



TAMIL NADU PUBLIC SERVICE COMMISSION

Advertisement No. 686

Notification No. 7 / 2024

Date: 15.05.2024

Combined Technical Services Examination (Interview Posts)

Applications are invited only through online mode for direct recruitment to the posts included in Combined Technical Services Examination (Interview Posts).

1. Important Instructions:

1.1. Candidates to ensure their eligibility for the examination:

All candidates are requested to carefully read the “Instructions to Applicants” available in the Commission’s website www.tnpsc.gov.in and this Notification. The candidates applying for the examination should ensure that they fulfill all eligibility conditions for admission to the examination. Their admission to all stages of the examination will be purely provisional, subject to their satisfying the eligibility conditions. Mere admission to the written examination / certificate verification / interview / counselling or inclusion of name in the selection list will not confer on the candidates any right to appointment. The Commission reserves the right to reject candidature at any stage, after due process even after selection has been made, if a wrong claim or violation of rules or instructions is confirmed.

1.2. Important Date and Time:

Date of Notification	15.05.2024	
Last date and time for submission of online application	14.06.2024 11.59 P.M	
Application Correction Window period	19.06.2024 12.01 A.M to 21.06.2024 11.59 P.M	
Date and Time of Examination		
Paper – I		
Subject	Date	Time
Tamil Eligibility Test, General Studies, and Aptitude and Mental Ability Test	28.07.2024	09.30 A.M. to 12.30 P.M
Paper - II		
Subject Paper	Date	
Basics of Engineering	From 12.08.2024 to 16.08.2024 (excluding 15.08.2024)	
Agriculture		
Home Science		
Statistics		

Rehabilitation Science	From 12.08.2024 to 16.08.2024 (excluding 15.08.2024)
Economics	
Law	
Stenography in English	
Business Administration	
Mechanical / Production / Manufacturing Engineering	
Food and Nutrition	
Stenography in Tamil	
Physical Education	
Sociology	
Mathematics	
Financial and Cost Accountancy	
Public Administration	
Social Work	
Town and Country Planning	
Child Development	
Psychology	

1.2.1. The date and time of examination for the Paper-II-Subject Paper, will be informed only through Commission's website www.tnpsc.gov.in

1.3. How to Apply:

1.3.1. One Time Registration and Online Application:

Candidates are required to apply online by using the Commission's website www.tnpscexams.in. The candidate needs to register himself / herself first at the One Time Registration (OTR) platform, available on the Commission's website, and then proceed to fill up the online application for the examination. If the candidate is already registered, he / she can proceed straightway to fill up the online application for the examination.

1.3.2. Application Correction Window:

After the last date for submission of online application, the Application Correction Window will open for 3 days from 19.06.2024 to 21.06.2024. During this period, candidates will be able to edit the details in their online application. After the last date of the Application Correction Window period, no modification is allowed in the online application.

1.3.3. Subject Paper Options:

Candidates should choose the subject paper(s) and specify in the online application. The candidates should only choose the subject paper(s) in which they have obtained the educational qualification or equivalent qualification for appearing in the examination.

1.3.4. The detailed instructions regarding how to apply and the examination centres are available in Annexure I of this Notification.

1.4. Banned Items:

1.4.1. Candidates are not allowed to bring mobile phone, pager or any electronic equipment or programmable device or storage media like pen drive, smart watches, watches and rings with in-built memory notes, etc., or camera or Bluetooth devices or communication chips or any other equipment or related accessories either in working or switched off mode capable of being used as a communication device into the examination hall / room. Candidates are not allowed to bring non-electronic devices such as P&G Design Data Book, mathematical and drawing instruments, log tables, stencils of maps, slide rules, books, notes, loose sheets, guides, rough sheets, hand bags into the examination hall / room.

1.4.2. If they are found to have any such things or instruments, they will not be allowed to write the examination, besides invalidation of the answer sheet and / or debarment and / or rejection of candidature. If it is considered necessary, they will be subjected to a thorough physical search including frisking on the spot.

1.4.3. Candidates are advised, in their own interest, not to bring any of the banned items including mobile phones to the venue of the examination, as arrangements for safekeeping of the same cannot be assured.

2. Warning:

2.1. All the recruitments by the Tamil Nadu Public Service Commission are purely merit-based. The Tamil Nadu Public Service Commission hereby cautions the candidates against touts and agents who may cheat, by making false promises of securing jobs through unfair means. The Tamil Nadu Public Service Commission shall not be responsible or liable for any loss that may be caused to any candidate on account of indulging in any sort of dealings with such unscrupulous elements.

2.2. Candidates are solely responsible for their claims in the online application. They cannot blame service providers like internet cafes / browsing centers / common service centers for the mistakes made while applying online for recruitment. Candidates are advised to check the filled-in online application before finally submitting the same.

3. Posts and Vacancies:

S. No.	Name of the Post	Post Code	Name of the Service / Organization	Distribution of vacancies		Number of Vacancies	Level of Pay
1	College Director of Physical Education and Sports in Government Law Colleges	2156	Tamil Nadu Legal Educational Service	GT (G)	2	12	Level 24 (CPS)
				GT (W)	1		
				GT (G) (PSTM)	1		
				BC (OBCM) (G)	2		
				BC (OBCM)(W)	1		
				MBC/DC (G)	1		
				MBC/DC (W)	1		
				SC (G)	1		
				SC (W)	1		
				SC (A) (W) (PSTM)	1		

2	Manager Grade – III (Legal)	3311	Tamil Nadu Industrial Investment Corporation Ltd.,	GT (G)	1	2	Level 23 (EPF and EGF)
				SC(A) (W) (PSTM)	1		
3	Senior Officer (Legal)	3312	Tamil Nadu Industrial Investment Corporation Ltd.,	GT (G)	2	9	Level 22 (EPF and EGF)
				GT (W)	1		
				BC (OBCM) (G)	1		
				BC (OBCM) (W)	1		
				MBC/DC (G)	1		
				MBC/DC (W)	1		
				SC (G)	1		
				SC(A) (W) (PSTM)	1		
4	Assistant Manager (Legal)	3259	TNSTC, Kumbakonam	GT (G)	1	3	Level 22 (CPS)
				SC(A) (W) (PSTM)	1		
				MBC/DC (G)	1		
		TNSTC, Coimbatore	GT (G)	1	2		
			SC(A) (W) (PSTM)	1			
		TNSTC, Tirunelveli	GT (G)	1	2		
			SC(A) (W) (PSTM)	1			
		TNSTC, Villupuram	GT (G)	1	2		
			SC(A) (W) (PSTM)	1			
		TNSTC, Salem	GT (G)	1	2		
			SC(A) (W) (PSTM)	1			
		TNSTC, Madurai	GT (G)	1	2		
			SC(A) (W) (PSTM)	1			
		SETC, Chennai	GT (G)	1	1		
5	Assistant Manager (Legal)	3338	State Industries Promotion Corporation of Tamil Nadu Ltd., (SIPCOT)	SC (G)	1	2	Level 22 (GFTR, PFTR, SPF-cum GSTR)
				MBC/DC (W)	1		
6	Tamil Reporter	3336	Tamil Nadu Legislative Assembly Secretariat Service	GT (G)	1	5	Level 22 (CPS)
				SC (G)	1		
				BC (OBCM) (G)	1		
				BC (OBCM) (W)	1		
				MBC/DC (W)	1		
7	English Reporter	2090	Tamil Nadu Legislative Assembly Secretariat Service	Backlog Vacancies - 5		5	Level 22 (CPS)
				BC (OBCM) (G)	1		
				MBC/DC (G)	2		
				SC (G)	2		
8	Accounts Officer Class-III	2093	Tamil Nadu State Treasury and Accounts Service	SC (W)	1	1	Level 23 (CPS)
9	Accounts Officer	3337	Tamil Nadu Industrial Development Corporation Ltd.,(TIDCO)	SC (G)	1	3	Level 22 (EPF)
				MBC/DC (W)	1		
				BC (OBCM) (W)	1		
10	Assistant Manager (Accounts)	3335	TNSTC, Kumbakonam	GT (G)	1	3	Level 22 (CPS)
				SC(A) (W) (PSTM)	1		
				MBC/DC (G)	1		
		TNSTC, Coimbatore	GT (G)	1	2		
			SC(A) (W) (PSTM)	1			
		TNSTC, Tirunelveli	GT (G)	1	2		
SC(A) (W) (PSTM)	1						
TNSTC, Villupuram	GT (G)	1	4				
	SC(A) (W) (PSTM)	1					

				MBC/DC (G)	1		
				BC (OBCM) (G)	1		
			TNSTC, Salem	GT (G)	1	2	
				SC(A) (W) (PSTM)	1		
			TNSTC, Madurai	GT (G)	1	3	
				SC(A) (W) (PSTM)	1		
				MBC/DC (G)	1		
			SETC, Chennai	GT (G)	1	2	
				SC(A) (W) (PSTM)	1		
			MTC, Chennai	GT (G)	1	2	
				SC (A) (W) (PSTM)	1		
11	Deputy Manager (Accounts)	3339	Tamil Nadu Corporation for Development of Women Ltd.,	GT (G)	1	1	Level 22 (CPS)
12	Assistant Manager (Finance)	3341	State Industries Promotion Corporation of Tamil Nadu Ltd., (SIPCOT)	BC (OBCM) (W)	1	1	Level 22 (GFTR, PFTR, SPF-cum GSTR)
13	Assistant General Manager	3342	State Industries Promotion Corporation of Tamil Nadu Ltd., (SIPCOT)	GT (W)	1	1	Level 27 (GFTR, PFTR, SPF-cum GSTR)
14	Assistant Director of Agriculture (Extension)	3202	Tamil Nadu Agricultural Extension Service	GT (G)	1	6	Level 22 (CPS)
				GT (G) (LV)	1		
				BC (OBCM) (G)	1		
				MBC/DC (W)	1		
				SC (G) (PSTM)	1		
				SC (W)	1		
15	Assistant Director of Statistics	2097	Tamil Nadu Statistics Service	GT (G)	3	17	Level 22 (CPS)
				GT (W)	1		
				GT (G) (PSTM)	1		
				GT (W) (PSTM)	1		
				BC (OBCM) (G)	3		
				BC (OBCM) (W)	1		
				MBC/DC (G)	3		
				BC (M) (W)	1		
				SC (G)	1		
				SC (A) (G) (PSTM)	1		
				SC (W)	1		
16	Assistant Director (Social Welfare and Women Empowerment Department)	3005	Tamil Nadu General Service	Backlog Vacancies - 1		3	Level 22 (CPS)
				GT (G) (HH)	1		
				Current Vacancies - 2			
				GT (G)	1		
				MBC/DC (G)	1		
17	Senior Assistant Director of Boilers	1700	Tamil Nadu Boiler Service, Public Works Department	GT (G) (PSTM)	1	4	Level 22 (CPS)
				BC (OBCM) (G)	1		
				MBC/DC (G)	1		
				SC (W)	1		
18	Bursar	3010	Tamil Nadu Educational Service, Collegiate Education Department	GT (G)	1	6	Level 22 (CPS)
				GT (W)	1		
				BC (OBCM) (G)	2		
				MBC/DC (W)	1		
				SC (G) (PSTM)	1		

19	Assistant Director of Town and Country Planning	1778	Tamil Nadu General Service, Housing and Urban Development Department	Backlog Vacancies - 1		4	Level 22 (CPS)
				GT (G) (LV)	1		
				Current Vacancies - 3			
				GT(G)	1		
				BC (OBCM) (G)	1		
				MBC/DC (G)	1		
20	Assistant Manager (Projects)	3346	Tamil Nadu Urban Finance and Infrastructure Development Corporation Ltd.,	SC(A) W (PSTM)		2	Level 22 (EPF)
					1		
				MBC/DC (G)			
Total No. of Vacancies						118	

Abbreviations:

CPS	- Contributory Pension Scheme	MTC	- Metropolitan Transport Corporation
EGF	- Employees' Gratuity Fund	PFTR	- Provident Fund Trust Rules
EPF	- Employees' Provident Fund	SETC	- State Express Transport Corporation
GFTR	- Gratuity Fund Trust Rules	SPF	- Special Provident Fund
GSTR	- Gratuity Scheme Trust Rules	TNSTC	- Tamil Nadu State Transport Corporation
BC (M)	- Backward Classes Muslims	MBC/DC	- Most Backward Classes / De-notified Communities
BC(OBCM)	- Backward Classes (Other than Backward Classes Muslims)	PSTM	- Person Studied in Tamil Medium
G	- General	SC	- Scheduled Castes
GT	- General Turn	SC(A)	- Scheduled Castes (Arunthathiyars)
HH	- Hard of Hearing (with Assistive Device)	ST	- Scheduled Tribes
LV	- Low Vision	W	- Women

3.1. The number of vacancies notified is tentative and is liable for modification, before the publication of the results of the written examination. Whenever the vacancies are revised, the number of candidates selected for the successive stages will also be revised commensurately.

3.2. The Commission reserves the right to include additional posts with different nomenclature and having similar eligibility conditions, as announced in this notification.

4. Eligibility Conditions:

4.1. Age Limit: (as on 01.07.2024)

The candidates should have completed the age of 21 years. The category wise maximum age limit and age concession details are given below.

4.1.1. Others (Candidates not belonging to SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s and BCMs):

S. No	Name of the Post	Post Code	Maximum Age (Should not have completed)	Age Concession		
				Persons with Benchmark Disability	Ex-Servicemen	Destitute Widow
1	College Director of Physical Education and Sports in Government Law Colleges	2156	57	57	57	57
2	Manager Grade – III (Legal)	3311	32	42	50	No Maximum Age Limit
3	Senior Officer (Legal)	3312	32	42	50	
4	Assistant Manager (Legal)	3259	32	42	50	
5	Assistant Manager (Legal)	3338	32	NA	32	32
6	Tamil Reporter	3336	32	42	50	No Maximum Age Limit
7	English Reporter	2090	32	42	50	
8	Accounts Officer Class-III	2093	32*	42	50	
9	Accounts Officer	3337	32	NA	50	
10	Assistant Manager (Accounts)	3335	32	42	50	
11	Deputy Manager (Accounts)	3339	32	42	50	32
12	Assistant Manager (Finance)	3341	32	NA	32	
13	Assistant General Manager	3342	47	NA	47	47
14	Assistant Director of Agriculture (Extension)	3202	34	44	50	No Maximum Age Limit
15	Assistant Director of Statistics	2097	32	NA	50	
16	Assistant Director (Social Welfare and Women Empowerment Department)	3005	32	42	50	
17	Senior Assistant Director of Boilers	1700	37	NA	50	
18	Bursar	3010	32	42	50	
19	Assistant Director of Town and Country Planning	1778	32 **	42	50	
20	Assistant Manager (Projects)	3346	32	42	50	

* In case of person who are in regular service under Government of Tamil Nadu, the maximum age limit is 37.

** The maximum age limit of 32 years prescribed for appointment to this post shall not apply to persons appointed from the category of Town Planning Officers of Municipal Councils or other Local Bodies in the State.

NA - Not Applicable, since persons with benchmark disability are not eligible to apply for this post.

4.1.2. BC (OBCM)s, BCMs, MBCs/DCs, SCs, SC(A)s and STs:

S. No	Name of the Post	Post Code	Maximum Age (Should not have completed)	Age Concession		
				Persons with Benchmark Disability	Ex-Servicemen	Destitute Widow
1	College Director of Physical Education and Sports in Government Law Colleges	2156	57	57	57	57
2	Bursar	3010	59	No maximum age limit	No maximum age limit	No maximum age limit
3	Assistant General Manager	3342	47	NA	47	47

4	Assistant Manager (Legal)	3338	BC(OBCM)s, BCMs MBCs/DCs-34, SCs, SC(A)s, STs-37	NA	BC(OBCM)s, BCMs MBCs/DCs-34, SCs, SC(A)s, STs-37	BC(OBCM)s, BCMs MBCs/DCs-34, SCs, SC(A)s, STs-37
5	Assistant Manager (Finance)	3341				
6	Accounts Officer	3337	No maximum age limit	NA	No maximum age limit	No maximum age limit
7	Assistant Director of Statistics	2097				
8	Senior Assistant Director of Boilers	1700				
9	Manager Grade – III (Legal)	3311	No maximum age limit	No maximum age limit	No maximum age limit	No maximum age limit
10	Senior Officer (Legal)	3312				
11	Assistant Manager (Legal)	3259				
12	Tamil Reporter	3336				
13	English Reporter	2090				
14	Accounts Officer Class-III	2093				
15	Assistant Manager (Accounts)	3335				
16	Deputy Manager (Accounts)	3339				
17	Assistant Director of Agriculture (Extension)	3202				
18	Assistant Director (Social Welfare and Women Empowerment Department)	3005				
19	Assistant Director of Town and Country Planning	1778				
20	Assistant Manager (Projects)	3346				

Abbreviations:

BC(OBCM) - Backward Classes (Other than Backward Class Muslims)

BCM - Backward Class Muslims

MBC / DC - Most Backward Classes / Denotified Communities

SC - Scheduled Castes

SCA - Scheduled Castes (Arunthathiyars)

ST - Scheduled Tribes

NA - Not Applicable, since persons with benchmark disability are not eligible to apply for this post.

4.1.3. No maximum age limit shall mean that the candidates should not have completed 60 years of age as on 1.7.2024 or at the time of selection / appointment to the post.

4.1.4. Candidates claiming age concession should upload / produce the supporting documents for such a claim. Failure to upload / produce such a document shall result in the rejection of candidature after due process.

4.2. Supporting Documents:

4.2.1. The date of birth will be verified against the tenth standard (SSLC) or twelfth standard (HSC) mark sheet, issued by the Tamil Nadu Board of Secondary Education and Tamil Nadu Board of Higher Secondary Education respectively.

4.2.2. Those candidates whose date of birth is not mentioned in their tenth standard / twelfth standard mark sheet must upload/produce their Birth Certificate / Transfer Certificate / Degree Mark Sheets, instead of the tenth standard or twelfth standard mark sheet. Any other form of evidence will not be accepted.

4.2.3. Failure to upload / produce such a document shall result in the rejection of candidature after due process.

4.3. Educational Qualification, Technical Qualification and Experience:

S. No	Name of the Post	Post Code	Qualification
1	College Director of Physical Education and Sports in Government Law Colleges	2156	<p>(A) (i) A Master's Degree in Physical Education and Sports or Physical Education or Sports Science with 55% marks or an equivalent grade in a point-scale wherever the grading system is followed:</p> <p>Provided that in the case of candidates belonging to Scheduled Caste / Scheduled Tribe / Backward Classes / Backward Classes Muslims / Most Backward Classes and Denotified Communities and Differently-abled candidates the minimum marks shall be 50% or an equivalent grade.</p> <p>(ii) Must have represented the University or College at the inter-university or inter-collegiate competitions or the State or National championships.</p> <p>(iii) (a) Must have qualified in the National Eligibility Test (NET), conducted by the UGC or CSIR, or a similar test accredited by the UGC, like SLET/SET: Provided that qualification in NET/SLET/SET shall not be required for such Masters Programmes in disciplines for which NET/SLET/SET is not conducted by the UGC, CSIR or similar test accredited by the UGC like SLET/SET; or</p> <p>(b) Must have been awarded a Ph.D Degree in Physical Education or Physical Education and Sports or Sports Science, in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree) Regulations, 2009 or subsequent UGC Regulations on the subject:</p> <p>Provided that the candidates registered for the Ph.D. degree prior to July 11, 2009, shall be governed by the provisions of the then existing Ordinances/ Bye-laws/ Regulations of the Institutions awarding the degree and such Ph.D degree holders shall be exempted from the requirement of NET / SLET / SET for recruitment and appointment of College Director of Physical Education and Sports on furnishing a certificate from the Registrar or the Dean (Academic affairs) of the concerned university that he fulfills the following conditions:-</p> <p>(a) The Ph.D degree of the candidate has been awarded in regular mode; (b) The Ph.D thesis has been evaluated by at least two external examiners; (c) An open Ph.D viva voce of the candidate has been conducted; (d) The candidate has published two research papers from his</p>

			<p>Ph.D work, out of which at least one is in a refereed journal; (e) The candidate has presented at least two research papers in conference / seminar based on his Ph.D. work.</p> <p>(iv) Must have passed the Physical Fitness Test conducted in accordance with UGC Regulations on Minimum Qualifications for Appointment of Teachers and Other Academic Staff in Universities and Colleges and other measures for the Maintenance of Standards in Higher Education, 2018; or (B) Must have won a medal in an Asian Game or Commonwealth Games and possess a degree not less than Post-Graduation level.</p>
2	Manager Grade – III (Legal)	3311	A Degree in Law obtained from a recognized University.
3	Senior Officer (Legal)	3312	B.L. Degree from a Law College recognized by University Grants Commission.
4	Assistant Manager (Legal)	3259	<p>i) Must possess a degree in Law awarded by a recognized University (B.L.)</p> <p>ii) Must have sound knowledge of Corporate Laws, Labour Laws, and experience on the original side in City Civil Courts or Mofussil courts for a period not less than five (5) years and must have good knowledge and practice in Motor Accidents Claims / Tribunal, Labour Courts, etc.</p> <p>Other things being equal, preference shall be given to candidates possessing Post-Graduate Diploma in Labour Laws / Social Science</p>
5	Assistant Manager (Legal)	3338	Degree in Law from a recognized University.
6	Tamil Reporter	3336	<p>i) Must hold a bachelor's degree.</p> <p>ii) A pass in the Government Technical Examination in Shorthand in Tamil by 120 words per minute High Speed Test.</p> <p>iii) A pass in the Government Technical Examination in Typewriting in Tamil by the Senior Grade.</p> <p>Others things being equal, preference shall be given to persons who are qualified to report in English also.</p>
7	English Reporter	2090	<p>i) Must hold a bachelor's degree.</p> <p>ii) A pass in the Government Technical Examination in Shorthand in English by 180 words per minute High Speed Test.</p> <p>iii) A pass in the Government Technical Examination in typewriting in English by the Senior Grade.</p> <p>Others things being equal, preference shall be given to persons who are qualified to report in Tamil also.</p>
8	Accounts Officer Class - III	2093	Must have passed the Final Examination conducted by the Institute of Chartered Accountants / Cost Accountants
9	Accounts Officer	3337	<p>i) Must have passed the Final Examination conducted by the Institute of Chartered Accountants</p> <p>ii) 1 year post qualification experience in handling finance and</p>

			accounts in an organization in one / more of the following areas: a) Budget preparation, revised preparation, estimate preparation of books of accounts, voucher entry; understanding of taxation; understanding of audit processes; bill preparation; and BRS. b) Handling Internal audits, statutory audit and AG audits. c) Experience in handling RBI correspondence relating to NBFC compliance is preferred.
10	Assistant Manager (Accounts)	3335	Should have qualified CA/ICWA course i.e. Must have passed the Final Examination conducted by the Institute of Chartered Accountants of India / Institute of Cost Accountants of India (or) its equivalent qualification
11	Deputy Manager (Accounts)	3339	(i) Must have passed the final examination conducted by the Institute of Chartered Accountants / Cost Accountants or MBA (Finance) (ii) Minimum 3 years of experience in a financial institution or a reputed Industrial / Commercial Undertaking
12	Assistant Manager (Finance)	3341	Must have passed the Final Examination conducted by the Institute of Chartered Accountants / Cost Accountants or MBA (Finance)
13	Assistant General Manager	3342	(i) Degree in Engineering (second class or its equivalent) (ii) 5 years of experience in a reputed industrial or commercial concern in independent senior capacity
14	Assistant Director of Agriculture (Extension)	3202	A degree of M.Sc., in Agricultural Extension or Agricultural Economics. Provided that other things being equal, preference shall be given to those who possesses the M.Sc., degree in Agricultural Extension.
15	Assistant Director of Statistics	2097	i) Must hold a First Class Degree in Statistics or Mathematics or Economics or Applied Economics or Business Economics with not less than 60% marks or equivalent Cumulative Grade Point Average (CGPA); or ii) Master's Degree in Statistics or Mathematics or Economics or Applied Economics or Applied Statistics or Applied Mathematics or Business Economics or Operation Research or Mathematical Economics or Econometrics.
16	Assistant Director (Social Welfare and Women Empowerment Department)	3005	Must possess a Post Graduate degree in Home Science or Psychology or Sociology or Child Development or Food and Nutrition or Social Work or Rehabilitation Science.
17	Senior Assistant Director of Boilers	1700	i) Must possess a degree in Mechanical Engineering or a pass in Associate Membership Examination of the Institution of Engineers, India with Mechanical Engineering as the subject. ii) Must have undergone training as a practical Engineer in the design, construction, operation or maintenance of boilers for a period of not less than two years during which should have held responsible charge of a steam generation plant or a Boiler plant comprising of a battery of boilers, the total capacity of either plant being not less than 15000 Lbs / Hr.

18	Bursar	3010	<p>i) Must have passed Post Graduate Degree in Public Administration</p> <p style="text-align: center;">(or)</p> <p>ii) Post Graduate Degree in Business Administration (MBA) with specialization in Finance</p> <p>Other things being equal, preference will be given to persons with experience for a period of not less than three years in finance or administration matters.</p> <p>Note:</p> <p>(i) Experience should be acquired in the Managerial cadre / Officers in the Public Sector Organizations in the field of Finance or Administration matters.</p> <p>(ii) Experience gained in Government / Universities / Quasi Government Organizations / Public Sectors / Private Institutions shall be accepted. Experience gained in Private Institution which have been registered under Company's Act (Private Limited) shall be accepted.</p> <p>(iii) The Competent authority to issue the Experience Certificate shall be the General Manager / Equivalent Cadre.</p>
19	Assistant Director of Town and Country Planning	1778	<p>i) Post Graduate Degree in Town or City or Urban or Housing or Country or Rural or Infrastructure or Regional or Transport or Environmental Planning from a recognized University or Institute.</p> <p style="text-align: center;">(or)</p> <p>ii) Must be an Associate of the Institute of Architects or possess B.Arch Degree or possess Degree or Diploma recognized and equivalent to the National Diploma in Architecture with experience in town planning works for a period of not less than three years in a Town Planning Department of Government or in the Statutory Boards or Urban Authorities or Universities or Recognized Research Institutions or Public Sector Undertakings or Semi Government or Statutory or Autonomous Organisations or Local Bodies</p> <p style="text-align: center;">(or)</p> <p>iii) Must possess B.E Degree (Civil or Highway) with experience in town planning works for a period of not less than two years in Town Planning Department of Government or in the Statutory Boards or Urban Authorities or Universities or Recognized Research Institutions or Public Sector Undertakings or Semi Government or Statutory or Autonomous Organisations or Local Bodies.</p> <p style="text-align: center;">(or)</p> <p>iv) Must have passed Sections A & B of the Associate Member of the Institution of Engineers (India) Examination in the Civil Engineering Group with experience in town planning work for a period of not less than two years in Town Planning Department of the Government or in the Statutory Boards or Urban Authorities or Universities or Recognized Research Institutions or Public Sector Undertakings or Semi-Government or Statutory or Autonomous Organisations or Local Bodies.</p> <p style="text-align: center;">(or)</p> <p>v) Must possess Bachelor of Planning or Bachelor of Technology in Planning from a recognized University or Institute with two years experience in the field of Urban or Regional Planning in the State Governments or in the Statutory Boards or Urban Authorities or Universities or Recognized Research Institutions or Public Sector Undertakings or Semi-Government or Statutory or Autonomous Organisations or Local Bodies.</p>

20	Assistant Manager (Projects)	3346	<p>(i) A Degree in Civil Engineering of any University or Institution recognized by the University Grants Commission for the purpose of its grant; and</p> <p>(ii) A Master Degree in Business Administration of any University or Institution recognized by the University Grants Commission for the purpose of its grant. Specialization in Project Management is desirable; and</p> <p>(iii) Not less than three years of experience in appraisal / execution of Urban Infrastructure projects in Public / Private Limited Companies.</p>
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4.3.1. The candidates should possess the educational qualification, technical qualification and experience prescribed for the post, on the date of notification.

4.3.2. Supporting Documents:

4.3.2.1. SSLC / HSC / Diploma / Degree / PG Degree / Integrated PG Degree / Ph.D Degree / Provisional Degree or Provisional Diploma Certificate / Consolidated Mark Sheet along with Degree or Provisional Degree Certificate shall be accepted as proof of educational qualification.

4.3.2.2. In cases where the Diploma / Degree / PG Degree / Ph.D Degree certificates had been issued after the date of notification, candidates must upload / produce proof (in the form of Provisional Diploma / Degree Certificate / Consolidated Mark Sheet, etc.) of the publication of results of the respective qualification(s) on or before the date of notification.

4.3.2.3. The Under Graduate / Post Graduate degree qualification prescribed for the above posts should have been obtained by passing the required qualification in the following order of studies viz., SSLC + HSC / Diploma or its equivalent + Under Graduate Degree + Post Graduate Degree.

4.3.2.4. Candidates claiming possession of qualification higher than that prescribed for a post, must upload / produce certificates, issued on / before the date of notification, in support of such claim.

4.3.2.5. Candidates claiming experience, should upload the experience certificate in the format available in Annexure-V of this notification.

4.3.2.6. In cases where the duration of the prescribed educational / technical course / experience has been specified in the notification, any discrepancy between the claim in the application and the documents uploaded / produced, shall result in the rejection of candidature after due process.

4.3.2.7. In case the Degree Certificate is lost or is not immediately available for reasons to be specified, an extract from the Convocation Register will be accepted as evidence of qualification.

4.3.3. Equivalence of Qualification: The Government orders relating to equivalence of qualification are available on the Tamil Nadu Public Service Commission's website. However, if the candidate possesses an equivalence of qualification other than one mentioned in the Commission's website and if Government orders to this effect have been issued on or before the date of this notification, candidates should furnish the details of the same while applying and should upload a copy of the Government order at the time of uploading of documents, failing which his / her candidature will be rejected after due process. The Government orders regarding equivalence of qualification issued after the date of this notification will not be considered for this recruitment.

4.4. Medical and Physical Standards:

4.4.1. Candidates selected for appointment to the posts will be required to submit a certificate of physical fitness to the Appointing Authority at the time of joining the post.

4.4.2. The visual acuity of the candidates will have to be Standard III or better for all posts except for the post of Assistant Director of Town and Country Planning. For the post of Assistant Director of Town and Country Planning the Standard of vision will have to be Standard-II or better. Candidates with defective vision should produce an Eye Fitness certificate from a qualified Eye Specialist working in a Government Hospital, to the Appointing Authority at the time of joining the post.

4.5. Knowledge in Tamil:

4.5.1. Candidates should possess adequate knowledge in Tamil on the date of this Notification. The candidate shall be deemed to possess an adequate knowledge of Tamil if, he/she has passed the SSLC examination or its equivalent examination / HSC / Degree, etc., with Tamil as one of the languages or studied the High School Course in Tamil medium; or passed the SSLC examination or its equivalent examination in Tamil medium; or passed the Second Class Language Test (Full Test) in Tamil conducted by the Tamil Nadu Public Service Commission.

4.5.2. Candidates must upload / produce either SSLC / HSC / Degree / PG Degree mark sheets or proof of having passed the Second Class Language Test (Full Test) in Tamil conducted by the Tamil Nadu Public Service Commission, at the time of submission of online application.

4.5.3. Failure to produce documents in support of the possession of adequate knowledge of Tamil, shall result in the candidate being required to pass the Second Class Language Test (Full Test) in Tamil conducted by the Commission, within a period of two years from the date of his / her appointment, failing which he / she shall be discharged from service.

4.6. Restrictions on applying for the Examination:

4.6.1. The candidates not belonging to SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s, and BCMs, who have put in 5 years or more of service, since his / her first appointment to a service of Government of India or Government of a State / Union Territory, are not eligible to apply even if they are within the age limit, except for the post of Accounts Officer Class-III, Assistant Director of Town and Country Planning and Bursar.

4.6.2. The persons with benchmark disabilities are not eligible for the posts of Assistant Director of Statistics, Senior Assistant Director of Boilers, Accounts Officer (TIDCO), Assistant General Manager (SIPCOT), Assistant Manager (Finance), SIPCOT, Assistant Manager (Legal), SIPCOT.

4.6.3. Only women candidates, are eligible to apply for the post of Assistant Director (Social Welfare and Women Empowerment Department).

4.6.4. Posts identified suitable for Persons with Benchmark Disability:

4.6.4.1. The following posts are identified as suitable for reservation to persons with benchmark disabilities as detailed below:

Name of the Post	Post Code	Suitable Category of Benchmark Disabilities
College Director of Physical Education and Sports in Government Law Colleges	2156	LV, HH, HI, LD, CP, LC, DF, AC, SLD, MI
Manager Grade – III (Legal)	3311	VI, LV, HH, LD (OA, OL, OAOL, BL, BLOA, BABL), LC, AC, DF, CP, MD, MuD, ASD
Senior Officer (Legal)	3312	VI, LV, HH, LD (OA, OL, OAOL, BL, BLOA, BABL), LC, AC, DF, CP, MD, MuD, ASD
Assistant Manager (Legal)	3259	LV, HH, LD, CP, LC, DF, AC, MuD, MD
Tamil Reporter	3336	LD, LC, DF, AC
English Reporter	2090	LD, LC, DF, AC
Accounts Officer Class-III	2093	HH, LD (with mobility), AC, DF, LC
Assistant Manager (Accounts)	3335	LV, HI, HH, LD, LC, AC, DF, CP, MuD, MD
Deputy Manager (Accounts)	3339	LV,HH,LD,CP,LC,DF,AC,MD
Assistant Director of Agriculture (Extension)	3202	LV, HI, HH, LD, LC, DF, AC
Assistant Director (Social Welfare and Women Empowerment Department)	3005	HH, LD (OA, OL), DF, AC, LC
Bursar	3010	LV, HH, LC, DF, MD
Assistant Director of Town and Country Planning	1778	LV, HH, LD (OA,OL), AC, LC, DF
Assistant Manager (Projects)	3346	HH, LD (OA,OL), AC, LC, DF
Abbreviations:		
LV – Low Vision	CP – Cerebral Palsy	
VI – Visually Impaired	LC – Leprosy Cured	
HH – Hard of Hearing (with assistive device)	AC – Acid Attack Victims	
HI – Hearing Impaired	DF – Dwarfism	
LD – Locomotor Disability	MuD – Muscular Dystrophy	
BLOA – Both Leg One Arm	ASD – Autism Spectrum Disorder	
OA – One Arm	SLD – Specific Learning Disability	
OL – One Leg	MI – Mentally ill	
OAOL – One Arm One Leg	MD – Multiple Disabilities	
BABL – Both Arm Both Leg	BL – Both Leg	

4.6.4.2. Persons with Benchmark Disability with only those category (ies) of disability (ies) mentioned above shall be eligible to apply for the Examination for the posts included in Combined Technical Services Examination (Interview Posts) under Persons with Benchmark Disability category. Therefore candidates concerned are advised to read it carefully before applying appropriately for admission to the Examination.

5. Plan of Examination:

5.1. The Combined Technical Services Examination (Interview Posts) comprises of two stages (i) Written Examination and (ii) Interview for all the posts except for the post of College Director of Physical Education and Sports in Government Law Colleges for which the selection will be made in three stages (i) Written Examination (ii) Physical Fitness Test and (iii) Interview.

5.2. The candidates shall be admitted to the written examination, based on the claims made in the online application.

5.3. Onscreen certificate verification will be conducted before admission to the physical certificate verification and interview. The Commission will draw a list of candidates to be qualified for the onscreen certificate verification based on the criterion of minimum qualifying marks as mentioned in para 6 of notification and rule of reservation of appointments. The candidates will be admitted to onscreen certificate verification in the ratio of 1:3 / 1:4 (posts not requiring experience) and 1:10 (posts requiring experience). The experience certificate uploaded by the candidates will be verified by the Head of the Department / Organisation concerned, during onscreen certificate verification.

5.4. After onscreen certificate verification, based on the marks obtained in the written examination and subject to the rule of reservation of appointments, candidates shall be admitted to physical certificate verification and interview.

5.5. If the number of vacancies notified / reserved to be filled up by any one or more of the reservation categories [viz., Scheduled Castes, Scheduled Caste (Arunthaiyars), Scheduled Tribes, Most Backward Classes / Denotified Communities, Backward Classes (other than Muslim) or Backward Classes (Muslim) or General Turn], is five and above, the number of candidates to be admitted to the physical certificate verification and interview from those particular reservation categories, shall be two times the number of vacancies. If the number of vacancies notified / reserved to be filled up by any one or more of the reservation categories is four and below, the number of candidates to be admitted to the interview from those particular reservation categories, shall be three times the number of vacancies.

5.6. In respect of posts whose total cadre strength is one only and for which the rule of reservation of appointments does not apply, the number of candidates to be admitted to the physical certificate verification and interview on the basis of the marks obtained in the written examination shall be three.

5.7. The interview will carry 60 marks, with no minimum qualifying marks.

5.8. Marks obtained by the candidates in the Written Examination (Part B of Paper I and Paper II) and Interview would determine final ranking. The final selection will be made based on the total marks obtained by the candidate in Written Examination (Part B of Paper I, Paper II) and Interview taken together subject to rule of reservation of appointments. Candidates will be allowed to participate in counselling (wherever applies) based on his / her rank.

5.9. Appearance in Paper I, Paper II and the Interview is compulsory. Candidates who have not appeared for Paper I, Paper II and Interview, shall not be considered for selection, even if they secure the minimum qualifying marks.

5.10. Physical Fitness Test for the post of College Director of Physical Education and Sports in Government Law Colleges

5.10.1. Physical fitness test will be conducted for the candidates applied for the post of College Director of Physical Education and Sports in Government Law Colleges before admission to the physical certificate verification and interview. All the candidates admitted to the onscreen certificate verification shall undergo the physical fitness test.

5.10.2. The candidates applied for the post of College Director of Physical Education and Sports in Government Law Colleges are required to produce a Certificate of Physical Fitness from a Medical Officer of / or above the rank of an Assistant Surgeon appointed by the Government to the Government Medical Institution, obtained on or after the date of recruitment Notification certifying that he / she is medically fit before undertaking such tests.

5.10.3. On the production of such certificate mentioned above, the candidate would be required to undertake the physical fitness test in accordance with the following norms:

Norms for Men			
12 Minutes Run / Walk Test			
Upto 30 Years	Upto 40 Years	Upto 45 Years	Upto 50 Years
1800 metres	1500 metres	1200 metres	800 metres

Norms for Women			
8 Minutes Run / Walk Test			
Upto 30 Years	Upto 40 Years	Upto 45 Years	Upto 50 Years
1000 metres	800 metres	600 metres	400 metres

5.10.4. The physical fitness test will be conducted only at Chennai by Sports Development Authority of Tamil Nadu.

6. Scheme of Examination:

6.1. For posts other than Tamil Reporter and English Reporter

Subject	Standard	No. of Questions	Duration	Maximum Marks	Minimum Qualifying Marks	
					SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s and BCMs	Others*
Paper I	SSLC	100	3 hours	150	60	60
Part A Tamil Eligibility Test						
Part B (i) General Studies						
(ii) Aptitude and Mental Ability Test	Degree	75	3 hours	150	135	180
	SSLC	25				
Paper II Subject Paper	Degree / PG Degree	200	3 hours	300		
Total (Part B of Paper-I and Paper-II)				450		
Interview				60	-	
Grand Total (Part B of Paper I, Paper II and Interview)				510	-	
*Others - Candidates not belonging to SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s and BCMs						

6.1.1 Paper II - Subject Paper

Name of the Post	Post Code	Subject Paper	Subject Code	Standard
College Director of Physical Education and Sports in Government Law Colleges	2156	Physical Education	356	Post Graduate Degree
Manager Grade – III (Legal)	3311	Law	414	Degree
Senior Officer (Legal)	3312			
Assistant Manager (Legal)	3259			
Assistant Manager (Legal)	3338			
Accounts Officer Class-III	2093	Financial and Cost Accountancy	434	Post Graduate Degree
Accounts Officer	3337			
Assistant Manager (Accounts)	3335			
Deputy Manager (Accounts)	3339			
Assistant Manager (Finance)	3341			
Assistant General Manager	3342	Basics of Engineering	422	Degree
Assistant Director of Agriculture (Extension)	3202	Agriculture	285	Post Graduate Degree
Assistant Director of Statistics	2097	Statistics (or)	418	Degree
		Economics (or)	416	
		Mathematics	419	
Assistant Director (Social Welfare and Women Empowerment Department)	3005	Home Science (or)	341	Post Graduate Degree
		Psychology (or)	372	
		Sociology (or)	368	
		Child Development (or)	374	
		Food and Nutrition (or)	380	
		Social Work (or)	370	
		Rehabilitation Science	381	
Senior Assistant Director of Boilers	1700	Mechanical / Production / Manufacturing Engineering	399	Degree
Bursar	3010	Public Administration (or)	391	Post Graduate Degree
		Business Administration	385	
Assistant Director of Town and Country Planning	1778	Town and Country Planning*	382	Post Graduate Degree/Degree*
Assistant Manager (Projects)	3346	Business Administration	385	Post Graduate Degree

* Town Planning (60% of questions - PG Degree Standard), Civil Engineering (25% of questions - Degree Standard) and Architecture (15% of questions - Degree Standard)

6.2. For the posts of Tamil Reporter and English Reporter

Subject	Standard	No. of Questions	Duration	Maximum Marks	Minimum Qualifying Marks	
					SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s and BCMs	Others*
Paper I						
Part A Tamil Eligibility Test	SSLC	100	3 hours	150	60	60
Part B (i) General Studies	Degree	75		150	135	180
(ii) Aptitude and Mental Ability Test	SSLC	25				
Paper II Subject Paper	Diploma	100	1 ½ hours	300		
Total (Part B of Paper-I and Paper-II)				450		
Interview				60	-	
Grand Total (Part B of Paper I, Paper II and Interview)				510	-	
*Others - Candidates not belonging to SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s and BCMs						

6.2.1 Paper II - Subject Paper

Name of the Post	Post code	Subject Paper	Subject Code	Standard
Tamil Reporter	3336	Stenography in Tamil	383	Diploma
English Reporter	2090	Stenography in English	378	

6.3. The Paper II and Part B of Paper I will be evaluated only if the candidate secures minimum qualifying marks of 40% (i.e., 60 Marks) in Part A of Paper I.

6.4. The question paper for Paper II in the subject paper viz., Physical Education, Financial and Cost Accountancy, Agriculture, Basics of Engineering, and Town and Country Planning will be set in English only. For Stenography in Tamil and Stenography in English the question paper for Paper II will be set in their respective language. For other subject papers the question paper for Paper II will be set in both English and Tamil. The questions in Part B of Paper I will be set both in English and Tamil.

6.5. The differently abled candidates can avail exemption from writing Part A in Paper I (Tamil Eligibility Test). Such candidates have to furnish the required details in the online application without fail. Subsequent claim will receive no attention. The candidates need to upload the Certificate in the format prescribed in the para 4 of Annexure IV of this notification.

6.6. The syllabus for the written examination is available in Annexure III of this Notification.

6.7. Type of examination: Examination for the posts shall be conducted in objective type.

6.8. Mode of Examination: The examination will be conducted in Computer Based Test (CBT) method. The instructions to be followed while appearing for the examination, are available in Annexure IV of this Notification.

6.9. The Notification is published in English and Tamil versions. In case of doubt, English version is final.

7. Reservation of Appointments:

7.1. The rule of reservation of appointments applies to this recruitment. The details of the reservation to candidates belonging to various categories are given in Annexure II of this Notification. In respect of posts whose total cadre strength is one only, the rule of reservation of appointment does not apply.

7.2. Reservation of appointment to Destitute Widow and Ex-Servicemen will not apply to this recruitment.

8. Communication to Candidates:

8.1. The memorandum of admission (Hall Ticket) for eligible candidates will be made available on the Commission's website www.tnpscexams.in / www.tnpsc.gov.in for downloading by candidates. The memorandum of admission will not be sent by post. The candidates must comply with every instruction given in the memorandum of admission.

8.2. The Commission will publish the written examination results, date and time of physical certificate verification, interview and counselling on the Commission's Website. No individual communication will be sent to the candidates by Post. Candidates will be informed of the above fact only through SMS and e-mail, through the registered Mobile Number and email ID. Candidates are directed to watch the Commission's website in this regard. The Commission shall not be responsible if the communication does not reach the candidate due to an incorrect / invalid e-mail ID / mobile number and failure / delay in delivery of SMS / email to the candidates due to any reason including technical issues. Any representation from the candidates for non-receipt of SMS or e-mail will not be responded.

9. Communication with the Commission:

9.1. Candidates requiring clarification, can contact the office of the Tamil Nadu Public Service Commission in person or over the **Toll-Free No.1800 419 0958** on all working days between 10.00 A.M and 5.45 P.M.

9.2. Queries relating to One Time Registration / online application may be sent to helpdesk@tnpscexams.in. Any other communication with the Commission must be made through email to grievance.tnpsc@tn.gov.in. Communications sent by post must be addressed only to the Secretary, Tamil Nadu Public Service Commission, TNPSC Road, V.O.C. Nagar, Park Town, Chennai - 600003.

9.3. All communications to the Commission should invariably contain the following particulars. Communications not containing the following particulars will not be attended to.

- a. Name and Year of the examination
- b. Registration No.
- c. Name of the Candidate (in full and in block letters)
- d. Complete postal address as given in the application
- e. Valid and Active E-mail ID

9.4. Request for exemption from age limit or other qualifications will receive no attention. Requests for furnishing causes of failure in the written examination or for non-selection based on the results of the written examination or for revaluation of answer sheets will not be entertained.

9.5. Requests from candidates for furnishing of their marks or answer paper copy before the completion of the entire selection process, will not be entertained by the Commission.

10. Litigations:

The selection for appointment to the posts included in this recruitment is purely provisional subject to the final orders in the court cases, if any, pending before the Hon'ble High Court of Madras and Madurai Bench of Madras High Court, relating to this recruitment.

Secretary

Annexure I

How to Apply Online

1. Website: Candidates should apply only through online mode in the Commission's website viz., www.tnpscexams.in.

2. One Time Registration:

2.1. It is essential for the candidate to register himself / herself first at the One Time Registration (OTR) platform, available on the Commission's website, and then proceed to fill up the online application for the examination. Candidates should register only once in the One Time Registration by paying Rs.150/- as registration fee. Successfully registered One Time Registration is valid for five years from the date of registration.

2.2. During One Time Registration, the candidates should keep ready the scanned image of their photograph, taken within the last 3 months of size 20 KB – 50 KB and saved as "Photograph.jpg" and signature of size 10 KB – 20 KB and saved as 'Signature.jpg'. Both photograph and signature, of 200 DPI resolution, should be saved in a CD / DVD / Pen drive, to upload the same.

2.3. One Time Registration is not an application for any post. It is just a collection of information from the candidates and provides a separate dashboard to each candidate to facilitate the maintenance of their own profile. A candidate should make an online application separately for every examination for which he / she intends to appear.

2.4. A valid e-mail ID and mobile number are mandatory for One Time Registration. E-mail ID and mobile number are to be kept in 'ACTIVE' mode. Every candidate should have his / her email ID and password. No candidate should share his/her e-mail ID, password, mobile number with any other person. In case a candidate does not have a valid personal email ID, he / she should create a new email ID before applying online and must maintain that email account live. Inquiries relating to One Time Registration / online applications will be answered only if the inquiries are received through a registered e-mail ID.

2.5. Linking the Aadhaar number with One Time Registration (OTR) is mandatory for candidates. The information associated with the Aadhaar number including biometrics will be used only for identification purposes and will not be stored or shared. Candidates are requested to give their consent in their respective OTR. The Aadhaar details will be submitted to the Central Identities Data Repository (CIDR) only for authentication. Linking of the Aadhaar number is mandatory for all prospective candidates to create new OTR, renew / access the existing OTR and apply for any recruitment to be notified henceforth.

2.6. Details to be furnished during One Time Registration:

2.6.1. Candidates shall furnish their correct SSLC Register Number and Certificate Number, Month and Year of Passing, Medium of Instruction, and Name of the Board that issued the certificate while registering online. If any detail furnished is found to be wrong, the online application will be rejected at any stage after due process.

2.6.2. Candidates who have more than one SSLC mark sheet, should enter the details available in the mark sheet issued on the final attempt in which he / she had passed the SSLC examination.

2.6.3. Besides details related to SSLC, all other details required in the One Time Registration, shall be

furnished without any mistake, as these details shall form the basis of all other details given subsequently by the candidate while filling the online application for each recruitment.

2.7. One-Time Registration (OTR) Edit:

2.7.1. The candidates shall be permitted to edit the details in the OTR whenever required by uploading the supporting documents.

2.7.2. Any changes in the One Time Registration must be made before the submission of the online application since the details furnished in the One Time Registration will be filled in automatically in the online application. Hence, incorrect particulars furnished in the One Time Registration may result in the rejection of online application after due process. Candidates are therefore advised to fill in the One Time Registration particulars carefully and correctly.

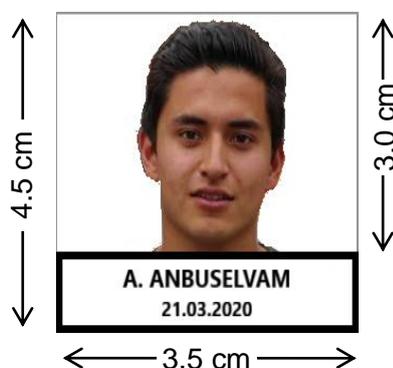
2.7.3. The Commission will not be responsible for any consequences arising out of failure on the part of the candidates to adhere to the instructions issued regarding One Time Registration or filling up of online application.

2.7.4. The instructions and illustration regarding One Time Registration are available on the website viz., www.tnpscexams.in.

3. Online Application:

3.1. A candidate who wishes to apply for any post shall click “APPLY” against the post notified on the Commission’s website and use the same User ID and Password given for One Time Registration. User ID and Password are to be created by the candidates themselves. In case the candidate forgets the User ID and Password, he/she can retrieve or reset them using the “FORGOT PASSWORD and FORGOT USER ID” options. The Commission will not furnish User ID and Password details to the candidates.

3.2. A candidate already having user ID and password, has to login. The available One Time Registration particulars will be displayed on the screen, including the photograph furnished at the time of One Time Registration, as well as the photographs uploaded with previous online applications. Candidates shall check and confirm the One Time Registration details before proceeding further. Thereafter, the candidates shall fill up additional details required in the specific recruitment application. If any of the One Time Registration details are found to be incorrect, the same should be corrected by clicking on OTR Edit. Changes made in the One Time Registration will be reflected only in online applications to be submitted subsequently.



3.3. Candidates shall upload their photograph taken on or after the date of notification at the time of submission of each and every online application. The photograph should be in colour, of passport size, against a white background and taken in a photo studio. The candidate should be photographed in

frontal view showing both ears and part of the neck. The candidate should ensure that the name of the candidate and the date of photography (i.e., on or after the date of notification) are printed at the bottom of the photograph. The face of the candidate as well as his / her name and date of photography should be clearly visible in the photograph of height 4.5 cm (170 pixels) and width 3.5 cm (130 pixels). Of the total height of the photograph, the image of the candidate shall be 3.0 cm (115 pixels) and the candidate's name and date of photography shall be 1.5 cm (55 pixels), as illustrated above. The photograph should be saved in a digital format (in CD / DVD / pen drive / hard drive), ready for uploading.

3.4. If the photograph is not available in a digital format, a passport-size photograph showing the image of the candidate along with the name of the candidate and the date of photography printed at the bottom, in the same dimensions as specified above, may be pasted on a plain white paper and scanned to obtain a resolution of 200 DPI. The image should then be cropped to show only the photograph of size 20 KB–50KB saved as “Photograph.jpg” and uploaded. The entire sheet of white paper on which the photograph is pasted should not be scanned / uploaded. Photographs taken using cellular phones, selfies, photocopies (Xerox) of photographs, photographs taken during family functions, at tourist places, or against a backdrop of plants or buildings should not be uploaded. Photographs of nature, wildlife, buildings, etc. shall not be uploaded. In case of uploading an inappropriate photograph, in violation of the aforementioned instruction, the application is liable to be rejected after due process.

3.5. Before uploading of signature, the candidate shall draw a box of dimension 6.0 x 2.0 cm (230 pixels x 75 pixels) on white paper and sign within the box, using a blue or black ink pen. The paper should then be scanned to obtain a resolution of 200 DPI. The image should then be cropped to show only the box with the signature, of size 10 KB –20KB, and saved as “Signature.jpg” and uploaded.

3.6. Clear images of the photograph and the signature should be uploaded in the correct dimensions, size, and format. Failure to upload/upload clear images of the photograph and signature will result in the rejection of the online application after due process.

3.7. Examination Centres:

3.7.1. While applying online, candidates shall be permitted to choose two district centres as their preference for the Written Examination. Candidates shall be allotted a venue in one of these two district centres. However, candidates with benchmark disability, shall be permitted to choose only one district centre and shall be allotted a venue in that district centre.

3.7.2. Candidates must appear for the examination at the venue they have been allotted, as mentioned in the memorandum of admission (hall ticket). Request for change of examination centre will not be permitted.

3.7.3. The Commission reserves the right to increase or decrease the number of examination centres and to re-allot the candidates accordingly. The Commission also reserves the right to allot a candidate to the nearby centre, if he / she could not be accommodated in the centres opted by the candidate.

3.7.4. The written examination will be held at the centres given below:

S.No.	Name of the Centre	Code	S.No.	Name of the Centre	Code
1.	Ariyalur	3001	21.	Ranipet	3501
2.	Chengalpattu	3301	22.	Salem	1701
3.	Chennai	0101	23.	Karaikudi	1805
4.	Coimbatore	0201	24.	Tenkasi	3601
5.	Chidambaram	0303	25.	Thanjavur	1901
6.	Dharmapuri	0401	26.	The Nilgiris	1301
7.	Dindigul	0501	27.	Theni	2001
8.	Erode	0601	28.	Thiruvallur	2101
9.	Kallakurichi	3401	29.	Thiruvannamalai	2201
10.	Kancheepuram	0701	30.	Thiruvarur	2301
11.	Nagercoil	0801	31.	Thoothukudi	2401
12.	Karur	0901	32.	Tiruchirappalli	2501
13.	Krishnagiri	3101	33.	Tirunelveli	2601
14.	Madurai	1001	34.	Tirupathur	3701
15.	Mayiladuthurai	3801	35.	Tiruppur	3201
16.	Nagapattinam	1101	36.	Vellore	2701
17.	Namakkal	1201	37.	Villupuram	2801
18.	Perambalur	1401	38.	Virudhunagar	2901
19.	Pudukkottai	1501			
20.	Ramanathanpuram	1601			

3.8. Application Preview:

3.8.1. Candidates should carefully fill in the details in the online application at the appropriate places and click on the 'SAVE AND PROCEED' button at the end of each page of the application. Before pressing the 'SAVE AND PROCEED' button, candidates are advised to verify each particular field in the application.

3.8.2. Candidates can edit/add/delete any information while filling the online application. Before finally submitting the application, candidates will be given the option of seeing a preview of their application. As soon as a candidate clicks the button meant for preview, an SMS will be sent to the registered mobile number, informing the availability of such a preview in the registered email ID provided by the candidate.

3.8.3. Once the candidate desires to make modifications based on the preview arrangement as indicated in the paragraph above, he/she may re-open the application and make necessary modifications using the Edit option and make the final submission of the corrected application, before the last date prescribed for submission of the online application. It is the responsibility of the candidate to carefully check the details available in the preview and make suitable corrections, if any, in the application / OTR before final submission. The candidate will be solely responsible for any non-rectification or non-submission of the application.

3.8.4. An individual is considered to have applied for a recruitment, if and only if, he / she finally submits the application, by clicking the 'SUBMIT' button. The mere availability of a preview shall not be tantamount to "having applied" for a particular recruitment.

3.9. Examination Fee:

3.9.1. The examination fee of Rs. 200 (Rupees Two hundred only) should be paid at the time of submitting the online application for this recruitment, unless exemption of fee is claimed.

3.9.2. Candidates belonging to special categories can avail of exemption from paying examination fees as per eligibility criteria. For further details refer to Annexure II of this Notification.

3.9.3. The total number of free chances availed, will be calculated based on claims made in previous applications. The number of free chances availed by the candidate may be verified by the Commission at any stage of the selection process. In case a candidate makes a false claim for exemption from payment of the application fee by suppressing information regarding his/her previous application(s), his / her candidature shall be rejected after due process and he / she shall be debarred for a period of one year, from appearing for examinations conducted by the Commission.

3.9.4. Candidates are directed to carefully choose the option "Yes" or "No" regarding availing of the fee concession. The choice made, cannot be modified or edited after successful submission of the online application. Candidates are advised in their own interest, to keep an account of the number of times fee concession has been availed, irrespective of the information displayed in the <Application History> of the candidate dashboard.

3.9.5. An application (irrespective of the post applied for) claiming fee concession will operate to exclude one chance from the number of free chances allowed. Candidates who have availed the maximum number of free chances permitted / candidates who do not wish to avail of the fee concession / candidates who are not eligible for fee concession shall choose the option "No" against the query regarding fee concession. Such candidates shall thereafter pay the requisite fee through the prescribed mode of payment.

3.9.6. Failure to pay the prescribed fee in time, along with the online application, will result in the rejection of the application after due process.

3.10. Examination Fee Payment:

3.10.1. After submitting the details in the online application, the candidates can pay the examination fee by online mode through Net Banking / Credit card / Debit card on or before the last date of submission of the online application by choosing the option in the online application. Candidates have to pay the service charges also as applicable.

3.10.2. Offline mode of payment if any received in the form of Demand Draft / Postal Order etc. will not be accepted and the applications forwarded with such modes of payment will be summarily rejected and the same will not be returned or refunded.

3.10.3. To facilitate payment of fees through the online mode, an additional page of the application format will be displayed wherein candidates may follow the instructions and fill in the requisite details to make payment. There is a possibility of online payment failure. Hence, if the online payment fails, candidates can check the status of the earlier transaction. If the earlier transactions have failed, the candidate shall retry paying the fee again by online mode. In case of online payment failure, the amount debited from the candidate's account will be reverted to his/her account. The candidates have been given a provision to check the status of the transaction made. If all the attempts/transactions have failed, candidates have to make the payment again. The Commission is not responsible for online payment failure. It is the responsibility of the candidates to ensure that the transaction made by them is successful.

3.10.4. After submitting the payment information in the online application format, wait for the intimation from the server. Meanwhile, DO NOT press 'Back' or 'Refresh' button to avoid payment failure or double payment.

3.10.5. If the online transaction has been successfully completed, an Application Number / Applicant ID will be generated. Candidates should note the Application Number / ID for future reference in respect of the recruitment applied for.

3.10.6. Tamil Nadu Public Service Commission reserves the right to change the mode of payment at any time.

3.11. Online Application Edit:

3.11.1. The candidates shall be permitted to edit all the details in the online application till the last date stipulated for submission of the online application.

3.11.2. If the candidate desires to change his / her photograph and/or signature in his / her online application, the candidate shall select the edit option in the online application to re-upload them which must be saved finally before submitting the online application.

3.11.3. Some of the information contained in the online application has been brought forward from the candidate's one-time registration. If such information has to be edited in the online application, the candidate shall select the edit profile option in One Time Registration (OTR) and shall make and save necessary corrections. After doing so, the candidate shall select the edit option in the online application and edit the details as desired. The candidate shall save the changes and submit it finally. The candidate shall take a printout of the same if required.

3.11.4. After editing the online application, if the edited details are not finally saved and submitted by the candidate, the details provided by the candidate in the application submitted before editing shall only be considered. If the candidate has to pay a fee based on the edited details, the candidate shall pay the prescribed examination fee in online. Candidates who have already paid the examination fee are not required to pay.

3.12. Application Correction Window:

3.12.1. After the last date for submission of the online application, the Online Application Correction Window shall open for 3 days as mentioned in Para 1 'Important Instructions' of this Notification. During this period, candidates will be able to edit the details in their online application. After the last date of the Correction Window period, no modification is allowed in the online application.

3.12.2. The applications shall be processed as per the details finally furnished by the candidates. It is the responsibility of the candidates and the Commission has no liability for subsequent rejection of the application consequent to the editing details already submitted in the online application. Request / representation received for modification of claims in the online application, in any mode shall not be entertained.

3.13. Candidates are advised in their own interest to apply online much before the closing date and not to wait till the last date to avoid the possibility of disconnection / inability / failure to log on to the Commission's website on account of heavy load on internet / website.

3.14. The Commission does not assume any responsibility for the candidates not being able to submit their online applications within the last date on account of the aforesaid reasons or for any other reason beyond the control of the Commission.

3.15. Candidates need not send the printout of the online application or any other supporting documents to the Commission by post unless asked for specifically.

3.16. The name of the candidate or the name of his / her father or mother, should be spelt correctly in the application as it appears in the certificates / mark sheets.

3.17. Any discrepancy between the details as given in the online application and the documents submitted shall result in the summary rejection of candidature after due process.

3.18. The Commission will not be responsible for any consequences arising out of furnishing of incorrect and / or incomplete details in the application or omission to provide the required details in the application.

3.19. Upload of Documents:

3.19.1. Candidates should upload the required documents of proof in respect of all the claims made in the application with reference to this notification while applying for this post / these posts. If the required certificates are not uploaded by the candidate, within the stipulated time, his/her candidature will be rejected after due process.

3.19.2. The candidates shall have the option of verifying the uploaded certificates / documents through their OTR. If any of the certificates / documents have wrongly been uploaded or not uploaded or if any modifications are to be done in the uploading of documents, the candidates shall be permitted to upload / re-upload the documents till two days prior to the date of hosting of hall tickets for that particular examination. (i.e., twelve days prior to the date of examination).

3.19.3. The uploaded credentials shall be mapped with the One Time Registration of the respective candidate along with the Application number and Notification Number (i.e., with reference to the notification for each post), so that they can be used during future submission of application by the same candidates.

3.19.4. The online application of the candidates who have not uploaded the required supporting documents (correctly / clearly / legibly) on or before the stipulated period shall be rejected after due process.

3.19.5. The documents uploaded by the candidates shall be linked with OTR and retained in the server for a maximum period of two years. If the candidate applies subsequently for other posts within two years, the documents that were already uploaded shall be displayed to the candidate during the online application process for confirmation and the same need not once again be uploaded by the candidates. If the candidate applies to other posts after the period of retention i.e. two years, the candidate shall be instructed to upload all the documents afresh.

4. Information regarding criminal cases / disciplinary cases:

4.1. Candidates who have declared pending criminal or disciplinary cases in their online application, must upload / produce a copy of the First Information Report (FIR) or memorandum of charges / show cause notice, as the case may be. Failure to upload / produce such papers at the time of submission of online application, shall result in rejection of candidature after due process.

4.2. Candidates who have declared conviction in criminal cases or punishment in disciplinary cases, in their online application, must upload / produce the relevant court orders and / or release orders or memorandum of proceedings, as the case may be, at the time of submission of online application.

Failure to upload / produce such papers shall result in the rejection of candidature after due process.

4.3. In case any criminal case is filed / disciplinary action is taken against or conviction / punishment is imposed on a candidate after submission of the online application, at any stage of the recruitment process before the completion of the entire selection process, such candidates should report this fact to the Commission in the next immediate stage when Commission calls for uploading / producing documents. Failure to comply with these instructions shall result in the rejection of candidature after due process and debarment for a period of one year.

4.4. The pendency of disciplinary cases / criminal cases shall in no way affect the selection prospects of candidates. However, failure to inform such pendency, shall result in the rejection of candidature after due process.

5. Employment Details:

5.1. Candidates who are in the service of the Indian Union or a State in India or in the employment of Local Bodies or Universities or Quasi Government Organizations or Public Sector Units constituted under the authority of the Government of India or of a State in India, in regular service, must inform the Commission of such fact, at the time of applying. Suppression of the fact of employment by candidates shall result in rejection of candidature after due process.

5.2. Candidates need not send their applications through their Head of Department or employer. Instead, they may directly apply to the Commission after duly informing their employer in writing that they are applying for the particular recruitment, subject to the condition that they should produce 'No Objection Certificate' in the format prescribed as shown below.

No Objection Certificate

This is to certify that Thiru/Tmt/Selvi(Name), employed as (designation) in this Office from..... (specify the date from which appointed), regularly / temporarily appointed and a probationer/approved probationer/ full member, had applied for direct recruitment to the post of inService, conducted by the Tamil Nadu Public Service Commission and informed the fact to this department/organization.

This department / organization has 'No Objection'* regarding the processing of the application of the individual by the Tamil Nadu Public Service Commission, subject to the condition that the particulars furnished by the individual are found to be correct.

Appointing Authority (Signature with Seal)

* In the case of a Government servant against whom departmental or criminal proceedings are contemplated or pending, the appointing authority shall inform the said fact to the Tamil Nadu Public Service Commission along with the "No Objection Certificate" and shall also inform the Tamil Nadu Public Service Commission about the initiation of departmental or criminal proceedings, if any, subsequently, till the date of his / her actual relief from the office to take up appointment in the post for which he / she has been selected.

5.3 Candidates who secure employment after submission of online application, must upload / produce a 'No Objection Certificate' or at least an undertaking regarding the fact of employment and that 'No Objection Certificate' has been applied for. Failure to upload / produce the 'No Objection Certificate' / an undertaking shall result in the rejection of candidature after due process.

5.4. Candidates who have been removed / dismissed / resigned from a post, shall intimate such fact to the Commission, through the One Time Registration Dashboard. Any failure in this regard shall result in the rejection of the candidature after due process.

5.5. Any change in the employment status of the candidate, whether appointment to or resignation / removal / dismissal, from a post, at any stage of the recruitment process, until completion of the entire selection process, must be informed to the Commission. Any failure in this regard shall result in the rejection of the candidature after due process.

5.6. Failure on the part of employed candidates to upload / produce the 'No Objection Certificate' shall result in the rejection of candidature after due process.

Annexure II

1. Ex-Servicemen:

1.1. 'Ex-serviceman' means,

1.1.1. any person who had served in any rank (whether as combatant or not) in the Armed Forces of the Union for a continuous period of not less than six months after attestation, if released between 1st July 1979 and 30th June 1987 (both days inclusive):

- a. for reasons other than at his own request or by way of dismissal or discharge on account of misconduct or inefficiency; or
- b. at his own request after serving for a period of not less than five years; or

1.1.2. any person who had served in any rank (whether as combatant or not) in the Armed Forces of the Union, and had retired or had been released on or after 1st July 1987 from such service:

- a. at his own request after earning his pension; or
- b. on medical grounds attributable to military service or circumstances beyond his control and awarded medical or other disability pension; or
- c. otherwise than at his own request after earning his pension, as a result of reduction in establishment; or
- d. after completing specific period of engagement, otherwise than at his own request or by way of dismissal or discharge on account of misconduct or inefficiency and has been given a gratuity.

1.1.3. any person of the Territorial Army of the following categories, namely, pension holder for continuous embodied service, person with disability attributable to military service and gallantry award winner retired on or after 15th November 1986; or

1.1.4. any person of the Army Postal Service, who retired on or after 19th July 1989 directly from the said service without reversion to Postal and Telegraph Department with pension or who has been released on or after 19th July 1989 from such service on medical grounds attributable to military service or circumstances beyond his control and awarded medical or other disability pension; or

1.1.5. any person who was on deputation in the Army Postal Service for more than 6 months prior to the 14th day of April 1987; or

1.1.6. any person who was boarded out or released on medical grounds and granted medical or disability pension; or

1.1.7. any person discharged on or after July 1987 under Army Rule 13(3) III (V) for the reason that his service is no longer required and in receipt of pension; or

1.1.8. such other person as may be notified by the Government from time to time.

1.2. Ex-servicemen does not mean the wards / dependants of those mentioned above.

1.3. A person discharged before July 1987 under Army Rule 13(3) III (V) for the reason that his service is no longer required is not an ex-serviceman.

1.4. In all cases, an ex-serviceman once recruited to a post in any class or service or category, cannot claim the concession of being called an ex-serviceman for his further recruitment.

1.5. Persons serving in the Armed Forces shall be eligible to apply for posts under the Government, if they are due to complete the specified term of their engagement in the Armed Forces, within one year from the last date prescribed by the Commission, for receipt of the online application in respect of a particular recruitment.

1.6. The above mentioned age concession will not apply to the Ex-Servicemen candidates who have already been recruited to any class or service or category.

1.7. Fee Concession: Two free chances.

1.8. Reservation of Appointments: The rule of reservation of appointment to Ex-Servicemen will not apply to this recruitment.

1.9. Supporting Documents:

1.9.1. A candidate who claims to have been demobilised from the Army or Navy or Air Force needs to upload/produce either a properly authenticated extract from his Discharge Certificate (viz., a Bonafide Certificate) issued by the Ex-Servicemen's Welfare Board in the format as depicted below or the Pension Pay Order at the time of submission of online application.

Form of Bonafide Certificate to be produced by Ex-Servicemen

1. Name of the applicant
2. Rank held, Name of the Service (Army / Navy / Air force)
3. Date of enrolment
4. Date of discharge
5. Reasons for discharge
6. Whether an 'Ex-Serviceman' should be specifically stated
7. Whether in receipt of pension
8. P.P.O No.
9. Conduct and character while serving in the defence forces
10. Name of the post applying for
11. Unique Service No.
12. Whether the individual is employed in any post under the Government of Tamil Nadu? If so, Name of the post and date of appointment

1.9.2. Persons serving in the Armed Forces who are due to complete the specified term of their engagement in the Armed Forces, within one year from the last date prescribed by the Commission, for receipt of the online application in respect of this recruitment, shall upload / produce at the time of certificate verification, an undertaking and a certificate from their Commanding Officer in the format as depicted below.

Form of Undertaking to be given by the Serving Personnel

I hereby accept that if selected on the basis of the recruitment / examination to which this application relates, I will produce documentary evidence to the satisfaction of the appointing authority that I have been duly released / retired / discharged from the Armed Forces and I am entitled to the benefits admissible to Ex-Servicemen given under Section 63 of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016.

Place:

Signature of the Applicant

Form of Certificate for Serving Personnel

I hereby certify that according to the information available with me (Number)(Rank) (Name) is due to complete the specified term of his engagement with the Armed Forces on the (date)

Place:

Signature of the Commanding Officer

Date:

1.9.3. Failure to upload/produce the supporting documents, shall result in the rejection of candidature after due process.

2. Persons with Benchmark Disability:

2.1. "Person with Benchmark Disability" means a person with not less than forty percent of a specified disability where specified disability has not been defined in measurable terms and includes a person with disability where specified disability has been defined in measurable terms, as certified by the certifying authority designated by the Government under sub-section (1) of section 57 of the Rights of Persons with Disabilities Act, 2016.

2.2 Fee Concession: Full exemption.

2.3. Reservation of Appointments: (For posts identified suitable for persons with benchmark disabilities) Out of the total number of appointments to be made in the communal reservation categories, viz., Scheduled Castes / Scheduled Caste - Arunthathiyars (on preferential basis) / Scheduled Tribes / Most Backward Classes / Denotified Communities / Backward Classes (other than Muslim) / Backward Classes (Muslim) and General Turn, in the case of appointment made by direct recruitment, 1% each shall be reserved for persons with benchmark disabilities under categories (a), (b) and (c) and 1% for persons with benchmark disabilities under categories (d) and (e) both taken together, namely:

- a. blindness and low vision;
- b. deaf and hard of hearing;
- c. locomotor disability including cerebral palsy, leprosy cured, dwarfism, acid attack victims and muscular dystrophy;
- d. autism, intellectual disability, specific learning disability and mental illness;
- e. multiple disabilities from amongst persons under categories (a) to (d) including deaf-blindness in the posts identified for each disability.

2.4. Supporting Documents:

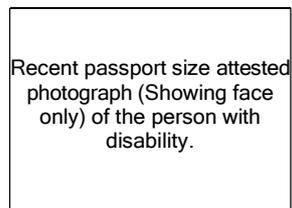
2.4.1. The Persons with Benchmark Disability should produce Disability Certificate in the format shown below, prescribed in the Rights of Persons with Disabilities Rules, 2017 and issued by the competent authority as mentioned below;

Form V

Certificate of Disability

(In cases of amputation or complete permanent paralysis of limbs or dwarfism and in case of blindness)

(Name and Address of the Medical Authority issuing the Certificate)



Certificate No. _____

Date: _____

This is to certify that I have carefully examined Shri./ Smt./ Kum. _____
Son / wife / daughter of Shri. _____ Date of Birth (DD/ MM/YY) _____ Age _____
years, male / female _____ Registration No. _____ permanent resident of House
No. _____ Ward / Village / Street _____ Post Office _____ District _State _
_____, whose photograph is affixed above, and am satisfied that:

(A) he / she is a case of:

- locomotor disability
- dwarfism
- blindness

(Please tick as applicable)

(B) the diagnosis in his / her case is _____

(C) he / she has _____ % (in figure) _____ percent (in words) permanent locomotor disability/ dwarfism/ blindness in relation to his / her _____ (part of body) as per guidelines

(..... number and date of issue of the guidelines to be specified).

2. The applicant has submitted the following document as proof of residence:-

Nature of Document	Date of Issue	Details of authority issuing certificate
--------------------	---------------	--

Signature/ thumb impression of the person in whose favour certificate of disability is issued.

(Signature and Seal of Authorized Signature of notified Medical Authority)

Form VI
Certificate of Disability
(In cases of multiple disabilities)

(Name and Address of the Medical Authority issuing the Certificate)

Recent passport size
attested photograph
(Showing face only) of
the person with
disability.

Certificate No. _____

Date: _____

This is to certify that we have carefully examined Shri./ Smt./ Kum. _____ son/ wife/
 daughter of Shri _____ Date of Birth (DD/ MM/ YY) _____ Age _____ years,
 male/ female _____. Registration No. _____ permanent resident of House No.
 _____ Ward/ Village/ Street _____ Post Office _____ District _____ State
 _____, whose photograph is affixed above, and am satisfied that:

(A) he/ she is a case of Multiple Disability. His/ her extent of permanent physical impairment/ disability has been evaluated as per guidelines (..... number and date of issue of the guidelines to be specified) for the disabilities ticked below, and is shown against the relevant disability in the table below:

Sl. No.	Disability	Affected part of body	Diagnosis	Permanent physical impairment/ mental disability (in%)
1.	Locomotor disability	@		
2.	Muscular Dystrophy			
3.	Leprosy cured			
4.	Dwarfism			
5.	Cerebral Palsy			
6.	Acid attack Victim			
7.	Low vision	#		
8.	Blindness	#		
9.	Deaf	£		
10.	Hard of Hearing	£		
11.	Speech and Language disability			
12.	Intellectual Disability			
13.	Specific Learning Disability			
14.	Autism Spectrum Disorder			
15.	Mental illness			
16.	Chronic Neurological Conditions			
17.	Multiple sclerosis			
18.	Parkinson's disease			
19.	Haemophilia			
20.	Thalassemia			
21.	Sickle Cell disease			

(B) In the light of the above, his/ her over all permanent physical impairment as per guidelines (..... number and date of issue of the guidelines to be specified), is as follows : -

In figures :- ----- percent

In words :- ----- percent

2. This condition is progressive/ non-progressive/ likely to improve/ not likely to improve.

3. Reassessment of disability is:

(i) not necessary, or

(ii) is recommended/ after years months, and therefore this certificate shall be valid till --- --- ---

(DD) (MM) (YY)

@ e.g. Left/ right/ both arms / legs

e.g. Single eye

£ e.g. Left/ Right/ both ears

4. The applicant has submitted the following document as proof of residence:-

Nature of document	Date of issue	Details of authority issuing certificate
--------------------	---------------	--

5. Signature and seal of the Medical Authority.

Name and Seal of Member	Name and Seal of Member	Name and Seal of the Chairperson
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Signature/ thumb impression of the person in whose favour certificate of disability is issued.
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Form VII
Certificate of Disability
(In cases other than those mentioned in Forms V and VI)
(Name and Address of the Medical Authority issuing the Certificate)

Recent passport size
attested photograph
(Showing face only) of
the person with
disability.

Certificate No. _____

Date: _____

This is to certify that I have carefully examined Shri./ Smt./ Kum. _____ son / wife / daughter of Shri _____ Date of Birth (DD/ MM/ YY)____ __ __ Age _____ years, male/ female _____ Registration No. _____ permanent resident of House No. _____ Ward/ Village/ Street _____ Post Office _____ District _____ State _____, whose photograph is affixed above, and am satisfied that he/ she is a case of _____ disability. His/ her extent of percentage physical impairment/ disability has been evaluated as per guidelines (..... number and date of issue of the guidelines to be specified) and is shown against the relevant disability in the table below:-

Sl. No.	Disability	Affected part of body	Diagnosis	Permanent physical impairment/mental disability (in %)
1.	Locomotor disability	@		
2.	Muscular Dystrophy			
3.	Leprosy cured			
4.	Cerebral Palsy			
5.	Acid attack Victim			
6.	Low vision	#		
7.	Deaf	€		
8.	Hard of Hearing	€		
9.	Speech and Language disability			
10.	Intellectual Disability			
11.	Specific Learning Disability			
12.	Autism Spectrum Disorder			
13.	Mental illness			
14.	Chronic Neurological Conditions			
15.	Multiple sclerosis			
16.	Parkinson's disease			
17.	Haemophilia			
18.	Thalassemia			
19.	Sickle Cell disease			

(Please strike out the disabilities which are not applicable)

2. The above condition is progressive / non-progressive / likely to improve / not likely to improve.

3. Reassessment of disability is:

(i) not necessary, or
(ii) is recommended/ after ___ years ___ months, and therefore this certificate shall be valid till (DD/ MM/ YY) _____

- @ - eg. Left/ Right/ both arms/ legs
- # - eg. Single eye/ both eyes
- € - eg. Left/ Right/ both ears

4. The applicant has submitted the following document as proof of residence:-

Nature of Document	Date of Issue	Details of authority issuing certificate
--------------------	---------------	--

(Authorized Signatory of notified Medical Authority)
(Name and Seal)

Countersigned

{Countersignature and seal of the
Chief Medical Officer/ Medical Superintendent/
Head of Government Hospital, in case the
Certificate is issued by a medical authority who is
not a Government servant (with seal)}

Signature/ thumb impression of the person in whose favour certificate of disability is issued.
--

List of Certifying Authority for the issue of disability certificate

TABLE – I

S. No.	Specified disability	Medical Authority for the purpose of the issue of disability certificate	Certifying authority to issue certificate of disability
1	In case of amputation or complete permanent paralysis of limbs or dwarfism	Hospitals/ Institutions/ Primary Health Centres run by Central and State Government/ Statutory Local bodies	Any doctor/ medical practitioner working in the Hospitals/ Institutions/ Primary Health Centres run by Government/ Statutory Local bodies.
2	Multiple Disability	District Hospital/ Other hospitals/ Institutions run by Central and State Government /Statutory Local Bodies having relevant medical specialist and testing/assessment facilities	Medical Board consisting of three members of whom two will be specialist dealing with relevant disabilities
3	Specified Disabilities not mentioned in Serial numbers 1 & 2 above	Hospitals / Primary Health Centers / Institutions run by Central and State Government/ Statutory Local bodies having relevant medical specialist and testing / assessment facilities	A specialist dealing with the relevant disability as specified in the Table - II given below

TABLE – II

Sl. No.	Category	Specialist
1	Locomotor disability other than amputation or complete permanent paralysis of limbs and dwarfism	Specialist in Physical Medicine and Rehabilitation or Orthopaedician.
2	Muscular Dystrophy	Specialist in Physical Medicine and Rehabilitation or Orthopaedician.
3	Leprosy cured person	Specialist in Physical Medicine and Rehabilitation or Orthopaedician.
4	Cerebral Palsy	Specialist in Physical Medicine and Rehabilitation or Orthopaedician.
5	Acid Attack Victim	Specialist in Physical Medicine and Rehabilitation or Orthopaedician.
6	Blindness	Specialist in the field of Ophthalmology.
7	Low Vision	Specialist in the field of Ophthalmology.
8	Deaf	Specialist in the field of Ear, Nose, Throat (E.N.T).
9	Hard of Hearing	Specialist in the field of Ear, Nose, Throat (E.N.T).
10	Speech and Language Disabilities	Specialist in the field of Ear, Nose, Throat (E.N.T) and Neurologist.

11	Intellectual Disability	Children with intellectual disability below the age of 18 years – Paediatrician or Paediatric Neurologist or Psychiatrist. Adults with intellectual disability above the age group of 18 years – Psychiatrist.
12	Specific Learning Disabilities	Medical board consisting of a) Paediatrician; and b) Psychiatrist and Trained Psychologist.
13	Autism spectrum disorder	Medical Board consisting of a) Psychiatrist and Trained psychologist; and b) Paediatrician or General Physician.
14	Mental Illness	Psychiatrist.
15	Chronic Neurological Conditions such as Multiple Sclerosis and Parkinson's Disease	Medical Board consisting of a) Psychiatrist and Trained Psychologist; and b) Neurologist; and c) Orthopaedician or Specialist in Physical Medicine and Rehabilitation.
16	Hemophilia	Hematologists or Orthopaedician or Paediatrician or General Physician.
17	Thalassemia	Hematologists or Orthopaedician or Paediatrician or General Physician.
18	Sickle Cell Disease	Hematologists or Orthopaedician or Paediatrician or General Physician.

2.4.2. In case the certificate is issued by a medical authority who is not a Government servant, it shall be valid only if countersigned by the Joint Director, Medical Services.

2.4.3. The disability claimed in the online application, shall be exactly the same as stated in the Disability Certificate. Any discrepancy in this regard shall result in rejection of candidature after due process.

2.4.4. Claim as person with benchmark disability, unsupported by the prescribed documents shall result in rejection of candidature after due process.

3. Destitute Widow:

3.1. "Destitute Widow" means a widow whose total monthly income from all sources shall not be more than Rs.4,000/- (Rupees Four Thousand only), including any family pension or other receipts including income from private practice in the case of professionals. Destitute Widow shall not include a divorcee or a woman deserted by her husband. The status of an individual as Destitute Widow is with reference to the date of notification.

3.2. Fee Concession: Full exemption.

3.3. Reservation of Appointments: The rule of reservation of appointment to Destitute Widow candidates will not apply for this recruitment.

3.4. Supporting Documents:

3.4.1. The Destitute Widows should produce a certificate from the Revenue Divisional Officer or the Assistant Collector or the Sub-Collector concerned, in the format prescribed below. Failure to upload / produce such certificate or uploading / production of a widow or divorcee certificate, shall result in rejection of candidature after due process.

Form of Destitute Widow Certificate

1. Name of the individual
2. Full Postal Address
3. Details of job held, if any:
4. Particulars of her children, if any
5. Name and last occupation of her late husband
6. Date of demise of her husband
7. Monetary benefits received after her husband's death by way of family pension, insurance, etc., if any
8. Details of Properties if any immovable and movable left behind by him
9. Present monthly income—
 - a. From salaries/wages
 - b. From family pension
 - c. From private properties
 - d. Rents received
 - e. From private practice
 - f. Other sources, if any
 - g. Total
10. Whether living alone or living with her husband's parents / in-laws / parents / brother(s)
11. Whether she satisfies the definition of the term "Destitute Widow" as defined in section 20(8) and 26 of Tamil Nadu Government Servants (Conditions of Service) Act, 2016.

Certified that I have verified the particulars furnished by the individual and satisfied myself as to the correctness of her claim with reference to the definition of the term – "Destitute Widow" in section 20(8) and 26 of Tamil Nadu Government Servants (Conditions of Service) Act, 2016.

Certificate Reference No.:

Signature:

Place:

Name:

Date:

Designation:

Revenue Divisional Officer / Assistant Collector / Sub-Collector

Explanation - The above certificate should be issued only by the Revenue Divisional Officer or the Assistant Collector or the Sub-Collector concerned.

3.4.2. A 'Widow Certificate' is different from a 'Destitute Widow Certificate'. Candidates who have uploaded / produced Widow Certificates will not be considered as Destitute Widow.

3.4.3. Claim as Destitute Widow shall be admitted only if the date of demise of husband is on or before the date of notification.

3.4.4. Any correction in the Destitute Widow certificate must be attested by the issuing authority or a fresh certificate in lieu thereof must be uploaded / produced.

4. Person Studied in Tamil Medium (PSTM):

4.1. "Person Studied in Tamil medium" means a person who has studied through Tamil medium of instruction up to the educational qualification prescribed for direct recruitment in the rules or regulations or orders applicable to any appointment in the services under the State.

4.1.1. In cases where a Degree is prescribed as the educational qualification, one shall have studied from first standard to Degree through Tamil medium of instruction.

4.1.2. In cases where a Post Graduate Degree is prescribed as the educational qualification, one shall have studied from first standard to Post Graduate Degree through Tamil medium of instruction.

4.2. Supporting Documents:

4.2.1. Candidates claiming to be Persons Studied in Tamil Medium (PSTM) must upload/produce evidence for the same, in the form of SSLC, HSC, Transfer Certificate, Provisional Certificate, Convocation Certificate, Degree Certificate, PG Degree Certificate, Mark Sheets, Certificate from the Board or University or from the Institution, as the case may be, with a recording that he had studied the entire duration of the respective course(s) through Tamil medium of instruction.

4.2.2. Candidates must upload/produce documents as evidence of having studied in the Tamil medium, all educational qualifications from 1st standard up to the educational qualification prescribed.

4.2.3. If no such document as evidence for 'Person Studied in Tamil Medium' is available, a certificate from the Principal / Head Master / District Educational Officer / Chief Educational Officer / District Adi Dravidar Welfare Officer / Registrar / Controller of Examinations / Head / Director of the Educational Institution / Director / Joint Director of Technical Education/ Registrar of Universities as the case may be, in the format as shown below, must be uploaded / produced, for each and every educational qualification, from 1st standard upto the educational qualification prescribed.

4.2.4. Failure to upload/produce such documents as evidence for 'Persons Studied in Tamil Medium' for all educational qualification up to the educational qualification prescribed, at the submission of online application shall result in the rejection of candidature after due process.

4.2.5. Documents uploaded / produced as proof of having studied in Tamil medium, for the partial duration of any course / private appearance at any examination, shall not be accepted and shall result in the rejection of candidature after due process.

Certificate for having studied in Tamil Medium

This is to certify that Thiru./Tmt./Selvi.(Name) had studied Classes to with **Tamil as the medium of instruction**, during the year toand had satisfactorily completed the course of studies prescribed for Classes to

Thiru./Tmt./Selvi.(Name) was / was not awarded **scholarship meant for students studying in the Tamil medium.**

This certificate is issued with reference to Section 2(d) of the PSTM (Amendment) Act, 2020, based on verifiable documentary evidence. The undersigned assumes full responsibility for the veracity of the contents herein.

Signature of Principal / Head Master /
District Educational Officer /
Chief Educational Officer /
District Adi Dravidar Welfare Officer

Place:

Date:

Seal of the Institution

Mobile No. _____

- If the candidate has studied in different schools from 1st std. up to 10th std./ 12th std., then the above certificate shall be obtained from each of the schools the candidate has studied in.

Certificate for having studied in Tamil Medium@

This is to certify that Thiru./Tmt./Selvi.(Name) had studied..... (Diploma/Degree/PG Degree, etc.) during the year to with **Tamil as the medium of instruction** and had satisfactorily completed the course of studies prescribed for (Diploma / Degree/PG Degree, etc.).

Thiru./Tmt./Selvi.(Name) was / was not awarded **scholarship meant for students studying in the Tamil medium.**

This certificate is issued with reference to Section 2(d) of the PSTM (Amendment) Act, 2020, based on verifiable documentary evidence. The undersigned assumes full responsibility for the veracity of the contents herein.

Signature of Registrar / Principal / Controller of Examinations /
Head / Director of Educational Institution / Director/Joint
Director of Technical Education/ Registrar of Universities

Place:

Date:

Seal of the Institution

Mobile No.

@If the candidate has completed different courses in different Institutions, such a certificate shall be obtained from each of these Institutions for the courses completed therein.

5. Scheduled Castes, Scheduled Caste (Arunthathiyars) and Scheduled Tribes:

5.1. "Scheduled Castes" means the communities given in the Annexure to the "Instructions to Applicants" [extracted from Part-A of Schedule-II of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016].

5.2. 'Arunthathiyar' means the castes: Arunthathiyar, Chakkiliyan, Madari, Madiga, Pagadai, Thoti and Adi Andhra.

5.3. "Scheduled Tribes" means the communities given in the Annexure to the "Instructions to Applicants" [extracted from Part-B of Schedule-II of Tamil Nadu Government Servants (Conditions of Service) Act, 2016.

Note: Persons belonging to Tamil Nadu and to any one of the communities mentioned in the lists shown in the Annexure to the "Instructions to Applicants" alone shall be treated as Scheduled Castes or Scheduled Tribes as the case may be. Persons belonging to other States shall not be treated as belonging to the Scheduled Castes or Scheduled Tribes even though they may belong to any one of the communities specified in the list.

5.4. Fee Concession: Full exemption

5.5. Reservation of Appointments: The selection will be made following the rule of reservation of appointments for Scheduled Castes / Scheduled Caste (Arunthathiyars) / Scheduled Tribes.

Scheduled Caste (SC)	15%
Scheduled Caste (Arunthathiyar) (SCA)	3%
Scheduled Tribe (ST)	1%

5.6. Supporting Documents:

5.6.1. The Scheduled Caste (Arunthathiyars) and Scheduled Castes candidates should produce the Community certificate, citing either father's / mother's name, issued by Taluk Tahsildar, in whose jurisdiction the candidate claims to have permanent residence.

5.6.2. The Scheduled Tribe candidates should produce the Community certificate, citing either father's / mother's name, issued by the Revenue Divisional Officer / Assistant Collector / Sub-Collector / Personal Assistant (General) to the Collector of Chennai / District Adi-Dravidar Welfare Officer, in whose jurisdiction the candidate claims to have permanent residence.

5.6.3. Candidates belonging to Scheduled Tribe communities must upload/produce the report of the State Level Scrutiny Committee (SLSC), if available. Failure to do so would render their claim liable to verification by the State Level Scrutiny Committee.

5.6.4. Uploading / production of a community certificate citing name of the spouse, shall result in rejection of candidature after due process.

5.6.5. The certificate obtained by the candidates in the form other than the one referred to in G.O. Ms. No.781, Revenue Department, dated 2nd May 1988 and solely based on the entries in SSLC or Transfer Certificate or other school / college records will not be accepted.

5.6.6. Candidates are warned that if the community recorded in the certificate produced by them from the competent authority is not included in the list of Scheduled Castes, Scheduled Caste (Arunthathiyars),

Scheduled Tribes, given in the Annexure to the “Instructions to Applicants” [extracted from the Tamil Nadu Government Servants (Conditions of Service) Act, 2016], they will not be permitted to claim to belong to Scheduled Castes, Scheduled Caste (Arunthathiyars), Scheduled Tribes, as the case may be. They will, in that case, be permitted to claim to belong to ‘Others’ category only.

5.6.7. Candidates belonging to Scheduled Castes, on conversion to religions other than Christianity / Islam, shall be treated as ‘Others’. However, Scheduled Caste converts to Sikhism and Buddhism shall be treated as Scheduled Castes.

5.6.8. Failure to upload / produce the supporting documents, when called for shall result in the rejection of candidature after due process.

6. Backward Classes:

6.1. “Backward Classes” means the communities specified as Backward Classes, Backward Class Muslims, Most Backward Classes / Denotified Communities given in the Annexure to the “Instructions to Applicants” [extracted from Parts A, B, C and D respectively, of Schedule-I of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016].

6.2. Explanation - Persons who belong to the State of Tamil Nadu alone, who belong to one of the communities specified in Schedule-I, of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016 shall be treated as persons who belong to one of such communities.

6.3. Fee Concession: Three Free Chances

6.4. Reservation of Appointments: The selection will be made following the rule of reservation of appointments for Backward Classes (Muslim), Backward Classes, Most Backward Classes and Denotified Communities.

Backward Class (BC)	26.5%
Backward Class (Muslim) [BC (M)]	3.5%
Most Backward Class / Denotified Communities (MBC / DC)	20.0%

6.5. Supporting Documents:

6.5.1. The candidates belonging to Backward Classes (Muslim), Backward Classes, Most Backward Classes and Denotified Communities should produce the Community certificate, citing either father’s / mother’s name, issued by Revenue Officer not lower in rank than a Tahsildar or Head Quarters Deputy Tahsildar or Special Deputy Tahsildar appointed to issue Community Certificate or Deputy Tahsildar (School Certificates) or Executive Deputy Tahsildar (in respect of Chennai district) or Additional Head Quarters Deputy Tahsildar or Zonal Deputy Tahsildar, in whose jurisdiction the candidate claims to have permanent residence.

6.5.2. The candidates belonging to Thottia Naicker (including Rajakambalam, Gollavar, Sillavar, Thockalavar, Thozhuvu Naicker, and Erragollar) included in the list of MBC / DC should produce the Community certificate, citing either father’s / mother’s name, issued by Head Quarters Deputy Tahsildar/ Zonal Deputy Tahsildar, in whose jurisdiction the candidate claims to have permanent residence.

6.5.3. Uploading / production of a community certificate citing name of the spouse, shall result in rejection of candidature after due process.

6.5.4. The certificate obtained by the candidates in the form other than the one referred to in G.O. Ms. No.781, Revenue Department, dated 2nd May 1988 and solely based on the entries in SSLC or Transfer Certificate or other school / college records will not be accepted.

6.5.5. Candidates are warned that if the community recorded in the certificate produced by them from the competent authority is not included in the list of Backward Classes (Muslim), Backward Classes, Most Backward Classes / Denotified Communities, given in the Annexure to "Instructions to Applicants" [extracted from the Tamil Nadu Government Servants (Conditions of Service) Act, 2016], they will not be permitted to claim to belong to Most Backward Classes / Denotified Communities, Backward Classes (other than Muslim) or Backward Classes (Muslim), as the case may be. They will, in that case, be permitted to claim to belong to 'Others' category only.

6.5.6. Candidates belonging to Backward Classes, Most Backward Classes / Denotified Communities on conversion to religions other than Christianity / Islam, shall be treated as 'Others'.

6.5.7. Failure to upload / produce the supporting documents, when called for shall result in the rejection of candidature after due process.

7. Women:

7.1. Reservation of Appointments: A minimum of 30% of all vacancies shall be set apart for women candidates, irrespective of the fact of whether the rule of reservation of appointments applies to the posts or not. In respect of the posts to which the rule of reservation of appointments applies, 30% of vacancies shall be set apart for women candidates, following the reservation for each communal category as well as open category. Women / Transgender (women) candidates shall be entitled to compete for the said 30% of vacancies. They shall also be entitled to compete for the remaining 70% of vacancies along with male / Transgender / Transgender (men) candidates.

7.2. Supporting Documents: Gender claimed shall be verified against the Transfer Certificate / Community Certificate. Failure to upload/produce the supporting documents at the time of submission of online application shall result in the rejection of candidature after due process.

8. Transgender:

8.1. Supporting Documents:

8.1.1. Transgender / Transgender (Male) / Transgender (Female) candidates should produce the Transgender ID card issued only by the Tamil Nadu Transgender Welfare Board.

8.1.2. Uploading / production of Transgender ID card, issued by any authority other than the Tamil Nadu Transgender Welfare Board shall result in rejection of candidature after due process.

8.1.3. Transgender or Transgender (Male) or Transgender (Female) claim made in the online application must correspond to what is stated in the Transgender ID card. Any discrepancy in this regard shall result in rejection of candidature after due process.

8.1.4. Gender claim unsupported by the requisite documents shall result in rejection of candidature after due process.

8.2. Community:

8.2.1. Transgender candidates, who do not possess any community certificate may choose to be considered under 'Others' or under Most Backward Classes.

8.2.2. Transgender candidates who belong to Scheduled Caste / Scheduled Caste (Arunthathiyar) / Scheduled Tribe communities and possess community certificate as such, shall be considered as per their respective community.

8.2.3. Transgender candidates who belong to communities other than Scheduled Caste / Scheduled Caste (Arunthathiyar) / Scheduled Tribe and possess community certificate as such, are permitted to choose to be considered as belonging to their own community or as Most Backward Class, whichever is advantageous to them, at the time of One Time Registration itself. Once the individual opts to be considered as a particular community, it shall be crystallized and this option shall not be changed in the future.

8.2.4. Transgender candidates who do not possess a community certificate and have chosen to be considered under 'Most Backward Classes' or 'Others' and those in possession of a community certificate as Backward Classes / Backward Classes (Muslim) / Denotified Communities but have chosen to be considered under 'Most Backward Classes', need not upload / produce a community certificate in support of their claim.

8.2.5. Transgender candidates, in possession of a community certificate and who have chosen to be considered under the communal reservation category as stated in the community certificate, must upload / produce the same. Failure to upload / produce such a certificate shall result in rejection of candidature after due process.

8.2.6. All concessions permitted to Transgender candidates in the matter of choice of communal reservation category, shall be wholly dependent on the uploading / production of a Transgender ID card issued by the Tamil Nadu Transgender Welfare Board. Failure to upload / produce the same or uploading / production of a Transgender ID card issued by other authorities, shall result in rejection of candidature after due process.

Annexure III
Combined Technical Services Examination
Paper-I Syllabus

தமிழ் மொழி தகுதித் தேர்வு

பத்தாம் வகுப்பு தரம்

1. பிரித்தெழுதுதல் / சேர்த்தெழுதுதல்.
2. எதிர்ச்சொல்லை எடுத்தெழுதுதல்.
3. பொருந்தாச் சொல்லைக் கண்டறிதல்.
4. பிழை திருத்தம் (i) சந்திப்பிழையை நீக்குதல் (ii) மரபுப் பிழைகள், வழுவச் சொற்களை நீக்குதல் / பிறமொழிச் சொற்களை நீக்குதல்.
5. ஆங்கிலச் சொல்லுக்கு நேரான தமிழ்ச் சொல்லை அறிதல்.
6. ஒலி மற்றும் பொருள் வேறுபாடறிந்து சரியான பொருளையறிதல்.
7. ஒரு பொருள் தரும் பல சொற்கள்.
8. வேர்ச்சொல்லைத் தேர்வு செய்தல்.
9. வேர்ச்சொல்லைக் கொடுத்து / வினைமுற்று, வினையெச்சம், வினையாலணையும் பெயர், தொழிற் பெயரை / உருவாக்கல்.
10. அகர வரிசைப்படி சொற்களை சீர் செய்தல்.
11. சொற்களை ஒழுங்குப்படுத்தி சொற்றொடராக்குதல்.
12. இருவினைகளின் பொருள் வேறுபாடு அறிதல்.
(எ.கா.) குவிந்து-குவித்து
13. விடைக்கேற்ற வினாவைத் தேர்ந்தெடுத்தல்.
14. எவ்வகை வாக்கியம் எனக் கண்டெழுதுதல் - தன்வினை, பிறவினை, செய்வினை, செயப்பாட்டு வினை வாக்கியங்களைக் கண்டெழுதுதல்.
15. உவமையால் விளக்கப்பெறும் பொருத்தமான பொருளைத் தேர்ந்தெழுதுதல்
16. அலுவல் சார்ந்த சொற்கள் (கலைச் சொல்)
17. விடை வகைகள்.
18. பிறமொழிச் சொற்களுக்கு இணையான தமிழ்ச் சொற்களைக் கண்டறிதல் (எ.கா.) கோல்டு பிஸ்கட் - தங்கக் கட்டி.
19. ஊர்ப் பெயர்களின் மரூஉவை எழுதுக (எ.கா.) தஞ்சாவூர் - தஞ்சை
20. நிறுத்தற்குறிகளை அறிதல்.
21. பேச்சு வழக்கு, எழுத்து வழக்கு (வாரான் - வருகிறான்).
22. சொற்களை இணைத்து புதிய சொல் உருவாக்கல்.
23. பொருத்தமான காலம் அமைத்தல்
(இறந்தகாலம், நிகழ்காலம், எதிர்காலம்).
24. சரியான வினாச் சொல்லைத் தேர்ந்தெடு.
25. சரியான இணைப்புச் சொல்
(எனவே, ஏனெனில், ஆகையால், அதனால், அதுபோல).
26. அடைப்புக்குள் உள்ள சொல்லைத் தகுந்த இடத்தில் சேர்க்க.
27. இருபொருள் தருக.
28. குறில் - நெடில் மாற்றம், பொருள் வேறுபாடு.
29. கூற்று, காரணம் - சரியா? தவறா?

30. கலைச் சொற்களை அறிதல் :-
எ.கா. - Artificial Intelligence - செயற்கை நுண்ணறிவு
Super Computer - மீத்திறன் கணினி
31. பொருத்தமான பொருளைத் தெரிவு செய்தல்
32. சொற்களின் கூட்டுப் பெயர்கள் (எ.கா.) புல் - புற்கள்
33. சரியான தொடரைத் தேர்ந்தெடுத்தல்
34. பிழை திருத்துதல் (ஒரு-ஓர்)
35. சொல் - பொருள் - பொருத்துக
36. ஒருமை-பன்மை பிழை
37. பத்தியிலிருந்து வினாவிற்கான சரியான விடையைத் தேர்ந்தெடு.

Unit-I: General Science

- (i) Scientific Knowledge and Scientific Temper - Power of Reasoning - Rote Learning vs Conceptual Learning - Science as a tool to understand the past, present and future.
- (ii) Nature of Universe - General Scientific Laws – Mechanics - Properties of Matter, Force, Motion and Energy - Everyday application of the Basic Principles of Mechanics, Electricity and Magnetism, Light, Sound, Heat, Nuclear Physics, Laser, Electronics and Communications.
- (iii) Elements and Compounds, Acids, Bases, Salts, Petroleum Products, Fertilisers, Pesticides.
- (iv) Main concepts of Life Science, Classification of Living Organisms, Evolution, Genetics, Physiology, Nutrition, Health and Hygiene, Human Diseases.
- (v) Environment and Ecology.

Unit-II: Current Events

- (i) History - Latest diary of events - National symbols - Profile of States - Eminent personalities and places in news – Sports - Books and authors.
- (ii) Polity - Political parties and political system in India - Public awareness and General administration - Welfare oriented Government schemes and their utility, Problems in Public Delivery Systems.
- (iii) Geography - Geographical landmarks.
- (iv) Economics - Current socio - economic issues.
- (v) Science - Latest inventions in Science and Technology.
- (vi) Prominent Personalities in various spheres – Arts, Science, Literature and Philosophy.

Unit-III: Geography of India

- (i) Location – Physical features - Monsoon, Rainfall, Weather and Climate - Water Resources - Rivers in India - Soil, Minerals and Natural Resources - Forest and Wildlife - Agricultural pattern.
- (ii) Transport - Communication.
- (iii) Social Geography – Population density and distribution - Racial, Linguistic Groups and Major Tribes.
- (iv) Natural calamity – Disaster Management – Environmental pollution: Reasons and preventive measures – Climate change – Green energy.

Unit-IV: History and Culture of India

- (i) Indus Valley Civilization - Guptas, Delhi Sultans, Mughals and Marathas - Age of Vijayanagaram and Bahmani Kingdoms - South Indian History.
- (ii) Change and Continuity in the Socio-Cultural History of India.
- (iii) Characteristics of Indian Culture, Unity in Diversity – Race, Language, Custom.
- (iv) India as a Secular State, Social Harmony.

Unit-V: Indian Polity

- (i) Constitution of India - Preamble to the Constitution - Salient features of the Constitution - Union, State and Union Territory.
- (ii) Citizenship, Fundamental Rights, Fundamental Duties, Directive Principles of State Policy.
- (iii) Union Executive, Union Legislature – State Executive, State Legislature – Local Governments, Panchayat Raj.
- (iv) Spirit of Federalism: Centre - State Relationships.
- (v) Election - Judiciary in India – Rule of Law.
- (vi) Corruption in Public Life – Anti-corruption measures – Lokpal and Lok Ayukta - Right to Information - Empowerment of Women - Consumer Protection Forums, Human Rights Charter.

Unit-VI: Indian Economy

- (i) Nature of Indian Economy – Five year plan models - an assessment – Planning Commission and Niti Ayog.
- (ii) Sources of revenue – Reserve Bank of India – Fiscal Policy and Monetary Policy - Finance Commission – Resource sharing between Union and State Governments - Goods and Services Tax.
- (iii) Structure of Indian Economy and Employment Generation, Land Reforms and Agriculture - Application of Science and Technology in Agriculture - Industrial growth - Rural Welfare Oriented Programmes – Social Problems – Population, Education, Health, Employment, Poverty.

Unit-VII: Indian National Movement

- (i) National Renaissance – Early uprising against British rule - Indian National Congress - Emergence of leaders – B.R.Ambedkar, Bhagat Singh, Bharathiar, V.O.Chidambaranar Jawaharlal Nehru, Kamarajar, Mahatma Gandhi, Maulana Abul Kalam Azad, Thanthai Periyar, Rajaji, Subash Chandra Bose, Rabindranath Tagore and others.
- (ii) Different modes of Agitation: Growth of Satyagraha and Militant Movements.
- (iii) Communalism and Partition.

Unit-VIII: History, Culture, Heritage and Socio - Political Movements in Tamil Nadu

- (i) History of Tamil Society, related Archaeological discoveries, Tamil Literature from Sangam Age till contemporary times.
- (ii) Thirukkural : (a) Significance as a Secular Literature
(b) Relevance to Everyday Life
(c) Impact of Thirukkural on Humanity
(d) Thirukkural and Universal Values - Equality, Humanism, etc
(e) Relevance to Socio-Politico-Economic affairs
(f) Philosophical content in Thirukkural
- (iii) Role of Tamil Nadu in freedom struggle - Early agitations against British Rule - Role of women in freedom struggle.
- (iv) Evolution of 19th and 20th Century Socio-Political Movements in Tamil Nadu - Justice Party, Growth of Rationalism - Self Respect Movement, Dravidian Movement and Principles underlying both these Movements, Contributions of Thanthai Periyar and Perarignar Anna.

Unit-IX: Development Administration in Tamil Nadu

- (i) Human Development Indicators in Tamil Nadu and a comparative assessment across the Country – Impact of Social Reform Movements in the Socio - Economic Development of Tamil Nadu.
- (ii) Political parties and Welfare schemes for various sections of people – Rationale behind Reservation Policy and access to Social Resources - Economic trends in Tamil Nadu – Role and impact of social welfare schemes in the Socio - Economic Development of Tamil Nadu.
- (iii) Social Justice and Social Harmony as the Cornerstones of Socio- Economic Development.
- (iv) Education and Health Systems in Tamil Nadu.
- (v) Geography of Tamil Nadu and its impact on Economic growth.
- (vi) Achievements of Tamil Nadu in various fields.
- (vii) e-Governance in Tamil Nadu.

Unit-X: Aptitude and Mental Ability

- (i) Simplification – Percentage - Highest Common Factor (HCF) - Lowest Common Multiple (LCM).
- (ii) Ratio and Proportion.
- (iii) Simple interest - Compound interest - Area - Volume - Time and Work.
- (iv) Logical Reasoning - Puzzles-Dice - Visual Reasoning - Alpha numeric Reasoning – Number Series.

Paper II -Syllabus
1. Physical Education
(Post Graduate Degree Standard)

Subject Code: 356

Unit - I: Principles and Biological Basis of Physical Education

Definition, aim and objectives of physical education. Meaning of the terms Physical Training, Physical Culture. Philosophies of Education as applied to physical education- Idealism, Naturalism, Realism, Pragmatism, existentialism, Humanism. Biological basis of Physical activity-benefit of exercise, growth and exercise, exercise and well being sex and age characteristics of adolescent, body types, Hereditary traits, Muscle tone, athletic heart, Unsynchronized development, Reciprocal innovation, reflex arc, Vital capacity.

Unit - II: History and Psychological Basis of Physical Education

Physical Education in ancient Greece, Rome, and contemporary Germany, Sweden, Denmark and Russia. Olympic movement-Historical development of ancient and modern Olympic Games. Physical education in India. Psychological basis of Physical education-Play and play theories, general principles of growth and development, Principles of Motor-Skill acquisitions transfer of training effects.

Unit - III: Physiology and Athletic Injuries

Physiology of Muscular activity, Neurotransmission and Movement mechanism. Physiology of respiration. Physiology of blood circulation. Factors influencing performance in sports, bioenergetics and recovery process. Athletic injuries-their management and rehabilitation. Therapeutic modalities. Ergogenic aids and doping. Massage manipulation and therapeutic exercises.

Unit - IV: Biomechanical Analysis Movement and Sports Activities

Biomechanics: Meaning and Definition. Joints and their movement-planes and axes. Kinetics, Kinematics linear and angular levers. Laws of motion, principles of equilibrium and force, spin and elasticity. Posture, postural deformation and their correction. Muscular analysis of Motor movement. Mechanical analysis of various sports activities. Mechanical analysis of fundamental movements-(running, jumping, throwing, pulling and pushing).

Unit - V: Sports Psychology and Sociology

Learning process-theories and laws of learning. Motivation, theories and dynamic of motivation in sports. Psychological factors affecting sport performance: stress, anxiety, tension and aggression. Personality: Meaning, dimensions, theories, personality and performance. Group dynamics, team decision and leadership in sports. Sociometric. Media and Sports. Sociological basis of physical education-Socialization process, Social nature of men and physical activity, sports as cultural heritage of mankind, custom traditions and sport, competition and cooperation.

Unit - VI: Management and Curriculum Planning in Physical Education

Development of teacher education in Physical education. Professional courses in Sports and Physical education in India. Professional Ethics. Qualities and Qualification of Physical Educational Personnel. Principles of Curriculum planning. Courses content for academic and professional courses. Age characteristics of pupils and selection of activities. Construction of class physical education time table.

Types of Tournaments, Preparation of Fixtures for Knock out, League and Combination Tournaments.

Unit - VII: Health Education and Recreation

Health-Guiding principles of health and health education. Nutrition and dietary manipulation. Sports Nutrition. Health-related fitness- Components of Fitness, obesity and it's management. Environmental and occupational hazards and first aid. Communicable diseases-their preventive and therapeutic aspect. School health programmes and personnel hygiene. Theories and Principles of recreation. Recreation Programme for various categories of people.

Unit - VIII: Sports Training

Characteristics and principles of sport training. Training and periodization. Training method and specific training programme for development of various qualities. Training Load Technical and tactic preparation for sports. Short-term and long term training plans. Sports talent identification -process and procedure. Preparing for competition- (build up competition, main competition, competition frequency , psychological preparation).

Unit - IX: Research and Statistics

Nature, scope and types of research. Formulation and selection of research problems. Sampling-process and techniques. Methods of research. Data collection-tools and techniques. Statistical techniques of data analysis-measure of central tendency and variability, correlation, normal probability curve, t-test, and f-test, chi square, z-test. Hypothesis formulation. Writing research report.

Unit-X: Tests, Measurement and Rules of Games and Sports

Meaning of the terms: test, measurement and evaluation. Construction and classification of tests. Criteria of test evaluation. Assessment of physical fitness, motor fitness, motor ability and motor educability. Skill test for Badminton, Basketball, Hockey, Lawn Tennis, Soccer, Volleyball. Testing psychological variables-Competitive Anxiety, Aggression, Team Cohesion, Motivation, Self Concept. Rules, Officiating and Measurements in the following games: Track and field, Basketball, Ball Badminton, Badminton, Cricket, Football, Handball, Hockey, Kabaddi, Kho-Kho, Tennis, Table Tennis, Volleyball.

2. Law

(Degree Standard)

Subject Code: 414

Unit-I: Constitutional Law and Human Rights

Defining Constitution, Constitutional Law, Constitutionalism, Transformative Constitutionalism – Constitutional Conventions - Salient features of the Indian Constitution, Concept of State – Writs - Judicial Review – Fundamental Rights – Directive Principles of State Policy–Fundamental Duties – Contractual and Tortious liability of the State – Compensatory Jurisprudence – Services – Administrative Tribunals – Right to Information – Role of Judiciary and Human Rights – National and State Human Rights Commissions.

Unit-II: Jurisprudence

Evolution of Law – Ancient India, Greek and Roman Civilization – Law, Morals, Ethics and Justice – Nature of law – Functions of Law - Rule of Law - Authority - Autonomy - Anarchy - Obligation - Opinion -

Dictum – Law as a Social Fact - Nature and Scope of Jurisprudence – From Police State to Welfare State.

Schools of Jurisprudence – Analytical – Historical – Philosophical – Sociological - Western Thoughts and Indian Jurisprudence – Social Transformation and Social Justice - Local Law & Global Law - Civil Law & Common Law - Cultural & Technical aspects - Micro & Macro aspects.

Definition of Law – Kinds of Law – Nature and Functions of State – State and Sovereignty – Relationship with Law and State - Sources of Law – Classical and Modern Sources – Convention, Custom, Legislation, Precedent and its kinds – Stare Decisis, Ratio Decidendi and Obiter Dicta - Administration of Justice – Complete Justice – Theories of Justice.

Meaning, Definition and kinds of Rights and Duties – Jural Correlatives and Jural Opposites - Person and its kinds – Status and Theories of Corporate personality - Title and its kinds – Ownership– meaning and its kinds – Possession – meaning and its kinds - Liability – meaning and its kinds – Negligence – meaning and its kinds – Obligation–meaning and its kinds – Law of Procedure – Elements of Judicial Procedure – Evidence - Property – Meaning and its kinds.

Application of Law and Interpretation of Law - Codification of Customary Law and Enforcement mechanism – Writ Remedies – Public Interest Litigation – Justice Delivery System – Judicial Activism and Judicial process.

Unit-III: Law relating to Industrial Relations

Industrial Disputes Act, 1947 – Definitions – Industry, Industrial Dispute, Workman – Appropriate Government - Authorities – Investigation and Dispute Settlement machineries – Conciliation - Arbitration – Adjudication – Reference of disputes – Conciliation Board – Conciliation Officer – Labour Court – Tribunal, National Tribunal – Court of Inquiry – Award–Settlement – powers of the adjudicatory authorities - Strike, Lock-out - Lay-off, Retrenchment, Closure and Transfer of undertaking - Unfair Labour Practices - Recovery of money due from an Employer – Penalties.

Trade Unions Act, 1926 – Definitions – Registration of Trade Unions – Members – Office Bearers – Rights and Liabilities – Privileges and Immunities – Recognition of Trade Union.

Industrial Employment (Standing Orders) Act, 1946– Appointment, Jurisdiction, Powers and Duties of Certifying officers – Procedure for certification of Standing Orders – Operation and Binding Effect of Certified Standing Orders – Modification – Appeal – Registration of Standing Orders – Temporary Application of Model Standing Orders – Interpretation of Standing Orders - Subsistence Allowance.

Misconduct – Domestic Enquiry and Disciplinary Proceedings – Appropriate Relief in case of Termination, Discharge, Dismissal.

Unit-IV: Law relating to Wages

Payment of Wages Act,1936 – Definitions - Obligations of the Employer–Deductions – Authorities– Settlement of Claims – Inspectors – Powers –Offences and Penalties.

Minimum Wages Act, 1948– Definitions – Fixation and Revision of minimum rates of wages – Methods – Committees and Advisory Boards – Settlement of Claims - Inspectors – Offences and Penalties.

Payment of Bonus Act, 1965– Definitions – Coverage – Kinds of Bonus – Eligibility and extent of bonus – Calculation of Bonus – Available and Allocable surplus – Set on and Set off – Forfeiture of Bonus – Recovery of Bonus – Powers and Functions of Inspectors.

Equal Remuneration Act, 1976– Definitions – Duty of employer – Work of same and similar nature –

Advisory Committee - Hearing and deciding claims and complaints – Inspectors – Penalties.

Unit-V: Law relating to Social Security

Employees' Compensation Act, 1923 – Definitions – Liability of the employer to pay compensation – Personal injury– Accident - Arising out of and in the course of employment – Doctrine of Notional Extension –Occupational disease – Notice and Claims –Determination and Distribution of Compensation – Commissioner – Powers and Functions.

Employees' State Insurance Act, 1948 – Definitions – ESI Corporation – Standing Committee – Medical Benefit Council – ESI Fund – Contributions – Benefits – Adjudication of Dispute and Claims – Penalties.

Employees' Provident Funds and Miscellaneous Provisions Act, 1952 – Definitions – Central and State Board of Trustees - Provident Fund Scheme – Family Pension Scheme – Deposit Linked Insurance Scheme – Contributions – Determination of Money due from Employees - Authorities under the Act – Powers and Functions – Offences and Penalties.

Maternity Benefit Act, 1961 – Definitions – Eligibility – Maternity Benefit and certain other benefits under the Act – Notice of Claim – Prohibition against Dismissal and Wage Deduction – Inspectors – powers and duties.

Payment of Gratuity Act, 1972 – Definitions – Payment of Gratuity – Eligibility – Amount of Gratuity – Forfeiture of gratuity - Determination of gratuity amount – Recovery of gratuity – Compulsory Insurance - Controlling authority – Offences and Penalties.

Factories Act, 1948 – Definitions – Registration – Provisions relating to Health, Safety and Welfare - Special provisions relating to hazardous processes – Working hours of Adults – Regulation of employment of women and children – Annual leave with wages – Penalties and Procedure.

Motor Transport Workers Act, 1961 – Definitions, Registration of motor transport undertakings – Inspectors – Certifying surgeons – Welfare and Health – Hours and Limitation of employment – Employment of young persons - Wages and leave – Penalties and Procedure.

Unit-VI: Administrative Law

Introduction to Administrative Law – Role of State from Laissez-Faire to Welfare State – Definition, Nature and Scope of Administrative Law - Relationship Between Administrative Law and Constitutional Law – Rule of Law - Doctrine of Separation of Powers - System of checks and balances –Classification of Administrative Actions.

Delegated Legislation – Need for Delegated Legislation – Delegated Legislation in India – Pre and Post Constitutional Period – Constitutionality of Delegated Legislation – Essential Legislative Function – Permissible and impermissible limits of Delegated Legislation - Control over Delegated Legislation – Judicial, Procedural and Legislative Control.

Need for Administrative Adjudication - Reason for growth of Administrative Tribunals - Procedure and powers of Administrative Tribunal – Tribunal under Constitution – High Court's Superintendence over Tribunals – Administrative Tribunals under Administrative Tribunals Act, 1985.

Principles of Natural Justice – Concept - Rule against Bias - Audi Alteram Partem – Exceptions to the Rule of Natural Justice

Judicial Review and Liability of the State - Judicial Review of Administrative Action through Writs - Kinds of Writs - Grounds for issue of Writs - Administrative Discretion - Nature and need of Administrative discretion - Grounds and Extent of Judicial Review of Administrative discretion – Doctrine of proportionality – Privileges and Immunities of Government in Legal Proceedings – Privilege to withhold documents – Miscellaneous Privileges of the Government - Notice, Limitation, Enforcement of Court Order - Binding nature of Statutes over the States action – Promissory Estoppel - Doctrine of Legitimate Expectation – Right to Information – Liability of State in Torts and Contracts.

Maladministration and Alternative Remedies - Ombudsman in England - Ombudsman in India – Lokpal – Lokayukta in States - Central Vigilance Commission.

Public Undertakings - Rights, Duties and Liabilities of Public Corporations - Controls over Public Corporations, Government Control, Parliamentary Control, Judicial Control, Public Control – Role of Ombudsman in Public Undertaking.

Unit-VII: Law of Contracts and Transfer of Property Act

Essentials of Contracts – Valid, Void, Voidable - Discharge of Contracts – Quasi Contracts Damages – Compensation – Indemnity – Guarantee – Bailment – Lien – Partnership Act and Limited Liability Partnership - Specific Relief Act.

Mortgage – Definition and Kinds – Rights and Liabilities of Mortgagor and Mortgagee – Doctrine of Equity of Redemption – Collateral Advantages – Doctrine of Marshalling, Contribution and Subrogation – Charge & Lease – Differences.

Unit-VIII: Company Law & Banking Law

Companies Act, 2013 - Definition - Characteristic of a Company - Types of Companies - Formation of a Company – Memorandum of Association, Articles of Association – Registration of charges – Formation of CSR Committee – Management of the company – AGM – Ordinary resolution & Special resolutions - Appointment & Qualification of Directors - Meeting of the Board and its powers – Quorum of the Board - Appointment of independent Directors – Duties of Director – Key Managerial personnel and promoter - Powers of Shareholders - Norms for accepting deposits from the Public – adjudicatory powers of Official Liquidator – procedure for merger and amalgamation – procedure for merging foreign company with an Indian company - process of rehabilitation and liquidation of the companies in case of financial crisis - Winding-up– Winding-up by Tribunals – Voluntary Winding-up.

National Company Law Tribunal and Appellate Tribunal.

Banking Law – Banker and Customer – Rights and Duties of Banker – Law relating to Loans, Advances and Investments by Banks.

Negotiable Instruments Act, 1881 - Definition and Characteristics – Parties to Negotiable instruments – Discharge and dishonor of instruments – Liability – Cheques – Civil and Criminal Liability for dishonor of cheque under Sec.138 to Sec.142 of the Amended Negotiable Instruments Act.

State Financial Corporation's Act, 1951 (SFCs Act) - Important Definitions viz., Board, Development Bank, Financial Corporation, Industrial concern - Powers and Duties of the Board – Rights available to Financial corporation to enforce securities in case of default - Power to call for repayment before agreed period - Special provisions for enforcement of claims by Financial Corporation - Procedure of District Judge in respect of applications –Recovery of amounts due to the Financial Corporation as an arrear of land revenue.

The Securitisation and Reconstruction of Financial Assets & Enforcement of Security Interest [SARFAESI] Act, 2002 - Important Definitions – Brief overview of the SARFAESI Act – Applicability of the SARFAESI Act - Features of SARFAESI Act – Procedure of the SARFAESI Act – Methods for recovery under SARFAESI Act – Enforcing security interests, i.e., seizing the assets pledged as collateral security for the loan – Significance of the SARFAESI Act – Shortcomings and lacunae in the SARFAESI Act – Central Registry - Recent amendments in SARFAESI Act.

Recovery of Debts and Bankruptcy Act, 1993 - The Debts Recovery Tribunals [DRTs] and Debts Recovery Appellate Tribunals [DRATs] - Jurisdiction, Powers and Authority of Tribunals – Procedure of Tribunals – Recovery of Debts determined by Tribunal – Insolvency and Bankruptcy Code, 2016.

Unit-IX: Procedural Law

Plaint, Written Statement – Suits in General – Admission – Execution – Reference, Review, Revision – Brief History about the Criminal procedure code – definition – Classes of Criminal Courts – Processes to compel appearance – Summons, warrant of arrest – Jurisdiction of Criminal Courts in Inquiries and Trials – Trial Procedure – Appeals, Reference in Criminal Cases – General provisions regarding execution – Levy of Fine – The Contempt of Courts Act, 1971.

Unit-X: Other Laws

Penal Code – General explanations – General exceptions – offences against property.

Indian Evidence Act, 1872 – Scope, object and applicability of Indian evidence act and exclusion – Relevance of facts and admissibility of facts – Facts which need not be proved – Judicial notice – Burden of Proof – Types of evidence – presumptions.

Family Law in India – Law of Marriage and Divorce: Hindu, Muslim & Christian Law and Recent Developments – Law of Adoption – Hindu Adoption with Special Reference to the Juristic Concept and Development of Case Laws – Changes brought by Hindu Adoption and Maintenance Act, 1956 – Hindu Minority and Guardianship Act – Maintenance – Contemporary Changes – Muslim Law of Legitimacy – Acknowledgement of Paternity.

Motor Vehicles Act, 1988 – State Transport undertakings – Accident Claims Tribunals – No Fault Liability – Offences, Penalties and Procedure, Insurance of Motor Vehicles against third party risks – Recent amendments.

Consumer Law - Consumer Protection Act and its developments - Consumer, Complaint, Complainant – Consumer Rights – Filing of Complaints – Consumer Redressal Forums – Jurisdiction, Powers and Functions – Recent Amendments.

3. Financial and Cost Accountancy (Post Graduate Degree Standard)

Subject Code: 434

Unit – I: Accounting

- Accounting Standards – GAAP - AS - applicability, interpretation, scope and compliance-IFRS-Ind AS 2, 10, 115, 16, 21, 20, 23, 37 & 38.
- Company Accounts - Presentation of Financial Statements as per Schedule III of Companies Act 2013 - Statement of Profit or Loss, Balance Sheet, Change in Equity, Cash flow statement

- Accounting of Banking, Electricity and Insurance Companies
- Accounting for Cooperative Societies
- Branch and Departmental Accounts (including foreign branches)
- Accounting for non-profit organisations and incomplete records
- Computerised Accounting System (ERP features and advantages)

Unit – II: Auditing

- Nature and scope and significance of auditing
- Audit Engagement, Audit Programme, Audit working papers , Audit notebook audit evidence and audit report
- Internal check, internal control and internal audit- industry specific
- Reporting requirements under companies act - report vs certificate, contents of the report and qualifications in the report.
- Cost audit and Secretarial audit
- Auditing of different types of undertaking - education, hospitals, cooperative societies, trusts.

Unit – III: Financial Management

- Meaning-objectives -scope of financial management
- Sources of Funds- Introduction of Financial Markets- Capital & Money Markets
- Tools for Financial Analysis - Ratio, Funds flow analysis, Cash flow analysis
- Cost of Capital, Capital Structure and Leverages
- Working Capital Management- Financing - Cash, Inventory, Receivables and Payables
- Capital Budgeting.
- Risk Management - risk measurement- risk analysis- Value at Risk(VAR)- Capital Adequacy Norms & Income Recognition Norms (NPA) in NBFCs.

Unit – IV: Taxation

- Direct Taxation- Residential Status- Heads of Income and Computation of Total Income under various heads- assessment of income of different persons - TDS/TCS/Advance Tax- Income Computation and Disclosure standards (Basic Concepts only) - Taxation as applicable to Government undertaking and Cooperative Societies. Due dates and compliances. Effects of non compliance and penalty. Tax audit provisions under I.T. Act
- Indirect Taxation- Canons of Taxation- Customs Law - Goods and Services Tax (GST) - CGST- SGST-IGST- Cess - Registration - Supply- Time of Supply- Value of Supply- Place of Supply- E-Invoicing, E-Way Bill, Input tax credit- Reverse Charge Mechanism (RCM) - Payment of Taxes, Penalties.

Unit – V: Commercial Law, Industrial Law & Company Law

- MSME Act 2006.
- Laws and Regulations relating to Cyber Security and Data Protection.
- Factories Act
- Payment of Gratuity Act
- Employees Provident Fund Act 1952
- Employees State Insurance Act 1948
- Payment of Bonus Act 1965

- Minimum Wages Act 1948
- Companies Act 2013-Promotion - Formation and related procedures – Types – Appointment and duties of Directors, Loans and Deposits, CSR, Salient features of Insolvency and Bankruptcy Code.

Unit – VI: Management Accounting

- Introduction to Management Accounting - Relationship between Management accounting and cost accounting- Decision Making tools
- Analysis and Interpretation of Financial Statements
- Learning Curve - concepts and its application

Unit – VII: Cost Management

- Life Cycle costing
- Target Costing
- Kaizen Costing
- Value analysis and Engineering
- Throughput Costing
- Business Process Re-engineering
- Back flush costing
- Activity Based Costing (ABC).

Unit – VIII: Decision Making Techniques

- Marginal Costing - CVP analysis - Profit Volume Graph- Decision involving alternative choices - Make or Buy; Evaluation of Orders; Multiple scarce: Product sales
- Pricing Decisions - New Product pricing- use of costs in pricing - sensitivity analysis - monopoly pricing - competitive pricing- Transfer pricing - Costing of Service Sectors
- Variance Analysis and Reporting- Material, Labour, Overheads, Turnover and Profit.

Unit – IX: Performance Evaluation & Improvement Tools

- Balanced Score Card
- Supply Chain Management
- Key Performance Indicators (KPI) like ROI, Economic Value Added (EVA).
- Bench Marking
- Six sigma, Statistical Quality Control
- Plan-Do-Check Action
- Management Information Systems (MIS)
- Total Productivity Management (TPM) and Total Quality Management (TQM)
- SWOT analysis
- Profitability Analysis.

Unit – X: Business Valuation

- Meaning of Value, Valuation and Business Valuation
- Valuation Methods - Non Discounted cash flow method- Discounted Cash Flow Method - Free Cashflow Method, Net Present Value Method (NPV)- Profitability Index Method(PI) - Internal Rate of Return Method (IRR)
- Valuation of Inventory

- Valuation of Investments
- Valuation of Intangibles
- Valuation of Human Resources
- Valuation of Equity

4. Agriculture (Post Graduate Degree Standard)

Subject Code: 285

Unit- I: Crop Production Principles and Practices

Weather and crop production – Agro – ecological zones and geographical distribution of crop plants in Tamil Nadu Cropping systems – different types and their importance in food production - Package of practices followed for field crops and cropping systems in Tamil Nadu - Production technologies for ornamentals, vegetables, fruits, spices, Plantation crops, indoor and Medicinal plants - Role of growth regulators in vegetables and fruit production.

Unit - II: Water and Weed Management Principles and Practices

Water Management - Integrated water management - common area management - Different efficiencies in irrigation management-Irrigation management under constraints of irrigation water. Weed management - Important weeds and their distribution in Tamil Nadu - Integrated weed management practices.

Unit - III: Cropping Systems and their Management

Tillage and Dry land agriculture - Tillage Management under wet and dry land agriculture water harvesting techniques - Technologies for increasing agricultural production in rainfed agriculture. Agroforestry - Waste land development: Problems and Prospects in Tamil Nadu-Farm forestry, Agroforestry, Social forestry, Natural forestry.

Unit - IV: Soil Management for Sustainable Agriculture

Soil types of Tamil Nadu and their important physico - chemical properties and their management-problem soils - management - soil fertility management - Integrated Nutrient management.

Unit – V: Seed Production-Principles, Practices and Policies

Seed production in Vegetatively propagated crops - Seed processing – Dormancy Seed treatment - Seed pelleting - Seed Certification - Certified seed production - Seed Act, New seed policy - seed storage - seed industry - Management of physiological disorders in crop plants for improving seed health and quality.

Unit - VI: Principles and Practices in Crop Improvement and Crop Biotechnology

Germplasm - crop genetic resources – Innovative breeding methods such as Mutation breeding - Marker assisted selection and breeding - Transgenic technology and applications.

Unit - VII: Principles and Practices in Pest Management

Pest - Definition – categories of pests including invasive pests - Pests control and pest management - natural, artificial – IPM – Principles, components and integration - Ecological aspects of IPM – various IPM methods - IPM for important pests and nematodes of crops - Role of parasitoids, predators, and entomopathogens (NPV, Bt, Fungus) in IPM – Bio intensive and biotechnological pest management

methods -Store grain pest management.

Unit - VIII: Principles and Practices in Plant Disease Management

Bacterial, fungal and viral diseases in major crops – Disease Surveillance – Assessment and forecasting integrated disease management for important plants – Integrated Disease management – Role of antagonistic organisms. Biotechnological approaches in disease management.

Unit - IX: Farming Systems and Management

Farming systems-Integrated farming systems - Farm planning and budgeting. Farm business management - farm management - principles and decision making - Management of resources - land, labour, capital and machinery -Farm financial management - Agricultural marketing management - world trade concept - economic liberalisation – GATT – IPR issues in agriculture.

Unit - X: Transfer of Technology

Use of modern agricultural information systems – ICT for effective Transfer of technology – importance of ToT in agricultural development - Principles of farm journalism - participatory technology development.

5. Statistics (Degree Standard)

Subject Code: 418

Unit I: Descriptive Statistics

Uses, scope and limitations of Statistics - Collection, Classification and Tabulation of data - Diagrammatic and Graphical representations - Measures of location, dispersion, skewness and kurtosis – Correlation and regression – Curve fitting – Linear and quadratic equations by the method of least squares.

Unit II: Probability Theory

Probability - Addition, Multiplication and Baye's Theorems and their applications. Tchebychev's inequality - Random variables – Univariate and Bivariate – Probability distributions – Marginal and conditional distributions – Mathematical expectations – Moments - Moment generating functions – Characteristic function and cumulant generating functions.

Unit III: Probability Distributions

Discrete distributions – Binomial, Poisson, Geometric and Hypergeometric Continuous distributions – Uniform, exponential, normal, Gamma and Beta - Sampling distributions and standard error - student's 't', Chi-square and F statistic – Distributions and their applications.

Unit IV: Estimation Theory

Estimation – Point estimation – properties of estimators - Neyman Fisher Factorization theorem, Cramer–Rao inequality, Rao–Blackwell theorem, Lehmann-Scheffe theorem (without proof) –MLE and method of moments estimation – Minimum Chi-square – Interval estimation for population mean and variance based on small and large samples.

Unit V: Tests of Hypotheses

Hypothesis testing – Null and Alternative – Types of errors – Level of Significance - Power of test, Neyman Pearson lemma, UMP and Likelihood ratio tests, Test procedures for large and small samples – Independence of attributes, Chi-square test – Goodness of fit.

Unit VI: Sampling Theory and Design of Experiments

Simple random sampling – Stratified, systematic, cluster (Single stage) - Estimation of mean and variance in SRS – Sample Survey Organisation – CSO and NSO – Sampling and non-sampling errors.

Analysis of Variance – Principles of design - CRD, RBD and LSD – Factorial experiments 2^2 , 2^3 and 3^2 (without confounding) - Missing plot techniques.

Unit VII: Statistical Quality Control and Operations Research

Concept of SQC – Control charts – \bar{X} , R, p and np charts - Acceptance sampling plan – Single and double – OC curves, ASN, ATI and AOQ - Attributes and Variables plan.

OR Models – Linear Programming problems – Simplex method - Primal and dual – Transportation and Assignment problems – Network, CPM and PERT.

Unit VIII: Time Series and Index Numbers

Time series – Components of time series – Trend and Seasonal Variations - Determination and elimination.

Index Numbers – Construction and uses – Simple and weighted index numbers – Reversal tests – Construction and uses of cost of living index numbers.

Unit IX: Vital Statistics

Vital Statistics – Importance-Collection - Mortality and its measurements -Life table construction and uses – Fertility and its measurements.

Unit X: Statistical Computing using MS-Excel and SPSS

Introduction to MS-Excel – MS-Excel Options using Excel Shortcuts - Link the Data in Rows, Columns and Sheet - Functions: Logical Functions - Math and Statistical Functions – Charts-Plotting Density Function and Distribution Function. Understanding on the usage of Statistical Package SPSS.

6. Economics (Degree Standard)

Subject Code: 416

Unit-I: Micro Economics

Definitions and Scope of Micro Economics – Importance of Micro Economics - Is Economics Positive or Normative - Law of Demand - Utility Analysis - Elasticity of Demand - Theory of Consumer Behaviour – Consumer Equilibrium - Consumer Surplus – Indifference Curve Analysis – Theory of Production - Definition – Production Function – Factors of Production – Least Cost Combination – Marginal Rate of Substitution – Laws of Returns – Returns to Scale – Producers Equilibrium – Producers Surplus – Economics of Scale – Cost and Revenue Curves in the Short-run and Long-run – Price and Output Determination under different Market Structures – Perfect and Imperfect Competitions – Theory of Distribution – Rent, Wages, Interest and Profit – Welfare Economics – Different concepts of Social Welfare.

Unit-II: Macro Economics

Definition, Nature and Scope of Macro Economics – Circular flow of income - National Income - Definition, Concepts – Computation of National Income - Difficulties in calculating National income. J.B.Says' Law of Market - Keynesian Theory of Employment - Consumption Function and Investment Function - Multiplier - Accelerator - Inflation - Deflation - Trade Cycle.

Unit-III: Monetary Economics

Barter Economy – Evolution of Money - Functions of Money - Classifications of Money- Significance of Money in Modern Economic life, Value of Money - Quantity Theory of Money – Cambridge Version – Fisher and Friedman - Keynesian Critique - Components of Money Supply and Demand – Functions of Commercial Bank and Central Bank - Monetary Policy - Functions of Money Market - Capital Market.

Unit-IV: Public Finance

Nature and Scope of Public Finance – Principle of Maximum Social Advantage – Theory of Social Goods – Public Expenditure – Causes and Growth – Principles of Taxation – Canons of Taxation – Types of Taxation – Incidence and Shifting of Taxation – Public Debt – Sources and Methods of repayment - Management of Public Debt – Budget – Techniques – Types of Budgets – Fiscal Policy.

Unit-V: International Economics

Importance of International Trade – Basis of Trade – Classical Theory of International Trade - Ricardo's Comparative Cost Theory of International Trade – Heckscher-Ohlin Theory of International Trade - Exchange Rate – Balance of Trade and Balance of Payment – Difficulties – Measures – Free Trade vs Protection – International Liquidity – International Institutions – IMF and SDR – IBRD, WTO – UNCTAD.

Unit-VI: Indian Economy – I

Meaning of Economic Development and Economic Growth - Difference between Economic Growth and Economic Development - Indicators of Development- Features of Indian Economy and Tamil Nadu Economy - Obstacles of Development - Economic and Non-economic Factors - Agriculture - Role and Importance - Low Productivity - Causes – Measures - Green Revolution - Land Reforms - Development in India and Tamil Nadu - Economics of Planning: Meaning and Objectives of Economic Planning – Types of Planning - Five Year Plans in India - Objectives of Indian Plans and Failures & Achievements - Industry – MSME and Large scale Industries - Development in India and Tamil Nadu - Industrial policy – 1948-1991 a n d 2022 - Trade Unions - Industrial Disputes – Measures to settle Industrial Disputes.

Unit-VII: Indian Economy – II

Population – Causes for the growth of Population – Measures to control Population – Population Policy – Poverty – Causes, Alleviation Programmes in India and Tamilnadu – Rural Industrialisation – SIDCO – DIC – Industrial Estates – Role of Transport.

Unit-VIII: Descriptive Statistics

Different data types – Nominal, ordinal, binary and categorical data types

Diagrammatic representation of data – Standard charts, curves diagrams and plots including box plots - Statistical measures – Measures of central tendency – Measures of dispersion - Regression and Correlation coefficient.

Unit-IX: Sampling Methods and Statistical Test

Official Statistical System in India - Sampling versus Census – preparation of schedules and questionnaires - Probability and non-probability sampling method including simple random sampling, systematic sampling, stratified sampling, cluster sampling. Single proportion, equality of two proportions (large sample) - single mean, equality of two population means (small and large samples) - single variance and equality of two variances - independence of attributes.

Unit-X: Ethics in Research

Scientific Methods - Types of Research – Research Process – Research Designs – Basics in Computers.

7. Mathematics (Degree Standard)

Subject Code: 419

Unit-I: Algebra and Trigonometry

Theory of Equations: Relations between roots and Coefficients – Complex roots-Irrational roots – Related roots Transformations of equations- Reciprocal equations.

Summation of Series: Binomial, Exponential and Logarithmic series theorems - Summation of finite series using method of differences - Simple problems.

Expansion of $\sin(x)$, $\cos(x)$, $\tan(x)$ in terms of x – Expansion of $\sin(nx)$, $\cos(nx)$, $\tan(nx)$, $\sin^n x$, $\cos^n x$ - Hyperbolic and Inverse Hyperbolic functions - Simple problems.

Matrix Theory: Symmetric - Skew Symmetric – Hermitian - Skew Hermitian - Orthogonal and Unitary Matrices - Rank of a matrix - Consistency and solutions of Linear Equations – Cayley Hamilton Theorem - Eigen values and Eigen Vectors.

Unit-II: Calculus

Differential Calculus: n^{th} derivative - Leibnitz's theorem and its applications - Partial differentiation - Total differentials – Jacobians - Maxima and Minima of functions of two and three independent variables - necessary and sufficient conditions - Lagrange's method – simple problems.

Curvature - radius of curvature in Cartesian coordinates - polar coordinates - equation of a straight line, circle and conic - p-r equations –evolutes - envelopes - Methods of finding asymptotes of rational algebraic curves with special cases.

Integral Calculus: Methods of integration - Properties of definite integrals - Reduction formulae - Simple problems.- Double Integrals - triple integrals - applications to area, surface and volume - Beta and Gamma functions - properties and simple problems.

Unit-III: Differential Equations and Laplace Transforms

First order but of higher degree equations – solvable for p , solvable for x , solvable for y , Clairaut's form – simple problems.

Second order differential equations with constant coefficients with particular integrals for $e^{ax}, x^m, \cos mx, \sin mx, e^{ax} \cos mx, e^{ax} \sin mx$. Method of variation of parameters - Total differential equations - simple problems.

Partial Differential equations: Formation of P.D.E by eliminating arbitrary constants and arbitrary functions – First order P.D.E - complete integral - Singular integral - general integral - Charpit's method - standard types $f(p,q)=0, f(x,p,q)=0, f(y,p,q)=0, f(z,p,q)=0$ and $f(x,p)=f(y,q)$ - Clairaut's form and Lagrange's equations - $Pp+Qq=R$ – simple problems.

Laplace transform - inverse Laplace transform (usual types) - applications of Laplace transform to solution of first and second order linear differential equations (constant coefficients) – simple problems.

Unit-IV: Vector Calculus, Fourier Series and Fourier Transforms

Vector Differentiation: Gradient, divergence, curl, directional derivative, unit normal to a surface.

Vector integration: line, surface and volume integrals - Applications of Gauss, Stokes and Green's Theorems – simple problems.

Fourier Series: Expansions of periodic function of period 2π - expansion of even and odd functions - half range series.

Fourier Transform - Fourier integral transform (Complex form, no derivation) - sine and cosine transforms - simple properties of Fourier Transforms - Convolution theorem - Parseval's identity.

Unit-V: Algebraic Structures

Groups, subgroups, cyclic groups and properties of cyclic groups – simple problems - Lagrange's Theorem - Normal subgroups – Homomorphism - Automorphism - Cayley's Theorem - Permutation groups.

Vector Spaces: Definition and examples - linear dependence and independence - dual spaces - inner product spaces.

Linear Transformations: Algebra of linear transformations - characteristic roots – matrices - canonical forms - triangular forms.

Unit-VI: Real Analysis

Sets and Functions: Sets and elements - Operations on sets – functions - real valued functions – equivalence – countability - real numbers - least upper bounds.

Sequences of Real Numbers: Definition of a sequence and subsequence - limit of a sequence - convergent sequences - divergent sequences - bounded sequences - monotonic sequences - operations on convergent sequences - operations on divergent sequences – superior limit and inferior limit - Cauchy sequences.

Series of Real Numbers - Convergence and divergence - series with non-negative numbers - alternating series - conditional convergence and absolute convergence - tests for absolute convergence - series whose terms form a non-increasing sequence.

Limits and metric spaces: Limit of a function on a real line - metric spaces - limits in metric spaces.

Continuous functions on Metric Spaces: Functions continuous at a point on the real line – reformulation - functions continuous on a metric space - open sets - closed sets - discontinuous functions on the real line.

Rolle's theorem - Law of mean - Fundamental theorems of calculus - Taylor's theorem.

Sequences and Series of Functions: Point wise convergence of sequences of functions - uniform convergence of sequences of functions.

Unit-VII: Complex Analysis

Analytic functions: Functions of a complex variable – limits - theorems of limits – continuity – derivatives - differentiation formula - Cauchy-Riemann equations, sufficient conditions - Cauchy - Riemann equations in polar form - Harmonic functions.

Complex Integrals: Definite integrals – Cauchy's theorem – Cauchy's integral formula – Formula for higher derivatives.

Series expansions: Taylor's series - Laurent's series -Zero's of analytic functions- Singularities.

Poles and Residues: Poles - Residues – Cauchy's residue theorem - Evaluation of improper real integrals - Integrals involving trigonometric functions.

Unit-VIII: Dynamics

Kinematics of a particle – velocity – acceleration - relative velocity - angular velocity -Newton's laws of motion - equation of motion - rectilinear motion under constant acceleration - simple harmonic motion.

Projectiles: Time of flight - horizontal range - range in an inclined plane - Impulse and impulsive motion - collision of two smooth spheres - direct and oblique impact - simple problems.

Central forces: Central orbit as plane curve - p-r equation of a central orbit - finding law of force and speed for a given central orbit -, finding the central orbit for a given law of force.

Moment of inertia: Moment of inertia of simple bodies - theorems of parallel and perpendicular axes - moment of inertia of triangular lamina - circular lamina - circular ring - right circular cone - sphere.

Unit-IX: Operations Research

Linear programming – formulation – graphical solution – simplex method Big-M method – Two-phase method-duality- primal-dual relation – dual simplex method – revised simplex method – Sensitivity analysis. Transportation problem – assignment problem.

Sequencing problem – n jobs through 2 machines – n jobs through 3 machines – two jobs through m machines – n jobs through m machines

PERT and CPM: project network diagram – Critical path (crashing excluded) – PERT computations.

Inventory models: Basic concepts - EOQ models (a) Uniform demand rate infinite production rate with no shortages , (b) Uniform demand rate - Finite production rate with no shortages – Classical newspaper boy problem with discrete demand – purchase inventory model with one price break.

Game theory: Two-person Zero-sum game with saddle point – without saddle point – dominance – solving $2 \times n$ or $m \times 2$ game by graphical method.

Unit-X: Statistics

Statistics: Measures of central tendency – measures of dispersion – skewness- kurtosis.

Sample space: Events - Definition of probability – Addition and multiplication laws of probability – Independence – Conditional probability – Bayes theorem – simple problems.

Random Variables (Discrete and continuous) - Distribution function – Expected values & moments – Moment generating function – probability generating function – Examples. Characteristic function – Uniqueness and inversion theorems – Cumulants - Chebychev's inequality – Simple problems.

Concepts of bivariate distribution – Correlation - Rank correlation coefficient – Concepts of partial and multiple correlation coefficients – Regression - Method of Least squares for fitting Linear, Quadratic and exponential curves - simple problems.

Standard distributions – Binomial, Poisson, Normal and Uniform distributions – Simple problems.

8. Home Science
(Post Graduate Degree Standard)

Subject Code: 341

Unit-I: Food Science and Technology

Composition, nutritive value, changes during cooking of various foods - cereals, legumes, vegetables, fruits, milk and milk products, flesh foods- egg, fish and meat, fats and oils and sugars. Importance of fermented foods, use of enzymes in food industry, genetically modified foods and organic foods.

Unit- II: Human Nutrition

Energy- Unit, Determination of Total energy requirements, Energy balance. Carbohydrate, Fat and Protein in Human Nutrition- Sources, Classification, Functions, digestion, absorption, utilization and metabolism. Significance of dietary fiber, glycemic index, protein quality. Health effects of saturated and unsaturated fatty acids. Vitamins and Minerals in Human Nutrition- Sources, functions and deficiencies and excess of Fat soluble vitamins, Water soluble vitamins, Macro minerals, Microminerals and Trace elements. Significance of antioxidants in human nutrition.

Unit - III: Normal and Therapeutic Nutrition

Physiological changes affecting nutrient needs during pregnancy, lactation, infancy upto old age. Recommended Dietary allowances and meal planning. Nutritional concerns in pregnancy, infancy, early childhood, school going children, adolescents, adults and old age Therapeutic Nutrition- Etiology, symptoms, clinical features and dietary modifications for Fevers, Obesity, Gastrointestinal diseases, Diabetes Mellitus, Renal diseases, Cardiovascular diseases, Cancer and Inborn errors of metabolism.

Unit- IV: Food Microbiology and Food Safety

Contamination and spoilage of plant and animal foods, food borne infection and intoxication. Safe handling of food. Methods of Food Preservation. Food Adulteration nature of adulterants, method of evaluation of adulterants. Food safety- quality analysis, application of HACCP in food safety. Role of national and international agencies in food safety.

Unit- V: Institution and Entrepreneurship Management

Principles and functions of management, tools of management –organization chart, Job Description, Job Specification and Work Schedule. Personnel Management- recruitment, selection and training of employees. Financial management- Elements of cost, cost control and pricing. Labour laws related to employees – Industrial Dispute Act, Factories Act, Minimum Wages Act, Shops and Establishments Act. : Entrepreneur - Definition - Qualities and skills - Functions of an entrepreneur - Motivational and discouraging factors of entrepreneurship. Problems and constraints faced by women entrepreneurs. Assistance by Institutions for entrepreneurs - SSI and SISI, SIDCO. ITCOT, SIPCOT. NABARD and IDBI.

Unit- VI: Public Health Nutrition

Etiology, clinical features and preventive strategies for Under nutrition – PEM, anaemia, Vitamin A deficiency, Iodine deficiency disorders. Over nutrition - Obesity, Diabetes and Cardiovascular diseases. Nutrition Intervention programmes- ICDS, Midday meal programme. Role of National and International Organizations in Health Care. Nutritional Assessment- Anthropometric, Biochemical, Clinical, Diet Survey, Biophysical Methods, Functional Indices and Vital Statistics. Nutrition education- Objectives, Principles and Methods.

Unit- VII: Human Development and Family Dynamics

Pre natal development characteristics of physical, motor, social, cognitive, language and emotional development from infancy to old age. Childhood ailments, characteristics and problems of adolescents, adulthood and the aged. Family- Types of family and family structure in India. Characteristics and functions of the family. Stages and adjustments in family life cycle. Individual roles, rights and responsibilities within the family. Critical family situation. Marriage- motives of marriage, factors influencing marital adjustments. Sex education.

Unit – VIII: Textiles and Fabrics

Art and design in textiles – ancient and modern. Methods of printing- Hand printing- Block, Stencil, batik, tie and dye. Machine printing- Roller printing, screen printing. Dyes- classification. Fabric Construction- weaving, types of weaves. Fabric finishes- basic and special finishes. Care and maintenance of garments.

Unit- IX: Consumer and The Market

Definition, rights and responsibilities of consumer. Types and functions of market, buying practices, buying aids- branding, labeling and packaging. Problems of the consumer. Consumer organizations, consumer redressal, laws for consumer protection, consumer education- need, objectives and methods.

Unit- X: Research Methodology

Objectives and types of research, selection of research problems. Research ethics. Research Design- types, Sampling methods, Tools of data collection, pilot study. Processing of data- coding, classification, editing. Presentation, interpretation and report writing.

9. Psychology (Post Graduate Degree Standard)

Subject Code: 372

Unit-I: Developmental Psychology

Prenatal, Infancy, Childhood – Characteristics, Periods, Hazards, Developmental Tasks. Physical, Cognitive, Social, Emotional, Moral Development
Adolescences - Characteristics, Hazards, Developmental Tasks, Physical, Cognitive, Social, Emotional, Moral Development
Adulthood - Characteristics, Developmental Tasks, Vocational & Marital Adjustment, Hazards,

Physical, Emotional and Social Changes.

Middle age - Characteristics, Developmental Tasks, Vocational & Marital Adjustment, Hazards, Physical, Emotional and Social Changes.

Old age - Characteristics, Developmental Tasks, Hazards, Physical, Emotional and Social Changes, Graceful Aging and Death and Adjustments.

Unit-II: Personality - Theories and Applications

Personality - Definition, Levels of Personality Analysis, Sources of Personality Data, Role of Personality Theory, Personality Assessments

Approaches - Psychodynamic, Dispositional, Biological, Intra-psychic, Cognitive, Experiential, Social and Cultural. Eastern Perspective – Yoga and Hindu Tradition, Zen Buddhism, Sufism and Islamic Tradition. Applications of Various approaches of Personality.

Unit-III : Bio Psychology

Introduction to Neuron and Nervous System – Brain and its functions – Endocrine Glands – Characteristics, Major Endocrine glands, Hormone Characteristics and Functions. State of Consciousness. Physiology of Motivation and Emotions. Research Methods in Bio Psychology.

Unit-IV : Cognitive Psychology

Cognitive Psychology - Nature, History, Cognitive Neuro Science and Applications – Perception - Definition, Nature & Theories. Attention – Processing Capacity in Selective Attention, Models of Selective attention. Pattern Recognition and Consciousness. Memory Structure and Processes – Types and Process of Memory, Theories of neurocognition. Mental Representation – Models, Mental Imagery - and Cognitive Psychology, Cognitive maps, Storing and Retrieval, Theories of retrieval, Forgetting, Cognitive Development - Life Span Development and Theories.

Unit-V: Advanced Social Psychology

Social Psychology – Definition, Perspectives, Social Perception, Social Cognition, Attitudes, Social Identity, Prejudice - Causes and Effects. Interpersonal Attraction - Close relationships, Social Influence, Pro Social Behaviour, Aggression – Nature, cause and control, Groups and Individual behaviour. Social Psychology in Action.

Unit-VI : Health Psychology

Health Psychology – Definition & Scope. Historical Perspective on health & healing. Factors influencing Health. General approaches to health – Models and theories of health, Psychological approaches to health. Health enhancing behaviour - Eating behaviour & health, Maintaining healthy weight, Healthy relationships – Sexuality, Intimacy, Communication, Anger.

Health compromising behaviour- Smoking –Tobacco and its biological & psychological effects, Tobacco related damage to health, quitting smoking and related therapies.

Alcohol – biological and social effect, Use and abuse, Interventions for alcoholism. Stress and Coping – Types of stressors, Theories of stress, types of coping, stress management techniques. Cardiovascular Disease, Psychoneuroimmunology.

Unit-VII: Psychopathology

Mental disorders – Models, Diagnostic classification system. Theoretical approaches of Psychopathology. Assessment – Clinical interviews, MSE, MMSE, Case history, Clinical observations. Tests- Intelligence, Neuropsychological testing, Developmental and Educational testing – Organic disorders – Disorders of childhood and adolescence, Anxiety, Trauma, Stress related and Somatoform disorders, Disorders of adult personality, gender and behaviour -Impulse control disorder, Substance use and addictive disorder, Sexual dysfunctions, Mood- Disorder, Schizophrenia and other psychotic disorder. Ethics in clinical practice.

Unit-VIII: Organizational Behaviour and Human Resource Management

Organizational Behaviour- Definition, Nature & scope, Approaches. Perception, Attitude, Learning, Attribution, Motivation – Definition, theories and applications in organizations. Communication, Leadership and theories, Change process. Group and Teams, Conflict process, Power and politics. Human Resource Management – Definition, Nature and Scope, Human Resource Planning, Job Analysis, Recruitment, Selection and Placement Compensation, Performance and Management, Training and Development, Grievance, Discipline and Risk Management, Recent Trends in Human Resource Practices.

Unit-IX: Counselling and Therapy

Counselling – Origin, Scope and Structure – Steps in Counselling - Factors affecting counselling process, Skills for an effective counsellor –Factors of Counsellee – Early Theories of Counselling - Contemporary Theories of Counselling, Individual Counselling - Nature, Process and Benefits, Group Counselling – Nature, Scope and Limitations – School Counselling - Nature Role of Teacher, School Counsellor, Counselling and School Curriculum, Vocational Counselling - Theories, Process, Counselling in Specific areas – Family, Marriage, Women, Weaker Section, drug addicts, Delinquents – Review of Counselling - Counselling Evaluation, Monitoring, Evaluation - Approaches, Types, Techniques.

Unit-X: Research Methodology

Research - Objectives, Types, Significance, Steps in research process, Ethics in Research. Research problem – Review of literature, Measurement, Variables and Hypothesis, Sampling techniques – Non experimental Method – Observational Research, Interviewing, Focus groups, Survey, Case study. Experimental Method – Single factor design, Factorial Design, Standardization of psychological test. Parametric and Non-Parametric statistics. Qualitative Research Methods and analysis. Reporting research in Psychology.

10. Sociology (Post Graduate Degree Standard)

Subject Code: 368

Unit-I: Introduction to Sociology

Definition and Meaning of Sociology, Basic concepts: Society, Community, Culture, Association, Socialization, Individual and Society, Environment and Heredity, Social Institutions: Family, Marriage, Education, Religion, Caste, Class, and Politics.

Unit – II: Social Processes, Social Change and Social Control

Associative and dissociative processes, Difference between Associative and dissociative processes. Features, causes, sources and impact of social change; Advancement of technology and media for social change, Theories of social change; Meaning, purposes, types, and agencies of social control.

Unit-III: Sociological Theories

Law of Three stages; Social Statics and dynamics, Positivism, Theory of Evolution, Organic Analogy, Social Darwinism, Social facts, Suicide, Division of labour. Social action, ideal types, bureaucracy and *The Protestant Ethic and the Spirit of Capitalism*, Historical materialism, Social Change, Class struggle, alienation. Social structure, Social personality, Structuration and modernisation, deconstruction.

Unit-IV: Rural and Urban Sociology

Rural: Rural - urban contrast. Characteristics of Rural society. Agrarian class structure. Panchayatraj system. Rural development programmes. Rural industries and Rural Entrepreneurs. Skill development of rural entrepreneurs.

Urban: Meaning, Characteristics of urbanisation and its impact. Ecological processes. Urban sociological theories- Karl Marx, Ferdinand Tonnies, Georg Simmel, Max Weber, Robert Park, Louis Wirth and Ernest Burgess, Homer Hoyt, Harris and Ullman.

Unit-V: Sociology of Socially Excluded

Social exclusion- meaning, definition, features; Groups at the risk of being excluded; Three paradigms of social exclusion (solidarity, specialization and monopoly); Agents, forces, and Processes - globalization, international organizations, nation states, elites, excluded groups and individuals. The culture of marginalised communities - SC, ST, Nomadic Castes and Tribes and De-notified Tribes, transgender, religious minorities, differently abled, aged, HIV/AIDS. Constitutional Provisions, Implementation, and Impact on Marginalized.

Unit – VI: Contribution of Indian Social Reformers

Contributions of Mahatma Gandhi, Bharathiar, EVR Periyar, Anne Besant, Raja Ram Mohan Rai, Jyotiba Phule, Savitri Phule, Muthulakshmi, Ambedkar, Mother Teresa.

Unit-VII: Children with Difficult Circumstances

Sex preference, Female Infanticide, Girl child, Neglected, Orphan, Abandoned, Street Children, Child Abuse, Child Trafficking, Child Prostitution, Child Beggary, Child Labour, Children with Disabilities (Cwd), Child Marriage.

Unit-VIII: Constitutional Privileges towards Children

Children Related Policies and Acts: Constitutional Provisions for Children in India; Children in Five Year Plans; National Policy for Children (1974 and 2013); Development and Features of Legislations - Child Care and Protection in India; National policy for children – Salient features, priority areas and gaps. Current policies and trends - Child Welfare; Children Acts – JJ Act, Protection of Children, from Sexual Offences Act (POCSO), 2012, Child Labour (Abolition and Prohibition) Act 1986, The Prohibition

of Child Marriage Act 2006 – Bonded Labour (Abolition) Act 1976, and other relevant acts.

Unit-IX: Affirmative Actions for Child Welfare

Institutional services:- Short-stay homes for needy children from vulnerable sections of the society. Residential facilities for the destitute children. Foster home. Facilities/services for placement of children of unmarried mothers, Juvenile homes.

Non-Institutional services:- Anganawadi, Day-care centers, Crèches, Child Guidance centers, Services through nursery/primary school,

Services for children in need of special care - Schools for mentally retarded children. Schools for blind, deaf and dumb and physically handicapped. Adoption services for destitute children

Unit-X: Children and Stakeholders

Ministry of Women and Child Development: Roles and Functions - Central and State Level Commission for Protection of Child Rights in India; Roles and Functions National Institute of Public Cooperation and Child Development; Powers and functions of Directorate of Social Defence and District Child Protection Office; Roles and Functions of Civil Society and civil society organisations.

11. Child Development (Post Graduate Degree Standard)

Subject Code: 374

Unit 1: Growth and Development

- 1.1. Principles of Growth and Development
- 1.2. Factors affecting growth and Development
- 1.3. Domains of development and its interrelatedness
- 1.4. Heredity - Environment Interaction

Unit 2: Theories of Human Behaviour and Development

- 2.1. Evolutionary and biological theories – Gesell’s maturational developmental theory, Ethological theory, Brofenbrenner’s ecological theory, Vygotsky socio- cultural theory
- 2.2. Learning and behavioural theories – Pavlov’s Classical conditioning, Skinner’s operant conditioning, Watson behaviourism, Bandura’s social learning theory
- 2.3. Language theories – Behaviourist perspective, Nativist perspective and Interactionist perspective
- 2.4. Cognitive theories – Piaget’s Cognitive theory, Information Processing
- 2.5. Psycho-analytic theories – Freud’s psycho-analytic theory, Erikson’s psycho- social theory
- 2.6. Moral development theories – Piaget’s moral theory, Kohlberg’s moral theory

Unit 3: Stages / Periods of Child Development

- 3.1 Five stages of child development and its characteristics – Prenatal, Infancy and Toddlerhood, Early childhood, Late childhood and Adolescence
- 3.2 Havighurst’s Developmental Tasks – Infancy to Adolescence
- 3.3 Concept and importance of developmental milestones

Unit 4: Prenatal Development and Birth

- 4.1 Conception - Structure of Ovum and Sperm, process of fertilization

- 4.2 Prenatal development – the period of ovum, embryo and foetus
- 4.3 Factors influencing / debilitating prenatal development
- 4.4 Genetic counseling- Meaning and importance
- 4.5 Signs and symptoms of pregnancy
- 4.6 Prenatal diagnostic methods – amniocentesis, fetoscopy, chorionic villus sampling, ultrasound, maternal blood analysis, cordocentesis.
- 4.7 Stages of child birth and Types of delivery
- 4.8 Birth complications – Oxygen deprivation, preterm and low birth weight infants, post term infants, still birth

Unit 5: Infancy and Toddlerhood (Birth to Two Years)

- 5.1 Neonates - appearance, adaptations/adjustments; New born reflexes, APGAR Scale
- 5.2 Physical development-body growth, brain development, motor development, perceptual development
- 5.3 Cognitive development-Sensori-motor stage
- 5.4 Language development - receptive and expressive language
- 5.5 Emotional development - development of basic emotions, recognizing and responding to the emotion of others, the emergence of complex emotions, temperament
- 5.6 Social development - Development of attachment and its four phases

Unit 6: Early Childhood (2-6 Years) and Late Childhood (6-12 Years)

- 6.1 Physical development - body growth and brain development, motor development, handedness
- 6.2 Cognitive development - The Preoperational stage and the Concrete Operational stage
- 6.3 Language development - vocabulary development, grammatical development, pragmatics, Bilingualism, Multilingualism
- 6.4 Emotional development – self understanding, changes in complex emotions, improvements in emotional self-regulation, understanding others
- 6.5 Social development - peer relations, peer groups, friendships
- 6.6 Foundations of moral development and sex differences
- 6.7 Habit formation - principles, importance and methods
- 6.8 Common behaviour problems during childhood period

Unit 7: Early Childhood Care and Education (ECCE)

- 7.1 ECCE- Definition, Concept, Significance, Objectives and Scope of (ECCE)
- 7.2 Current trends in ECCE - Global and Indian context
- 7.3 Types of ECCE settings
- 7.4 ECCE professionals - Professionals working with children and working for children, prerequisites and characteristics of professionals
- 7.5 Play and its characteristics. Role of play in overall development of children and teacher's role.
- 7.6 Importance of Parental involvement in Early learning

Unit 8: Adolescence

- 8.1 Physical development - Puberty, Growth spurt, Primary and secondary sexual characteristics, Psychological impact of physical changes
- 8.2 Cognitive development - Formal operational thought
- 8.3 Psychological development - Self concept, Self esteem, Interest and Attitude

- 8.4 Identity paths according to James Marcia
- 8.5 Moral development - Sex differences,
- 8.6 Social development - Peer relationship and friendship, Parent adolescent relationships and conflict, Sibling relationship
- 8.7 Physiological and psychological problems and challenges, management strategies

Unit 9: Children with Diverse Needs

- 9.1 Definition, classification (RPWD Act), causes, characteristics and remedial measures for children with special needs
- 9.2 Definition, classification and characteristics, enrichment measures for Gifted children
- 9.3 Children in difficult circumstances – Child prostitutes, trafficked children, street children, refugee children and child victims of war/natural calamities, Juvenile delinquents, Abused children
- 9.4 Gender and societal disparities – Infanticide, foeticide, girl child, children of prostitutes and AIDS affected parents

Unit 10: Guidance and Counselling

- 10.1. Meaning, definition and scope and approaches of guidance and counseling
- 10.2. Physical and mental health counselling
- 10.3. Educational, vocational and career guidance
- 10.4. Child welfare and advocacy

12. Food and Nutrition (Post Graduate Degree Standard)

Subject Code: 380

Unit-I: Human Physiology

a) Cell and its Organelles – structure and functions.

Tissues – classification & functions.

Blood – composition, functions of blood and blood cells, blood groups & blood coagulation.

Cardiovascular physiology – structure and functions of heart, homeostasis of circulating body fluid, ECG, Echocardiogram, ECMO - Extracorporeal Membrane Oxygenation.

b) Respiratory system – Organs, structure & functions, Exchange of gases in lungs and tissues.

Endocrine system – pituitary, Thyroid, pancreas, adrenal medulla, adrenal cortex – hormones & functions.

Gastrointestinal physiology – parts, functions, digestion & absorption.

c) Excretory system – Kidney and nephron – structure & Functions, skin – structure & functions.

Reproductive system – Male & female reproductive organs & functions, menstrual cycle. Development of foetus.

d) Nervous system – Central nervous system & peripheral nervous system & functions.

Special senses – Eye, Ear, Nose, Tongue – structure & functions.

Immune system – Type of immunity – innate & acquired, antigen – antibody reaction, cell mediated immunity.

Unit II: Nutritional Biochemistry

a) Carbohydrates – classification, structure, functions, digestion & absorption. Metabolism – glycolysis, TCA, cycle, HMP shunt, Glycogenesis, glycogenolysis, Gluconeogenesis. Dietary sources, deficiency & Toxicity. Inborn errors of metabolism

Energy – BMR, direct & indirect calorimetry,

b) Lipids – classification, structure, characteristics, functions. Digestion, absorption & Metabolism

Fatty acids – types, synthesis & catabolism.

Dietary sources, deficiency & toxicity, Inborn errors of metabolism

Proteins & aminoacids – classification, structure, functions, digestion & absorption. Synthesis of proteins and catabolic pathways. Dietary sources, deficiency & Toxicity. Inborn errors of aminoacid metabolism

Nucleic acids & Nucleotides – Types, structure, functions & Metabolism.

c) Vitamins – Water soluble & fat soluble vitamins – structure, functions, absorption, storage & transportation. Dietary sources, deficiency & Toxicity.

Minerals – Macro & micro minerals – functions, Dietary sources, deficiency & Toxicity. Water & Electrolyte balance.

Fiber – Types, Functions and Sources.

d) Biochemical Techniques – Chromatography, Electrophoresis, Colorimetry, Spectrophotometry, Flame photometry. HPLC, AAS –Instrumentation, principles & applications.

Interpretation of the results of blood and urine analysis.

Unit III : Food Safety and Food Microbiology

a) Micro organisms important in food microbiology – moulds, yeast, Bacteria, viruses and algae.

b) Contamination and spoilage of foods – cereals & cereal products, sugar & sugar products, vegetables and fruits, meat and meat products, fish, sea foods, egg, poultry, milk & milk products.

c) Preservation of foods – Principles, Methods – High temperature, Low temperature, use of chemicals, radiation. Application of ohmic heating and high pressure processing.

d) Food borne illness – Bacterial and non bacterial food poisoning and infection.

Food safety – food sanitation and Hygiene, Examination of water for bacteria. Type of Food hazards, HACCP Principles.

Unit IV : Food Service Management

a) Principles of management – Functions, tools of management – Tangible and intangible resources.

b) Organisation chart - structure, function, work improvement techniques. Personal management – concept & approaches of personal management, Recruitment, orientation, training and performance appraisal.

c) Resource management – classification, characteristics, factors affecting use of resources, resource conservation.

d) Leadership – importance, style, skills of administrators. Communication -methods, importance and barriers to communication.

Unit V: Research Methodology and Applied Statistics

a) Research – Meaning, objectives, Types, Significance. Research Problem – Meaning, selection, Techniques involved.

Research Design – Meaning & Types, Features of a good research design

b) **Data collection** – Primary and Secondary data – collection techniques.

Data preparation—Editing, coding, classification, tabulation, diagrammatic & graphical representation, Data cleaning & adjusting.

c) **Sampling design** – pilot study, Types, Methods of survey – sample and census. Research ethics, ICMR guidelines for human subjects and animal related studies. Plagiarism check.

d) **Descriptive statistics** – Measure of Central Tendency, Measures of dispersion.

Correlation – Types, Interpretation of correlation co-efficient. Regression Analysis, Association of Attributes.

Probability – Rules and application.

Theoretical distributions – Normal & binomial distributions – characteristics & applications.

Test of significance – Procedure, Small & Large sample tests - t-test, F-test, chi square test, ANOVA. SPSS software in data analysis.

Unit VI : Advanced Food Science

a) Cereals, Pulses and Millets

Structure, Composition, Processing and Nutritive Value Rice and Rice Products, Starch Cookery – Dextrinisation and Gelatinisation Milling- Dry and Wet milling - Enrichment, Parboiling and Baking.

Wheat and wheat Products Gluten Formation and Factors affecting gluten formation

Pulses – milling, Soaking, Germination, Decortication, Fermentation, Pulse protein concentrates, toxic constituents in Pulses.

Millet and millet Products - cleaning & Dehusking, Milling and Sorting and parboiling, Bioavailability and toxicity

b) Sugar and Jaggery

Properties, Stages of Sugar Cookery, Crystallisation, Crystalline and Noncrystalline.

Palm and Sugarcane Jaggery – Economic importance and Health benefits.

c) Vegetables, Fruits, Fats and oils, Nuts and oil seeds

Composition, effect of Cooking on pigments – chlorophylls, Carotenoids, Anthocyanins, Flavanoids, Tannins and Betalins.

Processing and preservation of vegetables and fruit products - Freezing, Heat Blanching, Canning, Ascorbic acid dip, Sulphur dioxide Dip, Sugar syrup, Vacuum treatment concentration and drying. Nutritive value and Browning reactions of fruits and vegetables.

Fats and oils – role of fat in cookery, rancidity, changes of fat on heating.

Nuts and oil seeds, Nutritive value, importance, classification, toxins

d) Selection, processing, preservation, transportation, composition, Nutritive value, changes during cooking and spoilage of

Meat and Meat products, Eggs and Poultry, Fish and other sea foods, Milk and Milk Products

e) Recent trends in Food Science and Technology

Genetically Modified Foods, Biofortification, Food Packaging and Food safety, Space Foods and Nano Foods

Unit VII – Community Nutrition

a) Nutrition and National Development

Meaning of Community, Family, Village and Block. Definition of Nutrition, Optimum Nutrition, Malnutrition – Under Nutrition and Over nutrition. Nutritional and National Development. Nutritional problems confronting India. Human Life cycle – RDA for Indians. Prevalence of Malnutrition in India. National and International Organizations in Combating Malnutrition in the Community. WHO, FAO, UNICEF, ICMR, ICAR, NIN, ICDS, SNP, AMP, CFTRI, Role of PHC and ESI in health care.

b) Assessment of Nutritional status in the community

Direct and Indirect Methods. Anthropometry, Biochemical Assessment, Clinical Assessment, Biophysical Examination, Functional Assessment, Dietary Assessment and Vital Statistics.

c) Nutritional Deficiency Disorders

Protein energy Malnutrition, Nutrition and Anemia, Iodine deficiency disorders, Vitamin – A and D Deficiency disorders. Latest Immunisation Schedule.

d) Nutrition Education

Meaning, scope, methods, Teaching Aids used in Nutrition Education, Mass Communication Media used in Nutrition Education, Planning conducting and evaluation of Nutrition education programme.

Unit VIII: Nutrition through Life Cycle

a) Pregnancy preconceptual Nutrition – Physiological changes, energy cont of pregnancy, problems & complications, of nutritional requirement teenage pregnancy, risk factors for poor pregnancy, nutritional problems.

Lactation – Physiology of lactation, efficiency of milk products, nutritional and immunological components of breast milk, myths, special foods and nutritional requirements.

b) Infants – Growth and development, Nutritional requirements, feeding problems in normal and premature infants, weaning, significance, supplementary foods.

Preschool – Nutritional and food requirements, physiological development, neuromuscular, hematological, behavioral characteristics, Malnutrition-vitamin A, PEM, overweight problem.

c) School children - growth, feeding school children, feeding problems, under weight, hyper activity, dental caries, packed lunch and nutritional requirements

Adolescence- Growth and developmental changes, factors affecting menarchial age, peer group influence, psychological problems and challenges.

Malnutrition- anemia, goiter, obesity and nutritional requirements, PCOD and its management.

d) Adult- Nutritional requirements, problems in menopause and its management.

Geriatrics - Physiological and psychological changes, eating problems, meeting nutritional requirements.

Unit IX : Therapeutic Nutrition

a) Introduction to Diet therapy and Therapeutic Nutrition

Diet therapy: Principles of Diet Therapy, nutritional care process, Basic concepts of diet therapy and planning a diet. Therapeutic adaptations of normal diet.

Routine Hospital Diets: clear fluid, full fluid, soft and normal diet, Pre-operative and post-operative diets.

Special feeding techniques – Parenteral and enteral feeding

Dietitian: Role of dietitians in Nutritional care, planning and diet counseling

b) Diseases of GI Tract

Aetiology, symptoms, complications and principles of diet management in peptic ulcer, gastritis, constipation, intolerance, Inflammatory Bowel Disease, Irritable Bowel Syndrome (IBS), Gastroesophageal reflux disease (GERD).

Fevers and infections – Typhoid, Malaria and Tuberculosis – Causes, Symptoms, metabolic changes and dietary management in fevers and infection.

Liver - Nutritional care for diseases of Liver and biliary system: Jaundice, Cirrhosis of liver, Viral Hepatitis, Hepatic Encephalopathy, Role of alcohol in liver disease.

Diseases of Gall Bladder and Pancreas – Cholelithiasis, Cholecystitis, Cholecystectomy, Acute and chronic Pancreatitis – Aetiology, symptoms, complications and principles of diet management

c) Diet in Diabetes Mellitus and cancer

Dietary management of Diabetes mellitus – Prevalence, Types, Etiology and Signs and Symptoms, Factors affecting normal blood Glucose levels, Impaired glucose homeostasis, Diagnostic test for diabetes, Complications of diabetes – macro-vascular and micro-vascular Management of Diabetes, Dietary management of diabetes.

Cancer – Carcinogenesis – pathogenesis and progression of cancer, Types, Symptoms, Diagnosis. Chemotherapy, Radiation and Surgery Etiology clinical signs and symptoms of Kidney diseases – Glomerulonephritis, Nephrotic Syndrome, Acute Renal Failure (ARF), Chronic Renal Failure (CRF), End Stage Renal Disease (ESRD) –Dialysis and kidney Transplant.

d) Dietary management in cardiovascular disease – Etiology, Types, symptoms, complications, diagnostic test and principles of diet management for hyperlipidemia, Hypertension, Atherosclerosis, Ischemic Heart Disease, Congestive Cardiac Failure. Acute and Chronic heart disease.

Role of fat in development of atherosclerosis – High fibre, low fat, sodium restricted diet. Nutrient and drug interaction in cardio vascular diseases.

Diet in surgical conditions and Burns. Classification, Complication, Dietary management

Malabsorption syndrome – Restricted diets – Lactose, Sucrose, gluten etc

Allergies – Food allergy and intolerance – Mechanism, factors influencing, symptoms, tests for allergy, Nutritional care and Elimination and skin disorder

Weight Management

Obesity, Aetiology, assessment, types, complications and principles of diet management.

Under Weight: Aetiology, limitations, complications and principles of diet management

Unit X: Financial and Marketing Management

a) Introduction to Financial and Marketing Management

Nature, Scope and objectives – financial function – profit vs wealth maximization – Roles and responsibilities of a financial Manager / corporate financial officer – Marketing function

Classification of markets - Difference between Marketing and selling – Product, Price, Place, Promotion, People, Process and physical Environment

b) Financial Decisions

Sources and Types of capital - Cost of different types of capital – capital budgeting, cash budgets, break even analysis – Management of working capital

Roles and responsibilities of a Financial Manager, Corporate Financial Manager

c) Capital Investment Decisions

Planning and control of Capital Expenditure – Capital budgeting process -Cost of Capital and its application in Capital Budgeting decisions Pricing Policies – Importance of Pricing, Factors affecting pricing, Wholesale and retail Pricing, Food and Beverage costing and Pricing

Financial Accounting

Simple and double entry book keeping, Management accounting and decision making Working capital Management – Concept – Need and Influencing factors

– Estimation - working capital – Inventories and receivables Management – Management of cash

d) Pricing and Branding

Pricing - Meaning – Objectives of pricing – factors influencing pricing and decisions – Impact on decision making – Procedure for price determination

Branding - Definition – Types – Importance – Merits and Demerits of branding - Difference between branding and labelling – packaging and labelling – Types of labelling – labelling strategies

13. Social Work (Post Graduate Degree Standard)

Subject Code: 370

Unit-I: Social Work Profession

Definition and meaning; historical evolution of Social Work – UK, USA and India; Growth of Social Work as a Profession; Social Work concepts, methods, fields; international and national professional bodies/ forums; status and problems of the profession in India.

Social Work ideologies: socialism, marxism, equality, equity, social justice and humanitarianism; Indian socio-cultural and religious thought, social reforms purusharthas; Gandhian Social Work; contributions of religions- Hinduism, Buddhism, Jainism, Islam and Christianity; Rights based approach.

Philosophy of Social Work Profession – values, beliefs, principles and code of ethics; Social Work theories; International Social Work – basic concepts, Global Agenda and Global standards for practice; Human Rights and Social Work; Constitutional safeguards; India as a welfare state; role and contributions of voluntary organizations, INGOs, NGOs and CSOs.

Unit-II: Fundamentals of Sociology and Psychology

Sociology: Definition, meaning, scope and relevance to social work; basic sociological concepts: Society-meaning, definition and types, structure, features; social institutions; concept of social system and sub system, classification of social systems, culture: concept, characteristics, social stratification, social processes- social control, social change in India, social movements, crime and delinquency; social problems-poverty, inequality, casteism, causes and consequences.

Psychology: Definition, meaning and scope, Psychology and Social Work; lifespan, phases of human growth and development, (Erik Erikson and Freud) needs, tasks and challenges, influence of hereditary and environment; psychological processes for understanding behaviour, intelligence, sensation, emotions, learning, memory, attitudes, behaviour, perceptions and prejudices; life events and their impact on behaviour.

Unit-III: Direct Methods of Social Work Practice-I

Social Case Work: Historical development, CW as a direct method of Social Work, definition and meaning, philosophy, values, principles, skills, components of social case work, case work relationship; empathy, skills in building relationship, transference and counter transference; difference between casework, counseling and psychotherapy for different target groups, the helping process, approaches: Skills-referrals, interview, observation, collateral contact; types of recording, application of CW in various settings; limitations of the method.

Social Group Work: Definition of group, types, and characteristics of groups; Historical development of GW as a direct method in Social Work, definition and meaning, purpose, objectives, values, skills, principles of GW, phases of group work process-group processes and dynamics-stages in group development, the influence of new comers on group processes, isolation, rejection in groups, group-bond, subgroups, clique, dyad, triad, group norms, group membership, group cohesiveness, group pressure, group morale, leadership, team building, decision making, problem solving, conflict management, communication; role clarity in a group; use of sociometry; Group Work models; social goals model, remedial model, reciprocal model, Application in various settings; types of recording in Group Work.

Unit-IV: Direct Methods of Social Work Practice-II

Community Organisation: Definition, philosophy, principles, goals, scope of CO; community as a social system; subsystems; types and characteristics community power structure, community dynamics, evolution of CO as a direct method in social work, community organization models: Rothman- social planning, locality development and social action; Murray Ross-general content, specific content and process objective; process and skills in community organisation.

Social Action: Concept, definition, aims and objectives, scope, social action as a method in social work, paradigm of five elements: causes, change agent, change target, change channels, change strategy, strategies and tactics for social action: channels topology; skills of a social activist, models and approaches to social action: Paulo Freire- Martin Luther King ,Saul Alinsky, social action movements in India- Narmada Bachao Andolan, Chipko movement, Dalit movements, women's movements, Contemporary Social Reforms movement

Unit-V : Indirect Methods of Social Work Practice-I

Social Work Research: Definition, objectives, scope, characteristics and functions– scientific method, concepts, variables, types of research, research as an indirect method of social work, qualitative methods – case study, Ethnography, Grounded, Theory, Content Analysis, Narrative, SWOC; quantitative research Methods-Tools and techniques in qualitative data collection: Observation, focus group discussion, unstructured in-depth Interview; iteration, triangulation and saturation. Mixed Methods: problem formulation: formulation of hypotheses; typology of research designs; ethical issues; sampling: definition, types, techniques: probability and non- probability sampling; sampling errors; data sources; types of data-nominal, ordinal, discrete numeric, continuous, sources of data; methods, tools and techniques of data collection, classification and coding, tabulation, analysis and interpretation–research reporting.

Statistics: Meaning, definition, limitations and uses- frequency distribution- construction of frequency tables—diagrammatic and graphical representation; measures of central tendency – mean, median, mode, measures of dispersion- standard deviation, variance, quartile range, measures of correlation and regression; tests of significance: hypothesis testing; Type I & Type II errors, Level of confidence, degrees of freedom Chi square, ‘t’ test, reliability and validity methods; Scales: Rating scales, Attitude scales—Likert, Thurstone, Guttman; using software for data analysis;

Unit-VI : Indirect Methods of Social Work Practice-II

Social Work Administration: Concept, definition, characteristics, Social work Administration as an indirect method of Social work; Organizational structure, boards and committees: executive: functions and qualities - administrative process: policy formation, planning, decision making, co-ordination, communication; Human Resource Management: selection of staff, orientation, placement, service conditions, promotions, discipline, welfare programmes for staff-financial administration: budgeting, accounting, bookkeeping and fund-raising-office administration: office management and maintenance of records- supervision, evaluation and public relations; Central Social Welfare Board, State Social Welfare Board, Nehru Yuvak Kendra, Ministry of Social Defence Department of Social Welfare; Role of Voluntary Agencies, Board, Trustee, Committees, Executives –Roles and Functions; Laws related to NGOs; Registration of organizations: Tamil Nadu Societies Registration Act 1975, Trust Act 2001, Foreign Contribution (Regulation) Act 1976, Tax Exemptions and Foreign grants; Role and contribution of international funding organizations; Project and Project Cycle Management; Project Proposal Writing, Overview of Logical Framework Analysis; Types and Steps, Format; Fund-Raising (Types, Methods, Skills); Monitoring and Evaluation of Projects.

Unit-VII: Specialization in Health Care and Social Work

Health - definition and concept; Healthcare approaches: patient as a person, psychosomatic approach, holistic approach. Problem assessment process: Rehabilitation, definition, types and principles, levels-prevention, promotion and tertiary; rehabilitation therapies; gender dimensions in disability, rehabilitation in various settings – UN convention on the rights of persons with disabilities; policies and programmes; Community based Rehabilitation.

Community health; definition, health indicators, disease, sickness/illness, definition of public health, changing concepts, primary healthcare: preventive, curative and social medicine. wellbeing, HDI; Communicable and non-communicable diseases: causes, prevention and treatment, Primary Health Care; Health Education; Skills of Social Worker in healthcare.

Concept of mental health; magnitude of mental health problems, changing trends in mental healthcare; psychiatric assessment: common mental disorders (as per ICD 10); mental health and Well Being; definition,

History and scope of psychiatric social work, changing perspectives of psychiatric social work, application of methods in psychiatric settings-theory and models; psychoanalytical, psycho social, transactional analysis, family therapy, crisis intervention, behaviour therapy, rational emotive therapy, group therapy & strengths based approach; counselling: definition, principles, goals, approaches and techniques - CBR and Community Mental Health, Mental Health Act 2018.

Unit-VIII : Specialization in Rural and Urban Community Development

Rural Community development: definition, philosophy, objectives, scope; history of RCD; Rural development: need and importance, approaches, power structure, caste and untouchability, poverty and indebtedness; land reform measures, Farm laws, agricultural laborers, marginal and

small farmers; water shed management;

Development Administration: Organization and administration of rural, tribal and urban development from block to National levels. Panchayat systems and local self-government in India; rural development programmes and policies; implementation strategies, PMERG, SUMCY, PMKVY tribal communities: Adivasis, Indigenous, aborigines; tribal social systems and structures; types, characteristics, tribal social systems and structures; belief systems, culture-indigenous vs. mainstream, Atrocities against SC/ST and Constitutional Provisions for the safeguard of SC/ST.

Urban Community development: definition, philosophy and objectives, history of UCD, scope; Slums: definition, causes, characteristics, functions, classification, approaches, theories and culture of slums; in and out migration, urbanization, urbanism: theories of urbanization, Unorganized/Informal sectors; urban services and urban deficiencies; 74th amendment and salient features of Nagarpalika Act; structure and functions of Urban Development Agencies: Urban Development Programmes: role of community development worker; rural, tribal and urban policies; tools and techniques for development practice; Application of social work methods in rural, tribal and urban communities, Role of CSR in Community Development.

Disaster: Definition, types, problems, Disaster Management and its process.

Unit-IX: Specialization in Family and Child Social Work

Family: Definition, concept, characteristics, types, functions, family patterns; marriage: forms, functions, changing situations in marriage, challenges, separation and divorce; assessment of family needs; laws on family and marriage;

Gerontology and Geriatric Care: Definition, Theories of Aging, Dimensions of Aging, disabilities; Interventions with older persons; Policies and programmes for senior citizens -NPOP and Maintenance and Welfare of Parents and Senior Citizens Act 2007, stress management of caregivers, Role of government and non-governmental services, institutional and non-institutional; hospice & palliative care.

Youth: Definition, demographic profile; Youth Policy–2014; needs of youth; impact of westernization, modernization, urbanization and globalization; problems of youth; programmes for rural / urban youth, career counselling, Organisations and Movements in India.

Women: Sex and gender, gender identity; gender stratification; sex ratio in India; feminism: concept, meaning and definition and types; empowerment: concept, definition, types; GDI, GEM; Constitutional provisions and protective laws for women; special initiatives and programmes for women, national and state commissions; Convention on elimination of all forms of discrimination against women and girls (CEDAW) 1982, micro finance and self-help groups (SHGs), challenges of Indian women Status of Women in India, Problems of Women, Cyber Security.

Children: Demography; Constitutional safeguards; UNCRC, Post 2015 Development Agenda; Common Problems of Children-School Dropouts, Truancy, street children, child labour, child abuse, child trafficking, child prostitution, Child marriage, Teenage Pregnancy, Children and Gaming Addiction, Social Media and related problems, disabled children, the girl child; Child services: mechanisms, National commission for protection of child rights/ State commission for protection of child rights, District Child protection Unit; Legislations for Protection of Children-POCSO, JJ Act, Information Technology Act-2000; Approaches: Adoption – sponsorship and foster care, Institutional Care; application of Social work methods in Family and Child setting.

Unit-X: Specialization in Industrial Relations, Labour Welfare and Social Work

Industrial Relations-Concept, characteristics, Industrial Relations at plant and shop floor level,

Industrial conflicts: concepts of industrial peace; cause and consequence of industrial conflict, strikes and lock-outs; conflict resolution, mediation, conciliation: arbitration and adjudication; statutory and non-statutory machinery for prevention and settlement of disputes. Trade Unions: Trade unionism in India, role in Industrial relations.

Labour Welfare: Concept, definition, philosophies, need, objectives, principles, scope and limitations of labour welfare; Historical development of labour welfare in India. Statutory and Non-Statutory Welfare Provisions: Industrial Counseling- Pre-retirement, Quality of work life. Social security, social security measures; Standardization, Wage policy, Wage incentives, bonus and profit sharing. Collective Bargaining: Meaning, goal, phases, pre-requisites, principles, strategies and negotiation skills, factors influencing collective bargaining, Role of Social worker in industrial setting.

HR System Concept and functions - HRM, HRD & HR; evolution, Asian trends; HRD system and sub-systems; elements, goals, importance of HRD in Industry; 360 Degree feedback; leadership and leadership development; mentors & modeling; Organizational commitment CSR in HR.

14. Rehabilitation Science (Post Graduate Degree Standard)

Subject Code: 381

Unit I: Introduction to Rehabilitation

- 1.1 Concept, Nature and Meaning of Rehabilitation,
- 1.2 History of Rehabilitation,
- 1.3 Need and significance of Rehabilitation Services,
- 1.4 Issues and Challenges in Rehabilitation Services
- 1.5 Competencies, Ethics and Attitudes of Rehabilitation Professionals

Unit II: Introduction to Disability

- 2.1 WHO International Classification of Impairments, Disabilities and Handicaps
- 2.2 Classification of Disabilities based on RPwD Act, 2016
- 2.3 Influence of Labelling, Stereotypes and Stigma on Disability
- 2.4 Historical Perspectives of Disabilities
- 2.5 Models of Disability Rehabilitation Services – Institutional, Home based Integrated, Community Rehabilitation Services and Inclusion

Unit III: Rehabilitation of Persons with Sensory Disabilities

- 3.1 Definition, signs and symptoms, classifications, causes, Characteristics and prevention of Visual Impairment, Hearing impairment, Speech and Language Disability
- 3.2 Early Identification and Assessment of Sensory disabilities
- 3.3 Misconceptions of Sensory Disabilities
- 3.4 Interventional Services for Persons with Sensory disabilities – Therapeutic, educational, vocational and Adaptive and Assistive devices in the services of Persons with Sensory Disabilities
- 3.5 Role of Family and community involvement in Rehabilitation Services of Persons with Sensory Disabilities

Unit IV: Rehabilitation of Persons with Locomotor Disability

- 4.1 Definition, signs and symptoms, classifications, causes, Characteristics and prevention of Dwarfism, Leprosy Cured person , Acid Attack Victims, Cerebral Palsy, Muscular Dystrophy
- 4.2 Early Identification and Assessment of Locomotor disabilities
- 4.3 Misconceptions of Locomotor Disabilities
- 4.4 Interventional Services for Persons with Locomotor disabilities - Therapeutic, educational, vocational and Adaptive and Assistive devices in the services of Persons with Locomotor Disabilities
- 4.5 Role of Family and community involvement in Rehabilitation Services of Persons with Locomotor Disabilities

Unit V: Rehabilitation of Persons with Chronic Neurological Disorder and blood disorders

- 5.1. Definition, signs and symptoms, classifications, causes, Characteristics and prevention of Multiple Sclerosis, Parkinson's Disease, Haemophilia, Thalassemia, and Sickle Cell Disease
- 5.2. Early Identification and Assessment of Chronic Neurological Disorder and blood disorders
- 5.3. Misconceptions of Chronic Neurological Disorder and blood disorders
- 5.4. Interventional Services for Persons with Chronic Neurological Disorder and blood disorders - Therapeutic, educational, vocational and Adaptive and Assistive devices in the services of Persons with Chronic Neurological Disorder and blood disorders
- 5.5. Role of Family and community involvement in Rehabilitation Services of Personswith Chronic Neurological Disorder and blood disorders

Unit VI: Rehabilitation of Persons with Intellectual Disability and Mental Behaviour

- 6.1. Definition, signs and symptoms, classifications, causes, Characteristics and prevention of Intellectual Disability, Mental Illness, Autism Spectrum Disorder, Specific Learning Disabilities
- 6.2. Early Identification and Assessment of Intellectual Disability and Mental Behaviour
- 6.3. Misconceptions of Intellectual Disability and Mental Behaviour
- 6.4. Interventional Services for Intellectual Disability and Mental Behaviour - Therapeutic, educational, behavioural, vocational and Adaptive and Assistive devices in the services of Persons with Intellectual Disability and Mental Behaviour
- 6.5. Role of Family and community involvement in Rehabilitation Services of Persons with Intellectual Disability and Mental Behaviour

Unit VII: Rehabilitation of Persons with Multiple Disabilities

- 7.1. Definition, signs and symptoms, classifications, causes, Characteristics and prevention of Multiple Disabilities
- 7.2. Early Identification and Assessment of Multiple Disabilities
- 7.3. Misconceptions of Multiple Disabilities
- 7.4. Interventional Services for Persons with Multiple Disabilities - Therapeutic, educational, vocational and Adaptive and Assistive devices in the services of Persons with Multiple Disabilities
- 7.5. Role of Family and community involvement in Rehabilitation Services of Persons with Multiple Disabilities

Unit VIII: Rehabilitation of Persons with Behavioural Disorders

- 8.1 Definition, signs and symptoms, classifications, causes, Characteristics and prevention of Psychosomatic disorders, Addiction, substance abuse, criminal behaviours, delinquency, personality disorders and media addiction
- 8.2 Early Identification and Assessment of Behavioural Disorders
- 8.3 Misconceptions of Behavioural Disorders
- 8.4 Interventional Services for Persons with Behavioural Disorders - Therapeutic, educational, vocational and Adaptive and Assistive devices in the services of Persons with Behavioural Disorders
- 8.5 Role of Family and community involvement in Rehabilitation Services of Persons with Behavioural Disorders

Unit IX: Compendium of Schemes and Services in Rehabilitation

- 9.1 Role of National Institutes and Centres in Rehabilitation Services
- 9.2 Central Public Sector Enterprises – NHFDC and ALIMCO
- 9.3 Schemes of the Department – Divyangjan : DDRS, ADIP, SIPDA, DDRCs
- 9.4 Other Schemes – Scholarship, Accessible India Campaign, Awareness Generation and Publicity Scheme, National Fund for PwDs , National Trust Schemes, Swavlamban Group Mediclaim Policy for PwDs, New Initiative Schemes in progress
- 9.5 National and State Awards for Empowerment of PwDs

Unit X: Legislations and Policies Governing the Rights of PwDs

- 10.1 International Declarations - Universal Declaration of Human Rights (1948), World Declaration for Education for All (1990)
- 10.2 International Conventions - Convention Against Discrimination (1960), Convention on Rights of Child (1989), UNCRPD (2006).
- 10.3 International Frameworks - Salamanca Framework, (1994) Biwako Millennium Framework of Action (2002)
- 10.4 National Commissions and Policies – Kothari Commission (1964), National Education Policy (1968), National Policy on Education (1986), Revised National Policy on Education (1992), National Curricular Framework (2005), National Policy for Persons with Disabilities (2006) Universal Design for Learning
- 10.5 National Acts and Programmes (RCI Act 1992, PwD Act 1995, National Trust 1999, RPwD Act, 2016) and IEDC 1974, SSA 2000, RTE 2006, RMSA 2009, HEPSN, TEPSN (2012), IEDSS 2013, RUSA 2013, Samagraha Shiksha Abiyan 2018,

15. Mechanical Engineering / Production Engineering / Manufacturing Engineering (Degree Standard)

Subject Code: 399

Unit – I: Mechanics, Kinetics and Dynamics

Statics of Particles, Equilibrium of Rigid bodies, Mechanism of Deformable Bodies, Properties of Surfaces and Solids, Centroid, Centre of Gravity, Dynamics of Particles, Elements of Rigid Body Dynamics, Basics of Mechanisms, Kinematics of mechanisms, gyroscope, Gears and Gear Trains, Fly Wheels and Governors, Balancing of Rotating and Reciprocating Masses, Friction in Machine Elements, Force Analysis, Balancing, Single Degree Free Vibration, Forced Vibration, mechanisms for Vibration Control, Effect of Damping, Vibration Isolation, Resonance, Critical Speed of Shaft.

Unit – II: Strength of Materials and Design

Stress, Strain and Deformation of Solids, Combined Stresses, Theories of Failures, Transverse Loading on Beams, Stresses in Beams, Torsion, Deflection of Beams, Energy Principles, Thin Cylinders and Thick Cylinders, Spherical Shells, Fundamentals of Design for Strength and Stiffness of Machine Members, Design of Shafts and Couplings, Design for Static and Dynamic Loading, Design of Fasteners and Welded Joints, Reverted Joints, Design of Springs, Design of Bearings, Design of Flywheels, Design of Transmission Systems for Flexible Elements, Spur Gears and Parallel Axis Helical Gears, Bevel Gears, Worm Gears and Crossed Helical Gears, Design of single and two stage speed reducers, Design of cam, Clutches and Brakes, Design of Piston and Connecting Rods.

Unit - III: Fluid Mechanics and Turbo Machinery

Fluid properties, fluid statics, manometry, buoyancy, control volume analysis of mass, momentum and energy, fluid acceleration, differential equations of continuity and momentum, Bernoulli's equation, Dimensional Analysis, viscous flow of incompressible fluids, boundary layer, elementary turbulent flow, flow through pipes, head losses in pipes, bends. Turbomachinery: Pelton wheel, Francis and Kaplan turbines - impulse and reaction principles – velocity diagrams, pumps and its applications-Valves and Types - Theory of Jet Propulsion- Pulse Jet – Ram Jet Engines, Online Continuous Flow Monitoring System.

Unit – IV: Thermal Engineering and Thermodynamics

Basic concepts, Zeroth, First and Second laws of thermodynamics, thermodynamic system and processes, Carnot cycle. irreversibility and availability, behaviour of ideal and real gases, thermodynamic relations, properties of pure substances, calculation of work and heat in ideal processes, analysis of thermodynamic cycles related to energy conversion, Fuel and combustion, Fuels Characteristics, Emissions and Controls, Testing of IC Engine-Renewable sources of Energy.

Power Engineering: Steam Tables, Rankine, Brayton cycles with regeneration and reheat. I.C. Engines: air-standard Otto, Diesel cycles. Refrigeration and air-conditioning: Vapour refrigeration cycle, heat pumps, gas refrigeration, Reverse Brayton cycle; moist air: psychometric chart, basic psychometric processes.

Unit – V: Heat and Mass Transfer

Modes of heat transfer - one dimensional heat conduction, resistance concept, electrical analogy, unsteady heat conduction, fins dimensionless parameters in free and forced convective heat transfer, various correlations for heat transfer in flow over flat plates and through pipes, thermal boundary layer, effect of turbulence, radiative heat transfer, black and grey surfaces, shape factors, network analysis; heat exchanger performance, LMTD and NTU methods.

Basic Concepts of Mass transfer, Diffusion Mass Transfer, Fick's Law of Diffusion Steady state Molecular diffusion, Convective Mass Transfer, Momentum, Heat and Mass Transfer Analogy, Convective Mass Transfer Correlations, Radiative Heat Transfer.

Unit – VI: Materials Science and Metallurgy

Constitution of alloys and phase diagrams, Iron – Iron Carbide Phase Diagram - steels, cast iron, phase transformations- diffusion-TTT diagram, ferrous and nonferrous alloys, heat treatment of ferrous and non-ferrous metal, surface modification techniques, powder metallurgy, non-metallic materials, mechanical properties and testing, crystal defects and strengthening mechanisms, conducting and semi conducting materials, magnetic and dielectric materials, Engineering ceramics, Engineering and commodity polymers, composites, nano-materials.

Unit – VII: Production Technology

Foundry Technology- types of pattern, cores, moulding and casting methods, Solidification, design of castings, defects, Melting Furnaces, Hot and Cold working, Metal Forming Processes - types, Defects and Remedies, Sheet Metal Operation, metal joining processes, types and design of weldment, welding metallurgy, welding defects, Casting, Welding Inspection (NDT), Manufacturing of Thermo Setting and Thermo Plastic Products, Metal cutting, Cutting Tool Nomenclature, Machinability machine tools - center lathe, drilling, milling, grinding, gear cutting and broaching, Machining Time Calculation, unconventional machining processes, Micro Manufacturing, CNC machine tools, Manual Part Programming - Machining and Turning Centre.

Unit – VIII: Metrology and Quality Control

Limits, Fits and Tolerance, Linear and angular measurements, Interferometry, laser interferometers - Types, Computer Aided Inspection, Basic concept of CMM - Types of CMM, Machine vision, Form measurement-Straightness- Flatness, Roundness, Surface finish measurement, contact and non-contact method, Measurement of power, flow and temperature. Statistical quality control, control charts, acceptance sampling, reliability, TQM, 5S, ISO standards.

Unit – IX: CAD / CAM / CIM / FEA

Fundamentals of Computer Graphics, Geometric Modeling, Visual Realism, Assembly of Parts, CAD Standards, Fundamentals of CIM, Production Planning and Control, Computer Aided Process Planning, Cellular Manufacturing, Flexible Manufacturing System and Automated Guided Vehicle System, Group Technology, Production Flow Analysis, Industrial Robotics, Additive Manufacturing, Just in Time(JIT), lean manufacturing, One Dimensional Problems in FEA, Two Dimensional Scalar Variable Problems, Two dimensional vector variable problems, Isometric Parametric Formulation.

Unit – X: Industrial Engineering and Management

Work study - Techniques, Method study and work measurements - objectives - basic procedure, machine loading and scheduling, product sequencing, inventory control - E O Q - quantity discounts, ABC Analysis material handling systems, operations research, Linear Programming, simplex method, Transportation model, Assignment model CPM and PERT, Queuing Models. Management theory and practice, planning -Decision making, Organising, staffing, Motivation, Leadership, controlling, control techniques, Industrial Safety - Standards – OSHA.

16. Public Administration (Post Graduate Degree Standard)

Subject Code: 391

Unit-I: Introduction:

1. Meaning, Nature, Scope and importance of Public Administration.
2. Politics - Administration Dichotomy.
3. Evolution of Public Administration and its Present Status.
4. New Public Administration - New Public Management.
5. Impact of Liberalisation, Privatisation and Globalisation on Public Administration.
6. Good Governance.

Unit -II: Organisation and Management

1. Meaning and Importance of Organisation

2. Bases of Organisation
3. Principles of Organisation - Hierarchy, Span of Control, Unity of Command, Centralisation Vs Decentralisation, Delegation.
4. Theories of Organisation - Classical Theory, Scientific Management Theory, Bureaucratic Theory, Human Relations Theory, System Theory
5. Meaning, Nature and importance of Management.
6. Principles of Management.
7. MBO (Management by Objectives), Participative Management

UNIT-III: Administrative Behaviour

1. Process and Techniques of Decision – making
2. Communication
3. Morale
4. Motivation – Motivation Theories
5. Leadership – Leadership Theories
6. Public – Private Partnership.

UNIT-IV: Personnel Administration

1. Meaning, Nature, Scope and Importance of Personnel Administration.
2. Manpower Planning
3. Recruitment
4. Performance Appraisal
5. Training – Skill Development
6. Bureaucracy and Civil Services
7. Civil Service Associations
8. Retirement
9. Corruption in Public Service
10. Administrative Ethics

Unit -V: Comparative Public Administration and Development Administration

1. Meaning, Nature, Scope and importance of comparative public administration.
2. Approaches to the study of comparative public administration
3. Ecological and systems approaches
4. Riggs model of comparative public administration: Prismatic Society-Industria Agraria model.
5. Comparative Administrative Systems: UK-USA-France and Switzerland.
6. Sustainable Development and Goals
7. Sustainable Governance
8. Social welfare Programmes and five year Plans in India
9. Social Welfare Programmes in Tamil Nadu
10. Poverty Alleviation Programmes.

Unit -VI: Public Policy

1. Meaning, nature and importance of public policy
2. Policy science and public policy
3. Approaches to public policy
4. Theories and models of public policy making: Harold Lasswell - Charles Lindblam - Y.Dror
5. Policy Making Process: Formulation-implementation - Evaluation

6. Policy making Institutions: Legislature- Executive - Judiciary - Higher Educational Institutions and NGOs
7. Role of media, civil society and pressure groups in policy making.

Unit-VII: Administrative Law

1. Meaning, nature and Scope of Administrative Law
2. Growth of Administrative Law
3. Sources of Administrative Law
4. Meaning and Importance of Delegation Legislation
5. Judicial Remedies and Judicial Review
6. Administrative Tribunals
7. Citizen Rights
8. Public Interest Litigation

Unit - VIII: Administrative Responsibility

1. The concept of Responsibility and Control
2. Executive Control over Administration
3. Parliamentary control over Administration
4. Judicial Control over Administration
5. Public Control over Administration
6. Media control over Administration

Unit-IX: Indian Administration

I. Introduction

- I. Evolution of Indian Administration
 - (a) Kautilya
 - (b) Maurya
 - (c) Mughal Period
 - (d) British Period
- II. Constitutional Framework of Indian Administration
 1. Framing of the Indian Constitution
 2. Fundamental Rights and Duties
 3. Directive Principles of State Policy
 4. Parliamentary Democracy
 5. Democratic Socialism

Unit X: Union Government

1. President
2. Vice-President
3. Prime Minister and Council of Ministers
4. Central Secretariat
5. Cabinet Secretariat
6. Ministries and Departments
7. Lok Saha and Rajya Sabha
8. The supreme court and Rule of Law.

Unit XI: Public Services:

1. **All India Services:-** The UPSC – Conduct of Examination – Recruitment procedures – Reforms in Examination System for All India Services – Training – Initial Training, On the Job Training – Training Senior Civil Servants – Promotion – Pay scales – Retirement – Re- appointment.
2. **Central Services:-** The Recruitment to Central Services – Training of Central Service Personnel – Promotion and Pay Scales – On the Job Training – Deputation – Retirement – Re-appointment.
3. **State Service:-** State Services in India – State Services in Tamil Nadu – The Tamil Nadu Public Service Commission recruitment procedures –Conduct of Examinations – Reforms in Examination – Appointment in various cadres – Pay scales – Promotion - Re-appointment.
4. **Training of Civil Servants:-** All India Services – Tamil Nadu State Civil Services – Indian Institute of Public Administration – Training in Abroad – Training in Field Services in India – Training of Subordinate Civil Servants in Tamil Nadu.

Unit XII: State Government:-

1. **The Governor:-** The office of the Governor – Constitutional Responsibilities of Governor – The Appointment and Removal of Governor of a State – Legal Administrative – Financial – Powers of the State Governor – The Relationship between Governor and the Chief Minister and the Ministry – The Emergency powers of Governor of the State.
2. **The Chief Minister and the Council of Ministers:-** The Appointment of Chief Minister and the Council of Ministers – The tenure of the Chief Minister and the Council of Ministers – The powers of Chief Minister – The Relationship between Chief Minister and the Council of Ministers – The function of giving advice to the Governor.
3. **State Government:-** The powers of State Government – The seventh schedule of the Constitution – The function of State Government.
4. **State Secretariat:-** The concept of separation of policy making and execution – The organization of Secretariat – Policy making in State Government – The Minister – Secretary relationship – The functional domain of Secretariat.
5. **State Legislature:-** State Legislature in India – The evolution from Government of India Act, 1909 – 1919 and 1935 – The constitutional provisions regarding powers of State Legislature – The power to discuss subjects – The powers of the Speaker, Chief minister – Leader of opposition – Party whips – The privileges of Members of State Legislative Assembly – The responsibility of Chief Minister and Council of Ministers to the Assembly – The tenure of State Legislatives.
6. **High Court:-** The hierarchy of Courts in India – The Supreme Court and High Courts of India – The appointment of Judges of High Courts –The Appointment and Removal of Judges of High Court – The collegium system – Law Commission Recommendations – The Jurisdiction of High Courts – The Original and appealing side of the High Court.
7. **Administration of Law and Order:-** The Maintenance of Law and order – The responsibility of States – The role of district administration – the Maintenance of Law and order in big cities – the Commissionarate system – The emergency powers of the President and the role of the Governor.

Unit XIII: Union – State Relations:

- 1. Legislative Relations:** Constitutional Seventh schedule – List-I, List-II and List-III – The Legislative powers of the Union and States.
- 2. Administrative Relations:** The Union – State relative Administrative Powers – Constitutional Provisions of the Executive powers of the President and the Governor – The Union node to State governments.
- 3. Judicial Relations:** The power of the Supreme Court – The directions of the Supreme Court – The Directive powers of Supreme Court.
- 4. Financial Relations:-** Constitutional provision of Centre – State Financial Relations – The seventh schedule – The taxing power of Union – and States - The appointment of Finance Commission – Finance Commission Recommendations – The reforms in Financial Relations – The G.S.T

Unit XIV: Financial Administration:-

1. Meaning, Nature and Scope and significance of financial Administration - Budgetary process – Preparation- enactment and execution.
2. Types of Budget – PPBS- ZBB- Performance Budget - Resourcemobilization – Tax Revenue - Non Tax Revenue.
3. Tax Administration in India: Direct Tax-Indirect Tax - Public Debt Management.
4. Local finances.
5. The Constitutional Provisions of the Financial Administration art 112
– the other provisions – Votes on account – etc. – The budget cycle –Preparation – Enactment and Execution – The role of Ministry of finance – The role of Administrative heads – (Controlling Officer) The network of Treasuries – The accounting and auditing of Accounts
– Pre-auditing – Post Auditing and concurrent auditing.
6. Executive Control of Public Expenditure:- The Role of controlling officer – The administrative heads – The drawing of money - Treasuries – The accounting and realising and flow and control of funds.
7. Parliamentary Control of Public Expenditure:- Constitutional Provisions regarding enactment and control public expenditure – The Privileges of Members of Legislatures – Discussion and debate over Public Expenditure. The standing Committees of Indian Parliament – The PAC, EC and COPU and the Departmentally Related Standing Committees. (DRSCS)
8. Auditing , Accounting and Argumentation of Revenues: The Comptroller and Audit General of India – (CAG) The role CAG in accounting and auditing of account of Union and States – The Auditing of Public Sector Undertaking.

Unit XV: District and Local Administration:

1. The role of District Collector in District Administration – The Changing role of District Collector – The Local Governments in India – Rural and Urban.
2. The 73rd and 74th Constitutional Amendment Acts – The new dispensation of Local Government.
3. Political Process: Political parties in India – Multi Party System – The Election Commission in India – The Representation of People Act. The political role of Bigger parties.
4. Pressure Groups: The Pressure Groups based on various functions. Agricultural – Industrial and Tertiary Sectors. The demand Groups in various sectors.

XVI: Issues in Public Administration:

1. Political and permanent Executive
2. Generalists VS Specialists
3. Integrity in Public Administration;
4. People's participation administration – Direct and Indirect; Ombudsman Institution in India.
5. Lok Ayukta and Lok Pal.
6. Administrative Reforms in India: First Administrative Commission – Second Administrative Commission.

17. Business Administration (Post Graduate Degree Standard)

Subject Code: 385

1. Management Concepts

The development of Management thought-Pre scientific management era – Human relation era – Social sciences era – Management sciences era. Definitions of Administration and Management – Basic Principles and Process of Management. Functions of Management Planning, Organising, Staffing, Directing, Coordination and Controlling. Management by objectives – Process of MBO – Management by Exception.

2. Managerial Economics

Introduction to Economics; Nature and Scope of Managerial Economics – Significance in Decision-Making and Fundamental Concepts - Objectives of a Firm - Role of Economic Analysis in managerial decisions. The Concept of Profit. Nature and Measurement of Profits - Profit Maximization - Profit Planning and control – Profit Policies – Cost Volume Profit Analysis. National Income – Definition, Concepts and Various Methods of its Measurement– Inflation, Types and Causes - National Income and Economic Welfare - Business Cycles and Business Forecasting – Measuring Business Cycles Using Trend Analysis

3. Organisational Behaviour

Organisational Behaviour : Importance – Historical Development of Organisation Behaviour- Understanding Individual Personality- Perception-Learning-Values-Attitude- Job Involvement – Organisational Commitment – Job Satisfaction – Emotions – Emotional Intelligence – Spiritual Quotient. Understanding groups: Meaning of group and group dynamics – Theories of Group Dynamics – Group Cohesiveness – Team Building- Management of change-Organisational Culture-Management of Conflict-Organizational Citizenship Behaviour.

4. Human Resource Management

Functions of HRM – Managerial Functions and Operative functions – Organisation of HRM Department – Qualities and Qualification of HRManagers – HR Policies - Environmental influences of HRM – HRM Challenges – HRM Strategies. Recruitment and Selection- Job Analysis- Job Evaluation- Performance Appraisal-Training and Development- Quality of Working Life-e HRM

5. Research Methodology and Statistics

Research – Meaning – Types – Nature and scope of research – Review of Literature - Problem formulation – Statement of research Objective – Value and cost of information – Research Questions – Research Gap - Decision theory –Research process – Research designs – Experimental Research.

Methods of data collection-Sampling – Measure of Central Tendency-Measure of Dispersion-Testing of Hypothesis- Correlations- Regression- Multivariate Analysis-Research Report

6. Operations Management

Operations Management concept, objectives and types –Characteristics of Modern Operation Management – Differences between Services and Goods – Operation Strategy – Supply Chain Management – Warehousing and Supply Chain Strategies – Supply Chain Dynamics. Operations Planning- Work study: Objectives, Procedures – Method Study and Motion Study - Work Measurement and Productivity. Total Productive Maintenance- Materials management and Purchase Management- Project management-Quality Control – Quality Movement – Continuous Improvement – Tools – Total Quality Management (TQM) concepts – ISO Quality Certification – Quality Assurance.

7. Marketing Management

Marketing – Definition – Importance – Concepts in Marketing, Marketing Concepts – Traditional and Modern Concepts – Marketing Environment, Marketing Strategies – Kinds of Marketing Strategies – Marketing Mix Concept – Marketing Research and Information – Objectives and Process. Consumerism – Problems of consumer protection – Developments in Consumer Protection in India - Government and Marketing – Neo Marketing Trends – e-Marketing – Tele-marketing – Green Marketing – Event Marketing – Viral Marketing – Direct Marketing- Ethics in Marketing & Advertisement.

8. Management Information System & E-commerce

Data, Information, Intelligence, Information Technology, Information System, Functional Information Systems, DSS, EIS, KMS, GIS, International Information System-Data Base Management System-Role of information management in ERP, e-governance, Data Mining, Business Intelligence, Pervasive Computing, Cloud computing, CMM. Electronic Commerce: Technical Components of E-Commerce Functions of E-Commerce - Advantages and disadvantages of E- Commerce - Electronic Commerce and Electronic Business- Electronic Commerce Technology - Building the E-Business application- Avoiding legal issues- Web strategy: Attracting and retaining visitors - Search Engines and Portals - Cyber service -Online Banking.

9. Accounts and Auditing

Basic Accounting concepts - Kinds of Accounts. Double Entry Book Keeping - Journal and Ledger Accounts- Subsidiary books- Trial balance - Errors – Types of errors - Rectification of errors – Bank reconciliation statement – Manufacturing - Trading - Profit & Loss Account - Balance sheet. – Accounting for non-trading Institutions-Income & Expenditure Account- Receipts and Payment Accounts and Balance sheet – Accounting for depreciation – methods of depreciation – Preparation of accounts from incomplete records. Auditing-Origin-Objectives-Types- qualities of an Auditor- Audit programmes- verification and valuation of Assets and Liabilities. Investigation-objectives of investigation-Audit of computerized-Accounts-electronic auditing

10. Financial Management

Finance Functions – Nature And Scope – Evolution Of Finance Function – Its New Role in The Contemporary Scenario – Goals Of Finance Function – Maximising Profit Vs Wealth – Cost – Risk – Return- Trade Off – Concept Of Time Value Of Money – Future Value And Present Value And The Basic Valuation Model - Sources Of Short Term Financing – The Management Of Working Capital- Cash Management Strategies- Receivables Management-Sources Of Long Term Finance- Cost Of Capital And Capital Structure- Economic Value Added (EVA) -Risk & Uncertainty -Risk Management- Return on Investment.

18. Town and Country Planning

**Single Paper Consisting of the subjects Town Planning (Post Graduate Degree Standard),
Civil Engineering (Degree Standard) & Architecture (Degree Standard)**

Subject Code: 382

18.1. Town Planning (Post Graduate Degree Standard)

Unit – I: Introduction to Planning – Scope and Content

Planning System in India, Regional Plan, Master Plan, Structure Plan, Detailed Development Plans, City Corporate Plan and Smart City Plan. New Town concepts, case studies in India & U.K. – Concept of Region, Types of Region, Techniques of Regional Analysis, Growth Model, Regional disparities, Resources in Regional development. Multi-level Planning – Regional Planning in India, Regional Plan case Studies, USA, U.K., Japan.

Unit – II: Planning Theory and Techniques

Process of evolution of human settlement planning - Principles in Planning – Rationality in Planning, Blueprint and Process mode, Disjointed Incremental mode of Planning, Normative versus Functional mode of Planning – Type of planning surveys, data identification for various plan preparation. Delphi, Trade off-game, Simulation models, Gravity analysis, Lowry model, Threshold analysis, Multivariate analysis – Optimization and economic analysis methods in project formulation and implementation, PBBS – URDPFI Guidelines.

Unit – III: Urban Sociology, Economics, Geography: Theories and Applications

Socio-economic groups, structures and Institutions as related to urban and rural communities - Ecological processes and structures in Indian Cities - Social Change & Economic Development - Agglomeration economics- Economics of scale, Multiplier effect concept, scope, limitation - Basic and non-basic activities of economics base, methods of base identification - Land-use determinants, Locational Dynamics of urban Land-use - Spatial organization of Urban settlements - City-region, Urban Sprawl and Fringe - Urbanization in India and Tamil Nadu with reference to settlements and population distribution.

Unit – IV: Environmental Issues Related to Planning

Components of Environment – Classification of Environmental Resources - Purpose and Objectives in Environmental Protection - Institutional and Legal Support in management of the Environment – Environmental Policies, and issues - Environmental Impact Assessment Practice in India - Types, Conceptual Approach and Phases of EIA – Impact Identification - Public Participation in the Process of Environmental Decision Making Process - Environmental Concepts – Sustainable Planning – Eco Cities, Compact Cities, Smart growth, Sponge city, IGBC Rating Systems applicable for Towns.

Unit – V: Urban Infrastructure Net Work Planning Issues

Obligatory and Discretionary Services, Implication of Urban Form and Size on Services, Norms and Standards, National Building Code, 2016. National and Local guidelines – Demand Strategy, Issues and Tasks, Operation and Management Aspects of each Service - Water Supply, Sewerage / Drainage, Solid Waste Management, Roads and Street Lighting - Priority, Placement Network Options, Effective System Analysis – Private and Public partnership and innovative concepts and practices in Infrastructure Development.

Unit – VI: Project Formulation and Implementation

Types of Project, Project Cycle, Identification, Selection, Preparation -Capital Investment Programme, Internal Rate of Return, Net present Value - Cost- Benefit & Analysis, Social Cost Benefit analysis, Budgeting, Tamil Nadu Transparency in Tender Rules - Appraisal techniques – Project Proposal and objectives, Current base line conditions, Financial and Economical Appraisal, Socio cultural assessment - Process Monitoring – Key issues, Monitoring Schedule, Data collection, Design, strategy, Impact Evaluation – Approaches, Key issues, Alternative to large scale qualitative Evaluation designs.

Unit – VII: Planning Legislation and Legal Framework

The concept of law, Indian Constitution. Rights of Ownership and development of property. Statutory control as a positive tool in plan preparation and implementation - Evolution, scope and Significance of Planning Legislation. History and survey of development of planning legislation in India - Panchayat Act, Municipality Act, Corporation Act, TNULB Act, Land Acquisition, Rehabilitation and Resettlement Act,2013. Provisions in the above acts related to functions, powers, role and responsibilities of local bodies including elected representatives and officers - 73rd and 74th CAA and their implications on planning and development. Local Body finance, revenue, expenditure and resource mobilization - T & C Planning Act of Tamil Nadu 1971, The Ancient Monuments and Archaeological Sites and Remains Act, Tamil Nadu Combined Development and Building Rules 2019, The Tamil Nadu street vendors scheme, The Tamil Nadu Real Estate (Regulation and Development) Act, 2016.

Unit – VIII: Issues in Traffic and Transportation Planning

Highway classification - Traffic characteristics – Horizontal and Vertical alignment, Land use & Transportation relationships - Sight distance – Cross- sectional elements – at grade and Grade separated intersections - Volume Count – Origin and Destination – Parking and Public Transport - Surveys – Inventory of Transport facilities – Methods of Survey – Different modes – Capacities – Limitations – Planning Aspects - Coordination – Para Transit modes – Private transport – Urban Transportation Planning Process – Trip Generation – Trip Distribution – Modal Split – Trip Assignment, Congestion pricing, Non Motorized Transport, Transit Oriented Development, Bus Rapid Transit System, Unified Transport Authority

Unit – IX: Remote Sensing and G.I.S., In Planning

Basics of Remote Sensing and GIS. - Classification of spatial and non- spatial data application of spatial data in urban and regional planning - Identification of required spatial data layers - Coding schemes – digitization of spatial data – editing spatial data usable for the given planning problem – Land use Suitability Analysis, Land use Modeling, Existing Land use Preparation using Mobiles, Satellite Imageries, Aerial Photographs, Drones in Physical Planning.

Unit – X: Current Trends and Issues in Planning

Concepts of sustainable urban development, sustainable Transportation,E – Governance, HRIDAY, Rurban Mission, Swachh Bharat Mission, AMRUT, National Health Mission, Public private partnership, local bodies and urban finance. Land Pooling concept, Transfer of Development Right, Accommodation Reservation, Formulation of Re-development and Urban Expansion Plans - Local Area Plans, Town Planning Schemes - Special Economic Zone, Value Capture Finance Policy Framework – Swiss Challenge Model, Industrial Corridor, Coastal Zone Management Plan.

18.2 Civil Engineering (Degree Standard)

UNIT I: Building Materials, Construction Practices and Concrete Technology

Properties and Classification of cement, lime, bricks, stone and timber - Uses and Tests – materials for acoustics and insulation - construction details and supervision for masonry - Design of Brick Pier and Wall – Damp Proofing courses – Shoring, scaffolding and Underpinning – Ventilation and Fire resistant construction – Green Building Concept - Types of concrete – testing of fresh and hardened concrete – mix design – quality control – special concreting techniques - concreting equipment – centering and shuttering – slip and moving forms – construction joints.

UNIT II: Engineering survey, Town Planning, Urban Engineering and Construction Management

Survey – Basic principles - Classification - computation of areas and Volume – Levelling – Fly levelling – L.S and C.S – Contouring – Traversing - Heights and Distances - Tacheometry – Use of EDM and Total Station – Global Positioning System – Concepts and applications of Remote sensing.

Urbanisation- Trends in India- Planning process– stages, type of survey, collection of data- Development of new towns – urban modern and satellite towns - Smart cities - levels of planning.

Construction management – Construction planning and scheduling – preparation of different types of schedules – methods of scheduling – CPM - PERT – resource planning - Construction Contracts.

Types of estimates - Detailed estimates for different types of buildings - methods of valuation – depreciation – fixation of rent- rate analysis- Quantity estimation

UNIT III: Strength of Materials, Analysis of Structures, Design of RC Elements, Prestressed Concrete and Steel Elements

Simple stress and strain - elastic constants- relationship - stress and strain in two dimensions, compound stresses- principal stresses- thin and thick cylinders - Bending moments and shear forces in statically determinate beams- simple bending theory - flexural shear stress - deflection of flexural members – torsion of circular section - Short and long columns.

Analysis of statically determinate trusses and arches

Working stress method (only for liquid retaining structures) - limit state design concepts - design of members subjected to flexure, shear, compression and torsion - Prestressed concrete: analysis and design of pre-tensioning and post tensioning beam.

Design of tension and compression members, beams and beam-columns, column bases - Design of bolted and welded connections.

UNIT IV: Geotechnical Engineering and Pavement Design

Properties of soils - soil classification – Compaction - permeability and seepage – soil stresses- Compressibility and Consolidation - Shear strength – Laboratory and in - situ tests. Sub-surface investigation - scope, drilling bore holes, sampling, penetrometer tests, plate load test – stability of slopes - foundation types - foundation design requirements – shallow foundations – Types and Design of isolated and combined footings - bearing capacity - effect of shape, water table and other factors- stress distribution - settlement analysis in sands and clays – deep foundations - pile types, dynamic and static formulae - load capacity of piles in sands and clays.

Design and construction of bituminous and concrete roads - Drainage of roads - Maintenance of roads.

UNIT V: Hydraulics, Water Resources, Water Supply and Environmental Engineering

Hydrostatics - applications of Bernoulli equation, Laminar and turbulent flow in pipes, pipe networks - concept of boundary layer and its growth - flow in channels, rapidly varied flow - tanks and pipes - Hydrologic cycle - Rainfall - draw down – recuperation test – well yield - Water resources of Tamil Nadu – Water policy – flood control – drought management.

Water quality standards – Intakes - Estimation of demand - Unit processes and operations for water treatment - Maintenance of treatment units - Conveyance and distribution systems of treated water - Rural water supply- Advanced water treatment.

Collection of waste water- Design of sewers - Sewage pumping - Characteristics of sewage - Primary, secondary and tertiary treatment of sewage- Sludge disposal - effluent standards - industrial wastewater management – Rural sanitation – solid waste management.

18.3 Architecture

(Degree Standard)

Unit – I: Human Settlements Planning

- Origin of Human settlements In India & the rest of the world – River valley civilizations (Indus Valley, Mesopotamia, Egypt & China) –Traditional planning principles in India – Vernacular architecture of India – approaches & concepts – Classical & Medieval planning in Europe - Evolution of modern planning concepts – Garden city concept, Neighbour hood concept, Geddesian triad, etc.
- Elements of Human settlements – functions & linkages, Structure & form
- Urban Planning & Renewal.
- DCR
- Issues in contemporary Urban planning.

UNIT – II: Urban Studies – Urban Design, Urban Housing & Conservation

- Urban Design – need, aspects, scope & components of urban space - Historic urban form of Greek, Roman, Medieval, Renaissance, Modern & post-modern periods-Indian Urbanism – temple towns, Mughal city form, medieval cities, colonial urbanism, planned capital cities Theorizing & Reading urban space – Imageability & townscape elements, genius loci, collective memory, historic reading of the city & its artefacts by Rossi, social aspects of urban space, gender & class, contribution of Jane Jacobs, William Whyte - Issues of Urban space.
- Housing issues in the Indian Context, Socio-Economic aspects, Housing Standards, Site Planning & Housing Design, Housing Process.
- Conservation – Definition, understanding the need & purpose, Adaptive re-use, International agencies & their role in conservation - Conservation In India – Role of ASI & INTACH – policies & legislations, case studies – craft issues – Conservation practice – listing, documenting, assessing architectural character, structure report & developing guidelines – Urban Conservation – Conservation Planning – Heritage tourism.

UNIT – III: Environmental Studies, Site Planning & Landscape Ecology

- Environment, Ecosystems & bio-diversity – Environmental Pollution, Human population & social issues with relation to the environment – Environmental laws in India.
- Site Planning – Introduction to basic terminologies, Methods of surveying, Instruments & Application, Leveling, Site Drawings, Importance of Site Analysis – On-site & off-site factors, Study of micro climate, Site Diagramming, Site Context, Site planning & Site layout principles.
- Introduction to Landscape Architecture – Elements of Landscape Design – plant material, water & forms, Garden Design – Japanese, Italian Renaissance & Mughal, Site Planning – Organisation of spaces – circulation, built form and open spaces, site planning and micro climate, site planning for neighborhood parks, children's play area and campus development – Landscaping of Functional areas – Urban open spaces and principle of urban landscape – Street landscaping, landscape design for waterfront areas and functional areas in urban centers – green roofs and walls – Street lighting.

19. Basics of Engineering (Degree Standard)

Subject Code: 422

Unit-I: Mathematics

Matrices: Eigenvalues - Eigenvectors of a real matrix - Cayley - Hamilton theorem - Similar and Orthogonal transformations - Reduction of a quadratic form to Canonical form by orthogonal transformation. Ordinary differential equations: Order and degree - Higher order linear ODE with constant coefficients - Method of undetermined coefficients - Method of variation of parameters - Cauchy's and Legendre's linear equations. Functions of several variables: Partial derivatives - Total derivatives - Euler's theorem - Implicit functions - Jacobians - Taylor's theorem - Maxima and Minima. Integration: Definite and indefinite Integrals - Techniques of integration using integration by parts and Trigonometric Integrals - Double Integrals - Change of order of integration - Volume Integrals. Vector Calculus: Vectors and scalars - Gradient and Directional derivatives - Divergence and Curl - Applications of Green's theorem, Gauss divergence theorem and Stoke's theorem. Complex variables: Analytic functions - Verification of Analyticity - Construction of Analytic functions - Conformal Mappings - Bilinear transformations. Complex Integration: Cauchy's integral theorem - Cauchy's fundamental theorem - Cauchy's residue theorem - Taylor's and Laurent's series - Contour integration (excluding poles on the real axis). Laplace transform: Existence of Laplace transform - Laplace transform of elementary functions- Properties - Laplace transform of Periodic functions - Inverse Laplace transform - Convolution theorem - Solution of linear second order ODE by Laplace transform technique.

Unit-II: Engineering Physics

Mechanics: Newton's laws of motion – gravitation – work, energy and power - Properties of matter : Elasticity – moduli of elasticity - Sound : intensity level – reverberation – Ultrasonics : production, detection and applications - Thermal Physics : Thermal expansion - thermal stress - expansion joints - bimetallic strips - thermal conductivity- heat conduction in solids – flow of heat through compound media – Thermodynamics – Laws of thermodynamics – Carnot engine - Applied Optics : Interference – Young's double slit experiment - anti-reflection coatings - Diffraction - Lasers – principle and applications – CO₂ and Nd:YAG laser - semiconductor lasers – applications of Lasers – Optical fibres: classification (index & mode based) - principle and propagation of light in optical fibres - acceptance angle and numerical aperture - fibre optic communication system - Quantum Physics : Photoelectric effect– dual nature of matter and radiation – Heisenberg's uncertainty principle - Schrödinger's wave equation - Physics of Materials : Crystal structures – unit cell – packing factor – Superconductivity : Properties and applications - Magnetisation of matter: Magnetic dipole moment – atomic magnetic moments- magnetic permeability and susceptibility - Magnetic material classification : diamagnetism –

paramagnetism – ferromagnetism – Semiconductors : Intrinsic Semiconductors – Energy band diagram – direct and indirect band gap - extrinsic semiconductors – Dielectric materials: Matter polarization and relative permittivity - dipole moment and polarization vector -polarization mechanisms: electronic, ionic, orientational, interfacial and total polarization- frequency dependence - dielectric strength and break-down in gases, liquids and solids.

Unit-III: Engineering Chemistry

Fuel - Classification of fuels - Calorific value - Solid fuel - Liquid fuel - Gaseous fuel - Octane number - Cetane Number -Lubricants - Classification - Greases - Solid Lubricants. Water - Sources - Classifications - Softening process - Desalination - RO Method - Internal treatment - Treatment of Water for Municipal purposes. Plastics - High polymer - classification - Polymerization techniques - Thermoplastics - Thermosetting resins - examples. Rubber -“Types of Rubber - Vulcanisation - Properties-Unvulcanised and Vulcanised. Natural Rubber - Synthetic Rubber - examples. Refractories - Classification - Manufacture of Refractories - Magnesite - Silica - Zirconia -Chromite. Abrasives - Natural - Artificial-Abrasive paper & cloth. Corrosion: Dry and Wet corrosion - Factors affecting corrosion- Different types of corrosion. Productive coating - Hot dipping- metal cladding, electro deposition - Organic Coatings - Paints - Varnishes. Cement and lime- setting and hardening. Explosives- classifications- characteristics-requirements for good explosives- nitrocellulose- TNT- TNB- DNB-PETN- RDX. Alloys- purpose of making alloy- types of alloys- Ferrous alloys. Electrochemistry- conductors and non-conductors - Kohlrausch law - Electrochemical cell- reversible and irreversible cells - EMF - Concentration cell- polarization - over voltage, decomposition potential. Fuel Cells. Nano Chemistry-Basics-distinction between molecules, Nano materials and bulk materials. Size dependent properties and applications of Nano Materials

Unit-IV: Basics of Computer Engineering

Computer Organisation - CPU and Microprocessor [ALU, Control Unit and Bus Structure] - Data Storage [Primary, Secondary and Virtual] - Input and Output Devices. System Software - Assembler - Compiler - Loader - Linker - Operating Systems. Programming Languages - Classification of Programming Language, Algorithm, Flow chart, Pseudo code, High-Level Languages – Fundamental concepts of C Programming. Basic Computer Networking - Network Components [Routers, Bridges, Gateways] - ISO-OSI Reference Model - LAN - WAN - Client-Server Architecture - Internet - World Wide Web. Applications - Office Tools - Word processor - Spreadsheet - Power point - Introduction to Database concepts - E-mail - Browser. IT Enabled Services - E-Governance - E-Commerce - Multimedia.

Unit-V: Basics of Civil and Mechanical Engineering

Introduction to Engineering mechanics - Units and Dimensions - Laws of Mechanics - Coplanar Forces - Static Equilibrium of Rigid body - Moment of force - free body diagram - friction - laws of friction - sliding friction - wedge friction - Rolling resistance - Lader friction - Friction in screws - Screw jack - Belt friction - Properties of surfaces and solids - Centroids and centre of mass - line and areas - Rectangular, circular, triangular areas by integration - T-section, I- Section, Angle section, Hollow section - Area moment of inertia of plane areas - Parallel axis theorem – Perpendicular axis theorem, Polar moment of Inertia, Principle moment of Inertia Mass moment of inertia- Centroid of the simple solids - Dynamics of particle - Displacement, velocity and acceleration - Different types of motion - Rectilinear , Curvilinear and Projectile motions - Newton’s II-law of motion - Work Energy equation - Impulse and momentum principles.

Unit-VI: Basics of Electrical and Electronics Engineering

Ohm's law – Kirchhoff's laws – introduction to DC and AC circuits - single phase and three phase circuits – Power and Power factor, Unbalanced and Balanced loads, Operating principles of moving coil and moving iron instruments (voltmeters and ammeters) – wattmeters, multimeter, energy meters and megger, Construction and principle of operation: DC motors- DC generators-Transformers- Induction motors, Characteristics of PN junction diode - zener diode- half wave and full wave rectifiers - Bipolar junction transistor (CC,CE,CB configurations), SCR, Amplifiers- Operational amplifiers – Inverting and Non-inverting amplifiers, Binary number system- logic gates- Boolean algebra - Half and full adders-Flip-flops - registers and counters- A/D and D/A conversion, Types of analog and digital signals- Modulation and Demodulation (amplitude and frequency) Communication systems: Radio- TV- Fax- Microwave- Satellite and optical fibre.

Unit-VII: Principles of Management

Management - Definition, Evolution of Management Philosophies, Types of Business, Environment Analysis - Planning- Types, Steps, Forecasting, MBO, MBE. Organizing – Departmentation, Line and Staff Authority, Delegation and Decentralization. Staffing - Manpower Planning, Recruitment and Selection, Training, Performance Appraisal. Directing – Theories of Motivation, Leadership Styles, Power and Politics, Change Management, Conflict Management, Communication in Business- Controlling Types, Control Techniques, Budgetary and Non-Budgetary Control.

Unit-VIII: Total Quality Management

Quality – Definitions, Vision, Mission and Policy statements-Dimensions of Product and Service Quality- Contributions of Quality Gurus-Deming, Juran, Crosby, Masaaki Imai, Feigenbaum, Ishikawa. Costs of Quality- Continuous Process Improvement- PDCA, Quality Circle, 5S, Kaizen-Statistical Process Control (SPC), 7QC Tools, New Management Tools of Quality, Bench Marking, 6 sigma, Quality Function Deployment (QFD), POKAYOKE, Total Productive Maintenance (TPM), Business Process Reengineering (BPR), Quality Certifications.

Unit-IX: Environmental Science and Engineering

Definition, scope and importance of environment – need for public awareness. Eco-system and Energy flow– ecological succession. Types of biodiversity: genetic, species and ecosystem diversity– values of biodiversity, India as a mega-diversity nation – hot-spots of biodiversity – threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts – endangered and endemic species of India – conservation of biodiversity: In-situ and ex-situ. Environmental pollution: Causes, Effects and Preventive measures of Water, Soil, Air and Noise Pollutions. Solid, Hazardous and E-Waste management. Energy management and conservation, New Energy Sources - Need of new sources. Different types new energy sources. Applications of- Hydrogen energy, Ocean energy resources, Tidal energy conversion. Concept, origin and power plants of geothermal energy. Sustainability and management - Development, GDP, Sustainability- concept, needs and challenges-economic, social and aspects of sustainability-from unsustainability to sustainability-millennium development goals, and protocols-Sustainable Development Goals-targets, indicators and intervention areas. Climate change- Global, Regional and local environmental issues and possible solutions. Concept of Carbon Credit Carbon Footprint. Environmental management in industry- Material Life cycle assessment, Environmental Impact Assessment. Sustainable habitat: Green buildings, Green materials, Energy efficiency, Sustainable transports. Sustainable energy: Non-conventional Sources, Energy Cycles carbon cycle, emission and sequestration, Green Engineering: Sustainable urbanization- Socio-economical and technological change.

20. Stenography in English (Diploma Standard)

Subject Code: 378

Unit - I

1. Importance of Stenography
2. Consonants
3. Grammalogues
4. Phraseography
5. Circles and Loops
6. Initial and Final Hooks

Unit - II

1. Compound Consonants
2. The Halving Principle
3. The Doubling Principle
4. Medial Semicircle

Unit - III

1. Prefixes and Negative words
2. Suffixes and Terminations
3. Contractions
4. Special Contractions

Unit - IV

1. Advanced Phraseography
2. Intersections
3. Usage of Political Phrases
4. Usage of Legal Phrases

Unit - V

1. Note-taking and Transcription
2. Legislature Reporting
3. Techniques for improving Speed

அலகு 1

- 1 சுருக்கெழுத்தின் முக்கியத்துவம்
- 2 மெய்யெழுத்துக்கள்
- 3 தனிக்குறிச் சொற்கள்
- 4 சொற்றொடரியல்
- 5 வட்டங்கள் மற்றும் சுழிகள்
- 6 ஆரம்ப மற்றும் இறுதி கொக்கிகள்

அலகு 2

- 1 கூட்டு மெய்கள்
- 2 பாதியாக்கும் முறை
- 3 இரட்டிப்பு முறை
- 4 நடு அரைவட்டம்

அலகு 3

- 1 முன்னொட்டுகள் மற்றும் எதிர்மறை சொற்கள்
- 2 பின்னொட்டுகள் மற்றும் இறுதி வார்த்தைகள்
- 3 சுருக்கங்கள்
- 4 சிறப்புச் சுருக்கங்கள்

அலகு 4

- 1 மேம்பட்ட சொற்றொடரியல்
- 2 வெட்டும் முறை
- 3 அரசியல் சொற்றொடர்களின் பயன்பாடு
- 4 சட்ட சொற்றொடர்களின் பயன்பாடு

அலகு 5

- 1 குறிப்பெடுத்தல் மற்றும் விரிவாக்கம் செய்தல்
- 2 சட்டமன்றம்-குறிப்பெடுத்தல்
- 3 வேகத்தை மேம்படுத்துவதற்கான நுட்பங்கள்

Annexure IV

Instructions to be followed by candidates while appearing for written examinations (Objective Type) conducted by the Commission

1. General Instructions

1.1. Candidates shall present themselves at the examination venue with the memorandum of admission (hall ticket) downloaded from the Commission's website, failing which, they shall not be allowed to write the examination. Candidates shall also bring with them, a photocopy of their Aadhaar card / Passport / Driving Licence / Permanent Account Number (PAN) card / Voter ID card.

1.2. Candidates must appear for the examination at the venue they have been allotted, as mentioned in the memorandum of admission (hall ticket). Change of venue will not be permitted. No candidate, without prior approval, shall be allowed to appear for the examination at a venue other than the one originally allotted.

1.3. Candidates may be subjected to frisking at the examination venue, if required, with the assistance of male / female police personnel or any authorized persons, as the case may be.

1.4. Candidates are advised, in their own interest, not to bring any of the banned items including mobile phones to the venue of the examination, as arrangements for safekeeping of the same cannot be assured.

1.5. Parents and others who accompany the candidates will not be permitted inside the examination venue.

1.6. If the photograph of the candidate in the memorandum of admission (hall ticket) is not printed or not clear or does not match with candidate's appearance, he / she should furnish a separate photograph affixed on a plain paper, along with his name, address, register number and signature along with a copy of the memorandum of admission (hall ticket) and a copy of Aadhaar card / Passport / Driving Licence / Permanent Account Number (PAN) card / Voter ID card, to the Chief Invigilator, who shall countersign it.

1.7. The ID proof in original, should also be shown to the room invigilator for verification. The room invigilator upon verification of the identity of the candidate, shall obtain an undertaking as to the genuineness of the candidate and to the effect that he / she is aware that he / she is liable to any criminal / penal action initiated by the Commission, if the information furnished is found to be incorrect at a later date. The undertaking shall then be handed over to the Chief Invigilator.

1.8. In order to facilitate verification of the identity of the candidates and explanation of the procedures pertaining to the examination, the candidates shall present themselves at the examination venue one hour before the time scheduled for the commencement of the examination.

1.9. All gates serving as entry into the examination venue shall be closed thirty minutes before the commencement of the examination and no one shall be allowed into the venue thereafter. (e.g., in case of forenoon session, for an examination scheduled to commence at 09.30 am, the candidates should present themselves at 09.00 am in the examination venue. In case of afternoon session, for an examination scheduled to commence at 02.00 pm, the candidates should present themselves at 01.30 pm. After that no candidate shall be permitted to enter the premises of the examination venue).

1.10. In case of examinations to be held in both forenoon and afternoon sessions, the reporting time for the afternoon session shall also be thirty minutes before the commencement of the examination and no one shall be allowed into the venue thereafter.

1.11. Candidates must show the memorandum of admission (hall ticket) to the Invigilator / Chief Invigilator / inspection authorities / any authorized persons of the examination hall, on demand, for verification.

1.12. Candidates must ensure that the Room Invigilator signs in the memorandum of admission (hall ticket). The memorandum of admission should be preserved carefully and retained permanently. The memorandum of admission should be produced if shortlisted for the next stage of selection / whenever sought for by the Commission.

1.13. The memorandum of admission may also be photocopied, as a precaution, after the exam is over.

1.14. No duplicate memorandum of admission (hall ticket) will be issued later.

1.15. Candidates should maintain strict discipline not only in the examination room, but also inside the campus of the examination venue. Candidates found smoking / intoxicated, or found to have entered into a quarrel of any kind, or to have misbehaved with the Chief Invigilator or with the inspection authorities or with the invigilator or with any other candidate either in the examination hall or inside the campus of the examination venue, either before, during or after the examination, are liable to invalidation of answer sheet and debarment for any period the Commission may deem fit, as well as appropriate criminal action.

1.16. Water, tea, coffee, snacks, soft drinks, etc., will not be allowed inside the examination venue.

1.17. Candidates suffering from serious health issues, may, with the consent of the Chief Invigilator, deposit medication or other medical requirements on the room invigilator's table for use if needed.

1.18. The candidates shall compulsorily be seated in the examination room thirty minutes before the time scheduled for the commencement of the examination.

1.19. Candidates must sit in the place allotted to them after checking the name, register number and photo as pasted on the table.

1.20. Candidate should appear for all the papers in the written examination for his / her answer sheets to be evaluated and in case the candidate absents himself / herself for any of the papers, the papers attended will not be evaluated.

2. Computer Based Test (CBT) Examination

2.1. The Registration for the examination shall start one hour before the time scheduled for the commencement of the examination. Further, the candidates should present themselves at the examination venue 30 minutes before the time scheduled for the commencement of examination and no one shall be allowed into the venue thereafter.

2.2. Each candidate will be assigned a Computer to take up the examination.

2.3. No computer knowledge is required to take up the Computer Based Test. Knowledge in Mouse operation would suffice to take up the Computer Based Test.

2.4. Candidates will be provided with a user name and password to login the system.

2.5. Use the keyboard only to key – in the Register Number, User id (registration id) and password.

- 2.6. Necessary instructions will be displayed on the screen. Kindly read all the instructions carefully and follow the instructions without fail.
- 2.7. In case of doubt in the questions and answers, English version is the final.
- 2.8. In Computer Based Test, questions with five options each will be displayed in the computer screen.
- 2.9. The Question and optional answers will be shuffled randomly and displayed to the candidate.
- 2.10. Candidates will be provided with a paper for doing rough work. After closure of the examination, rough sheet will be collected.
- 2.11. Candidate has to click the best answer to the question. Candidates can proceed to the next question by clicking next button or previous question by clicking previous button.
- 2.12. Candidate can use only the mouse to select the correct answers and proceed with answering the questions.
- 2.13. Candidates can recheck his / her answers and if he / she feels to correct the answers, it can be done at any time before the closure of examination. They can skip the questions also, if they desire so.
- 2.14. Candidate can submit their answers at any time during the examination.
- 2.15. If he / she wants to close the examination, he / she shall remain in the seat till the completion of the scheduled time of examination.
- 2.16. Once the entire answers are submitted, the candidates have no option to proceed further.
- 2.17. If the candidates fail to submit their answers, the system will automatically submit the answers to the server, at the closure of the examination.
- 2.18. The question and answers can be zoomed to the required level for the candidates with visual impairment.
- 2.19. Candidates have to sign the attendance sheet and affix thumb impression for verification of his / her identity.
- 2.20. All the activities of the candidates with the mouse will be recorded in the server and a log file will be created for future reference.
- 2.21. The Examination Hall will be under camera surveillance.
- 2.22. To acquaint with the operation of Mouse and the CBT, the candidates can take up the mock test available in the Commission's website (www.tnpsc.gov.in) and they can practice the usage of mouse in the mock test. Mock test is similar to the CBT to be held on the day of examination. In the Mock test, all the steps are given similar to the CBT. Candidates can practice the mock test as many times as he / she likes.
- 2.23. Answer sheet answered other than the subject opted by the candidate in the online application / specified in the Hall Ticket will be invalidated.
- 2.24. One question will be displayed on the screen at a time.

2.25. Time available for the candidate to complete the examination will be displayed through a countdown timer in the top right-hand corner of the screen. It will display the remaining time as Time Left. (For example: if duration of examination is 3 hours, at the beginning of exam, timer will show 180 minutes and for Differently Abled candidates with scribe / without scribe 240 minutes, which will reduce gradually with passage of time). When the timer reaches zero, the examination will end by itself and the examination will be submitted by the system automatically.

2.26. Question Number Box: 1. Question Number Box displayed on the right side of the screen will show the status of each question using one of the following symbols:

 You have not visited the question yet.

 You have not answered the question.

 You have answered the question.

 You have NOT answered the question, but have marked the question for review.

 You have answered the question and marked for review. This will be considered for evaluation.

The 'Marked for Review' status for a question simply indicates that you would like to look at that question again.

You can click on the ">" arrow which appears to the left of question number box to minimize the question number box. This will enable you to view the question on a bigger area of the screen. To view the question number box again, you can click on "<" arrow which appears on the right side of the screen.

You can click on  to navigate to the bottom and  to navigate to the top of the question area, without scrolling.

2.27. The summary of number of questions answered, not answered, not visited, marked for review and answered and marked for review will be displayed above the question number box.

2.28. The questions will appear on the screen in ascending order, which can be answered one by one.

2.29. To select your answer of a question, click on the button of one of the options.

2.30. Click on Save and Next button after answering every question to save your answer. Otherwise your answer will not be saved.

2.31. To deselect your chosen answer, click on the button of the chosen option again or click on the Clear Response button.

2.32. To view the image provided in the question in a bigger size, click on the image and rotate the scrolling wheel on the mouse.

2.33. Any attempt of malpractice found, will render you liable to such penal action as the Commission may decide.

3. Other Instructions

3.1. Borrowing of any material, instruments from other candidates is strictly prohibited. Candidates shall use only their own pens and specifically permitted material.

3.2. Candidates shall not be allowed to exceed the time allotted for answering the paper, for any reason.

3.3. Tentative answer keys will be hosted in the Commission's website within fifteen working days from the date of conduct of objective type examination. Instructions available in the Para 17 D (iv) of Instructions to Applicants is not applicable to this recruitment. Candidates can challenge the tentative answer keys of the objective type examination through the 'Answer Key Challenge' window available in the Commission's website [Results → Answer Keys]. Representations, if any, challenging the tentative answer keys shall be submitted only through online mode within seven days from the date of publication of tentative answer keys. Representations received by post or e-mail will receive no attention.

3.4. Detailed instructions, procedures to challenge the tentative answer keys have been made available in the Commission's website. Representations made online/offline after the closure of the window will also receive no attention.

3.5. The challenges submitted on time, through the online mode, shall be referred to a committee comprising of experts in each subject. The decision on the final answer key shall be made, based on the recommendations of the expert committee and paper evaluation shall commence thereafter.

3.6. The Commission shall not publish the final answer key until the completion of the entire selection process.

3.7. After conclusion of the entire selection process, relevant particulars of all candidates who had applied for recruitment to the post shall be made available on the Commission's website.

4. Special Instructions for Persons with Benchmark Disabilities, Usage of scribes, etc.,

4.1. Candidates with benchmark disability, shall be permitted to utilize the services of a scribe upon making such request in their online application. Such candidates should produce/upload the following certificate for utilizing services of the scribe and to claim exemption from Tamil Eligibility Test. Requests for scribes made after the submission of application or on the date of examination will receive no attention.

Certificate

This is certify that I have examined Mr/Ms/Mrs. _____
_____ (Name of the candidate with disability) a person with
_____ (Nature and percentage of disability as mentioned in the certificate
of disability), S/o/D/o _____ a resident of
_____ (Village / District / State and to state that He / She has physical limitation
which hampers his / her writing capabilities owing to his / her disability.

Due to the above mentioned disability following concession may be given:-

1. Exemption from Tamil / Second Language.
2. Extra _____ hours for writing theory exam.
3. Allocation of a scribe.
4. Overlooking spelling mistakes and grammatical errors.
5. Using calculator / assistive devices
6. _____ (Any other assistive devices or concessions).

*strike out the non applicable.

Signature

(Name of Government Hospital / Civil Surgeon / Medical Superintendent / Signature of the notified
Medical Authority of a Government Health Care Institution)

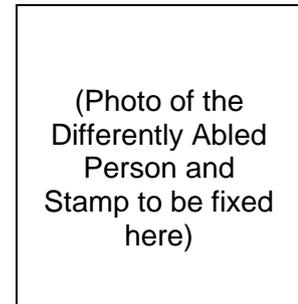
Name & Designation

Name of Government Hospital / Health Care Centre / The notified Medical Authority

Place:

Date:

Signature / Thumb impression
of the Differently Abled Person



Note:

Certificate should be given by a specialist of the relevant stream / disability
(e.g. Visual Impairment – Ophthalmologist, Locomotor disability – Orthopedic Specialist / PMR etc.,)

4.2. Visually impaired candidates and orthopedically challenged candidates who are unable to use their hands for writing, are allowed the assistance of a scribe subject to the following conditions;

4.2.1. The Commission will arrange for scribes and the fee amount to be paid to the scribes will be met by the Commission. Candidates availing of the services of the scribes need not pay any fee to them.

4.2.2. All candidates with benchmark disability, availing of the services of the scribes while appearing for the written examination will be seated in a separate room in the ground floor, in close vicinity to the Chief Invigilator's control room and under the close supervision of the Chief Invigilator.

4.3. Compensatory time of not less than 20 minutes per hour of examination will be allowed to candidates with benchmark disability, who have physical limitation to write including that of speed and who are utilizing the services of a scribe.

4.4. All candidates with disability who have physical limitation with regard to writing including that of speed and not availing the services of a scribe will be allowed additional time of a minimum of one hour for an examination of three hours duration which could further be increased on a case-to-case basis.

4.5. All persons with benchmark disability, who are unable to climb the staircase, will be allowed to write the examination in a room in the ground floor, in close vicinity to the Chief Invigilators control room.

5. Criminal Action: Criminal action will be initiated against the candidates for the following violations;

5.1. Misbehaviour and indiscipline in the examination hall. Candidates should maintain strict discipline not only in the examination room, but also inside the campus of the examination venue. Candidates found smoking / intoxicated, or found to have entered into a quarrel of any kind, or to have misbehaved with the Chief Invigilator or with the inspection authorities or with the invigilator or with any other candidate either in the examination hall or inside the campus of the examination venue, either before, during or after the examination, are liable to debarment for any period the Commission may deem fit, as well as appropriate criminal action.

5.2. Indulging in any type of malpractice, including impersonation and resorting to unfair means within the examination hall or outside will lead to debarment for any period deemed fit by the Commission, besides initiation of criminal action.

5.3. Debarment for such period as the Commission may deem fit will be imposed on candidates resorting to any kind of irregularity or malpractice within / outside the examination hall including:

- a. Consulting with / copying from another candidate in the examination hall.
- b. Copying from books or notes which are printed / typewritten / handwritten.
- c. Seeking the help / assistance of any official / hall supervisor in answering questions in examination hall.
- d. Possession of electronic devices such as cellular phones, pager, watches and rings with in-built memory notes, Bluetooth devices, communication chip, other electronic devices and non-electronic devices such as P&G design data book, books, notes, handbags, other non-permitted materials, etc.

5.4. Violation of any one or more of the instructions contained in the Commission's Instructions to Applicants / instructions printed on the memorandum of admission (hall ticket) shall also make the candidate liable to debarment, either permanently or for such period as the Commission deems fit, and/or rejection of candidature after due process and /or invalidation of answer sheet and/or any other penalty, as decided by the Commission.

5.5. Debarment: The period for which candidates shall be debarred from appearing for the examinations / participating in the recruitment processes conducted by the Commission, for the offences committed by the candidates are given below. Besides debarment, the candidate shall also be liable to rejection of candidature after due process, invalidation of answer papers, as the case may be. Criminal action may also be initiated against such candidates wherever indicated.

S. No	Nature of Offence	Period of Debarment
1	Attempts to influence the Chairman, Members of the Commission, Secretary, Controller of Examinations or any officer or staff of the Commission, personally / by letter / through relatives, friends, patrons, officials or other persons.	Three Years
2	Production of bogus community / destitute widow / differently abled / ex-serviceman / transgender / person studied in Tamil medium certificates, etc. Tampering or alteration in the documents or certificates.	Permanent, Initiation of criminal action
3	Suppression of material information, at any stage of the selection process, regarding: (i) Previous appearances or availing free chances. (ii) Regular / temporary employment in Government or Quasi-Government organizations, local bodies, public sector undertakings, statutory bodies, public corporations, Universities, etc., (iii) Criminal cases, arrests, convictions, disciplinary proceedings, etc. (iv) Debarment or disqualification by Union Public Service Commission / State Public Service Commissions / other agencies	One Year
4	Possession of electronic devices such as cellular phones, watches and rings with in-built memory notes, Bluetooth devices, communication chip, any other electronic devices inside the examination room and also seeking the help of / assistance of any official / invigilator / any outsider in answering question	Permanent
5	Possession of non-electronic devices such as P&G Design Data Book, books, notes, guides, handbags, other non-permitted materials, etc. inside the examination room.	Three Years
6	Consulting with other candidates, copying from other candidates, permitting others to copy from his / her answer paper, copying from books or notes which are printed / typewritten / hand written, etc.	Three Years
7	In addition to the offences listed herein, the involvement of candidates in any indiscipline or irregular practices within / outside the examination room.	Three Years
8	Candidates found smoking / intoxicated, or found to have entered into a quarrel of any kind, or to have misbehaved with the Chief Invigilator or with the inspection authorities or with the invigilator or with any other candidate either in the examination hall or inside the campus of the examination venue, either before, during or after the examination.	Three Years
9	Indulging in grave malpractices, including impersonation, amounting to subversion of the conduct of examination.	Permanent, Initiation of criminal action

Annexure V

1. Experience Certificate for the post of Assistant Manager (Legal) in the Tamil Nadu State Transport Corporation and State Express Transport Corporation (Post Code : 3259)

This is to certify that Thiru./Tmt./Selvi.....Son/Daughter/Wife of.....
Age.....permanently residing at No Thiru./Tmt./Selvi..... was enrolled
as an Advocate, Enrollment No..... date..... and have practiced or practicing
from.....(date) to (date). He/She has passed B.L /L.L.B / M.L / L.L.M degree in the
.....Year from the..... College / University. It is also certified that he/she
has sound knowledge of Corporate Law, Labour Law and experience on the original side in City
Civil Courts or Mofussil Courts for period of five (5) years and has good knowledge and practice in
Motor Accident Claims / Tribunal, Labour Courts etc.,

Date :

Station :

Signature, Name and Designation of
the Presiding Officer (with Enrollment
No.) / Competent Authority
Seal of the Officer.

***Notification date**

Note:-

1. A Certificate in the format prescribed should be obtained from a **Senior Advocate or District Judicial Head (not below the rank of Principle District Judge / District Labour Court Judge)** in support of applicant's claim regarding the period of practice in the above Court cases.
2. The term "Senior Advocate" herein includes Additional Public Prosecutor / Public Prosecutor / President / Secretary of the Bar Associations and Advocates practicing for ten years and more in Taluks and Districts, besides the Senior Advocates practicing in the High Court and in the Supreme Court.

2. Experience Certificate for the post of Deputy Manager (Accounts) in the Tamil Nadu Corporation for Development of Women Limited (Post Code : 3339)

1.	Name of the Employee	
2.	Father / Spouse Name	
3.	Date of Birth	
4.	Qualification possessed by the Employee on the date of joining service	
5.	Designation of the Employee	
6.	Nature of the Work / Duty performed by the Employee (To be mentioned in brief)	
7.	Period of Experience	From ____ (date) To ____ (date)
8.	Total Experience (YY/MM/DD)	____ years ____ months ____ days
9.	Whether Attendance Register / Attendance Rolls / Pay Register and other records available for this Employee	Yes / No
10.	Name of the Organisation / Institution	
11.	Type of Organisation/ Institution [Financial Institution / reputed Industrial / Commercial Undertaking]	
12.	Address of the Organisation / Institution	
13.	Phone No. and Email ID Organisation / Institution	

This is to certify that Thiru/Tmt./Selvi possesses the experience as stated above, as on the date of notification (i.e., 15.05.2024). The above particulars furnished by me are correct.

Affix photograph of the employee with the signature of the Certifying Authority on the Photograph

Seal of Office / Officer:

Place
Date:

Signature
Name & Designation of the
Head of Organisation / Institution /
Competent Authority

Note:

1. A certificate in the format prescribed should be obtained from the Head of the Financial Institution / reputed Industrial / Commercial Undertaking wherein the individual had served or the authority competent to issue such certificate.
2. The Competent authority who issues the certificate is cautioned that issuing of certificate which contains false or incorrect details will lead to legal / penal action against them.

3. Experience Certificate for the post of Assistant General Manager in the State Industries Promotion Corporation of Tamil Nadu Limited (Post Code : 3342)

1.	Name of the Employee	
2.	Father / Spouse Name	
3.	Date of Birth	
4.	Qualification possessed by the Employee on the date of joining service	
5.	Designation of the Employee	
6.	Nature of the Work / Duty performed by the Employee (To be mentioned in brief)	
7.	Whether the employee possesses experience in independent senior capacity	Yes / No
8.	Period of Experience in independent senior capacity	From ____ (date) To ____ (date)
9.	Total Experience (YY/MM/DD) in independent senior capacity	___ years ___ months ___ days
10.	Whether Attendance Register / Attendance Rolls / Pay Register and other records available for this Employee	Yes / No
11.	Name of the Organisation / Institution	
12.	Type of Organisation / Institution [reputed Industrial or Commercial concern]	
13.	Address of the Organisation / Institution	
14.	Phone No. and Email ID of the Organisation / Institution	

This is to certify that Thiru/Tmt./Selvi possesses the experience in independent senior capacity as stated above, as on the date of notification (i.e., 15.05.2024). The above particulars furnished by me are correct.

Affix photograph of the employee with the signature of the Certifying Authority on the Photograph

Seal of Office / Officer:

Place
Date:

Signature
 Name & Designation of the
 Head of Organisation / Institution /
 Competent Authority

Note:

1. A certificate in the format prescribed should be obtained from the Head of the Industrial or Commercial concern wherein the individual had served or the authority competent to issue such certificate.
2. The Competent authority who issues the certificate is cautioned that issuing of certificate which contains false or incorrect details will lead to legal / penal action against them.

4. Experience Certificate for the post of Senior Assistant Director of Boilers in the Public Works Department (Post Code : 1700)

1.	Name of the Employee	
2.	Father / Spouse Name	
3.	Date of Birth	
4.	Qualification possessed by the Employee on the date of joining service	
5.	Designation of the Employee	
6.	Nature of the Work / Duty performed by the Employee (To be mentioned in brief)	
7.	Period of Experience	From ____ (date) To ____ (date)
8.	Total Experience (YY/MM/DD)	___years ___months ___days
9.	Whether the employee possesses experience as practical engineer in the design, construction, operation or maintenance of Boilers during which should have held responsible charge of a steam generation plant or a Boiler plant comprising of a battery of boilers, the total capacity of either plant being not less than 15000 Lbs/hr	Yes / No
10.	Whether Attendance Register / Attendance Rolls / Pay Register and other records available for this Employee	Yes / No
11.	Name of the Organisation / Institution	
12.	Type of Organisation/ Institution [Factory / Industry]	
13.	Address of the Organisation / Institution	
14.	Phone No. and Email ID of the Organisation / Institution	

This is to certify that Thiru/Tmt./Selvi possesses the experience as stated above, as on the date of notification (i.e., 15.05.2024).The above particulars furnished by me are correct.

Affix photograph of the employee with the signature of the Certifying Authority on the Photograph

Seal of Office / Officer:

Place
Date:

Signature
 Name & Designation of the
 Head of Organisation / Institution /
 Competent Authority

Note:

1. A certificate in the format prescribed should be obtained from the Head of the Organisation / Institution wherein the individual had served or the authority competent to issue such certificate.
2. The Competent authority who issues the certificate is cautioned that issuing of certificate which contains false or incorrect details will lead to legal / penal action against them.

**5. Experience Certificate for the post of Bursar in the Collegiate Education Department
(Post Code : 3010)**

1.	Name of the Employee	
2.	Father / Spouse Name	
3.	Date of Birth	
4.	Qualification possessed by the Employee on the date of joining Service	
5.	Designation of the Employee	
6.	Nature of the Work / Duty performed by the Employee (To be mentioned in brief)	
7.	Whether the employee possesses experience in Finance or Administration matters in Managerial Cadre / Officer Cadre	Yes / No
8.	Period of Experience	From ____ (date) To ____ (date)
9.	Total Experience (YY/MM/DD)	____ years ____ months ____ days
10.	Whether Attendance Register / Attendance Rolls / Pay Register and other records available for this Employee	Yes / No
11.	Name of the Organisation/ Institution	
12.	Type of Organisation / Institution [Government / University / Quasi Government Organisation / Public Sector Institution / Private Limited registered under Companies Act]	
13.	Address of the Organisation/ Institution	
14.	Phone No. and Email ID of the Organisation/ Institution	

This is to certify that Thiru/Tmt./Selvi possesses the experience in Finance or Administration matters[@] as stated above, as on the date of notification (i.e., 15.05.2024). The above particulars furnished by me are correct.

@ strike out whichever is not applicable.

Affix photograph of the employee with the signature of the Certifying Authority on the Photograph

Seal of Office / Officer:

Place
Date:

Signature
 Name & Designation of the
 Head of Organisation/ Institution /
 Competent Authority

Note:

1. A certificate in the format prescribed should be obtained from the Head of the Organisation/ Institution wherein the individual had served or the authority competent to issue such certificate.
2. The Competent authority who issues the certificate is cautioned that issuing of certificate which contains false or incorrect details will lead to legal / penal action against them.

6. Experience Certificate for the post of Assistant Director of Town and Country Planning in the Housing and Urban Development Department (Post Code : 1778)

1.	Name of the Employee	
2.	Father / Spouse Name	
3.	Date of Birth	
4.	Qualification possessed by the Employee on the date of joining service	
5.	Designation of the Employee	
6.	Nature of the Work / Duty performed by the Employee (To be mentioned in brief)	
7.	Period of Experience	From ____ (date) To ____ (date)
8.	Total Experience (YY/MM/DD)	___ years ___ months ___ days
9.	Whether Attendance Register / Attendance Rolls / Pay Register and other records available for this Employee	Yes / No
10.	Name of the Organisation/ Institution	
11.	Type of Organisation/ Institution [Town Planning Department of Government / Statutory Board / Urban Authority / University / Recognized Research Institution / Public Sector Undertaking / Semi-Government / Statutory / Autonomous Organization / Local Body]	
12.	Address of the Organisation / Institution	
13.	Phone No. and Email ID of the Organisation / Institution	

(a) **Other than Under Graduates in Planning** [@]

This is to certify that Thiru/Tmt./Selvi possess experience in Town Planning works in the Town Planning Department of Government/ Statutory Board / Urban Authority / University or Recognized Research Institution / Public Sector Undertaking / Semi-Government / Statutory / Autonomous Organization / Local Body as stated above, as on the date of notification (i.e., 15.05.2024). The above particulars furnished by me are correct.

(b) **Under Graduates in Planning** [@]

This is to certify that Thiru/Tmt./Selvi possess experience in the field of Urban or Regional Planning in the State Government / Statutory Board / Urban Authority / University / Recognized Research Institution / Public Sector Undertaking / Semi-Government / Statutory / Autonomous Organization / Local Body as stated above, as on the date of notification (i.e., 15.05.2024). The above particulars furnished by me are correct.

@ strike out whichever is not applicable.

Affix photograph of the employee with the signature of the Certifying Authority on the Photograph

Seal of Office / Officer:

Place
Date:

Signature
 Name & Designation of the
 Head of Organisation/ Institution /
 Competent Authority

Note:

1. A certificate in the format prescribed should be obtained from the Head of the Organisation / Institution wherein the individual had served or the authority competent to issue such certificate.
2. The competent authority who issues the certificate is cautioned that issuing of any certificate containing false details will lead to legal / penal action on them.

7. Experience Certificate for the post of Accounts Officer, Tamil Nadu Industrial Development Corporation (Post Code : 3337)

1.	Name of the Employee	
2.	Father / Spouse Name	
3.	Date of Birth	
4.	Qualification possessed by the Employee on the date of joining service	
5.	Designation of the Employee	
6.	Nature of the Work / Duty performed by the Employee (To be mentioned in brief)	
7.	Period of Experience	From ____ (date) To ____ (date)
8.	Total Experience (YY/MM/DD)	___ years ___ months ___ days
9.	Whether Attendance Register / Attendance Rolls / Pay Register and other records available for this Employee	Yes / No
10.	Name of the Organisation/ Institution	
11.	Type of Organisation/ Institution	
12.	Address of the Organisation/ Institution	
13.	Phone No. and Email ID of the Organisation/ Institution	

This is to certify that Thiru/Tmt./Selvi possesses experience in handling finance and accounts as on the date of notification (i.e., 15.05.2024) in one/ more of the following areas @

- (a) Budget preparation, revised preparation, estimate preparation of books of accounts, voucher entry; understanding of taxation; understanding of audit processes; bill preparation; and BRS.
- (b) Handling Internal audits, statutory audit and AG audits.
- (c) Experience in handling RBI correspondence relating to NBFC compliance.

@ *strike out whichever is not applicable.*

The above particulars furnished by me are correct.

Affix photograph of the employee with the signature of the Certifying Authority on the Photograph

Seal of Office / Officer:

Place
Date:

Signature
 Name & Designation of the
 Head of Organisation/ Institution /
 Competent Authority

Note:

1. A certificate in the format prescribed should be obtained from the Head of the Organisation/ Institution wherein the individual had served or the authority competent to issue such certificate.
2. The competent authority who issues the certificate is cautioned that issuing of any certificate containing false details will lead to legal /penal action on them.

8. Experience Certificate for the post of Assistant Manager (Projects) in Tamil Nadu Urban Finance and Infrastructure Development Corporation Limited (Post Code : 3346)

1.	Name of the Employee	
2.	Father / Spouse Name	
3.	Date of Birth	
4.	Qualification possessed by the Employee on the date of joining service	
5.	Designation of the Employee	
6.	Nature of the Work / Duty performed by the Employee (To be mentioned in brief)	
7.	Whether the employee possesses experience in appraisal / execution of Urban Infrastructure Projects	Yes / No
8.	Period of Experience	From ____ (date) To ____ (date)
9.	Total Experience (YY/MM/DD)	___ years ___ months ___ days
10.	Whether Attendance Register / Attendance Rolls / Pay Register and other records available for this Employee	Yes / No
11.	Name of the Organisation / Institution	
12.	Type of Organisation / Institution [Public / Private Limited Company]	
13.	Address of the Organisation / Institution	
14.	Phone No. and Email ID of the Organisation / Institution	

This is to certify that Thiru/Tmt./Selvi possesses the said experience as stated above, as on the date of notification (i.e., 15.05.2024). The above particulars furnished by me are correct.

Affix photograph of the employee with the signature of the Certifying Authority on the Photograph

Seal of Office / Officer:

Place
Date:

Signature
Name & Designation of the
Head of Organisation / Institution /
Competent Authority

Note:

1. A certificate in the format prescribed should be obtained from the Head of the Organisation / Institution wherein the individual had served or the authority competent to issue such certificate.
2. The Competent authority who issues the certificate is cautioned that issuing of certificate which contains false or incorrect details will lead to legal / penal action against them.