



# TAMIL NADU PUBLIC SERVICE COMMISSION

Advertisement No.666  
Notification No. 17/2023

DATED:21.09.2023

Applications are invited from eligible candidates only through online mode upto 20.10.2023 for direct recruitment to the post of **Junior Analyst in the Drugs Testing Laboratory included in the Tamil Nadu Medical Subordinate Service.**

**Examination for this post shall be conducted in Computer Based Test (CBT) Method.**

## **WARNING**

- All recruitments by the Tamil Nadu Public Service Commission are purely merit based.
- The Tamil Nadu Public Service Commission hereby cautions the applicants 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 applicant on account of indulging in any sort of dealings with such unscrupulous elements.
- Applicants are solely responsible for their claims in the online application. They cannot blame service providers like internet cafes/browsing centres/Common Service centres for the mistakes made while applying online for recruitment. Applicants are advised to check the filled in online application along with required documents (see Annexure IV) before finally submitting the same.
- ***The applicants shall mandatorily upload the certificates / documents (in support of all the claims made / details furnished in the online application) at the time of submission of online application itself. It shall be ensured by the applicants that the online application shall not be submitted without uploading the required certificates.***
- Applicants are directed to read all the information / instructions / guidelines given in this notification and the Commission's "Instructions to applicants" before applying for this recruitment. Clarification if any required, may be obtained over phone and email well ahead of the last date for submission of online application. Candidates should follow the instructions given in the online application also.

### 1. ONE TIME REGISTRATION:

It is mandatory for applicants to register their basic particulars through one-time online registration system on payment of Rs.150/- (Rupees One Hundred and Fifty only) towards registration fee and then they should apply online for this recruitment. [The one-time registration will be valid for five years from the date of registration. Thereafter, the registration should be renewed by paying the prescribed fee] **One Time Registration will not be considered as an application for any post.**

For further details refer para 2 of the "Commission's Instructions to Applicants".

### 2. DETAILS OF VACANCIES:

Name of the Post	Name of the Service	No. of vacancies	Scale of pay
<b>Junior Analyst in the Drugs Testing Laboratory</b> (PostCode:2006)	<b>Tamil Nadu Medical Subordinate Service</b> (Code No:049)	7 6+1 (C/F) ST(G)	Rs.36,400- 1,15,700/- (Level-16)

#### **Note:**

**Unless and otherwise specified, the number of vacancies notified is approximate and is liable to modification as indicated in para 11-A of 'Instructions to Applicants'.**

### 3. DISTRIBUTION OF VACANCIES:

The rule of reservation of appointments is applicable for this recruitment.

Current vacancy - 6

GT (G)	SC (W)	MBC/DC	BC(G)	SC(G)	TOTAL
2	1	1	1	1	6

Carried forward vacancy 1-ST(G)

**Abbreviation:-** GT-General Turn; BC(OBCM)–Backward Classes (other than Backward Class Muslim); MBC/DC-Most Backward Classes / Denotified Communities; SC–Scheduled Castes; ST–Scheduled Tribes; G-General; W-Women;

#### 4. IMPORTANT DATES AND TIME:

Date of Notification	<b>21.09.2023</b>
Last date for submission of online application	<b>20.10.2023</b>
Application Correction Window Period	<b>From</b> <b>25.10.2023 - 12.01 am</b> <b>To</b> <b>27.10.2023 - 11.59 pm</b>
<b>DATE OF EXAMINATION (COMPUTER BASED TEST)</b>	
<b>PAPER-I:</b> (Subject Paper) (Degree standard)	<b>05.12.2023</b> <b>09.30 a.m. to 12.30 p.m.</b>
<b>PAPER-II:</b> <b>PART A:</b> Tamil Eligibility Test (SSLC Standard) and <b>PART B :</b> General Studies (Degree Standard)	<b>05.12.2023</b> <b>02.30 p.m. to 05.30 p.m.</b>

**Note:**

Refer [Annexure-VIII](#) of this Notification regarding tentative timeline for the recruitment process.

#### 5. QUALIFICATIONS:

##### (A) AGE LIMIT (as on 01.07.2023):

Sl. No.	Category of Applicants	Minimum Age	Maximum Age
1.	SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s, BCMs and Destitute Widows of All Categories	18 years	No maximum Age limit
2.	'OTHERS' [i.e. candidates not belonging to SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s and BCMs]		Should not have completed 32 years.®

**Note: @ In G.O (Ms).No.91, Human Resources Management (S) Department, dated 13.09.2021, the Maximum Age Limit prescribed for appointment by direct recruitment is enhanced by 2 years.**

**Explanation:** No maximum age limit shall mean that the applicants should not have completed 60 years of age either on the date of notification or at the time of selection /appointment to the post.

**Note**

"Others" [i.e., Applicants not belonging to SCs, SC(A)s, STs, MBCs/DCs, BC(OBCM)s, BCMs] who have put in five years and more of service in the State/Central Government are not eligible even if they are within the age limit.

(For further details refer to [para 3\(F\) of "Instructions to Applicants"](#), Section 3(r) of Tamil Nadu Government Servants (Conditions of Service) Act, 2016)

**AGE CONCESSION:**

**(i) For Persons with Benchmark Disability :**

Persons with Benchmark Disability are eligible for age concession upto 10 years over and above the maximum age limit prescribed.

(Section 64 of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016)

**(ii) For Ex-servicemen (Others)**

a) The maximum age limit for Ex-servicemen is 50 years.

(Section 63 of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016 and as per G.O.(Ms)No.91, Human Resources Management (S) Department, dated 13.09.2021)

b) The above mentioned age concession **will not apply** to the Ex-servicemen applicants who have already been recruited to any class or service or category.

(Section 3(j) of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016)

**(B) EDUCATIONAL QUALIFICATION (as on 21.09.2023)**

Applicants should possess the following or its equivalent qualification awarded by any University or Institution recognized by the University Grants Commission:

Must be a graduate in Pharmacy or Chemistry or Pharmaceutical Chemistry and should possess not less than two years experience in the analysis of drugs.

Provided that the requirement of experience may be reduced to one year in the case of Pharmacy graduates and post graduates in Chemistry with analytical Chemistry as a specific subject.

**Note:**

- i. The educational qualification prescribed for this post shall have been obtained by passing the required qualification in the following order of studies viz., 10th + HSC or its equivalent + Bachelors degree + Post Graduate degree as required under Section 25 of Tamil Nadu Government Servants (Conditions of Service) Act, 2016. **(Results of the Examination should have been declared on or before the date of notification)**

- ii. The qualifications considered equivalent are indicated in Annexure-I to this notification.
- iii. Candidates claiming Equivalence of qualification to the prescribed qualification should submit evidence for Equivalence of qualification in the form of Government Order issued on or before the date of this Notification, failing which their application **will be summarily rejected**. The Government Orders issued declaring Equivalence of prescribed qualification after the date of this Notification will not be accepted. (Refer also to the Disclaimer annexed to this Notification) **[For further details regarding Equivalence of Qualification refer para 9 of the "Instructions to Applicants"]**
- iv. With respect to the applicants should upload or submit experience certificate as provided in **Annexure-II** to this notification.

**(C) KNOWLEDGE IN TAMIL:-**

Applicants should possess adequate knowledge in Tamil. [For further details refer para 10 of 'Instructions to Applicants']

**(D) CERTIFICATE OF PHYSICAL FITNESS: -**

Applicants selected for appointment to the said post will be required to produce a certificate of physical fitness in the form prescribed below. The model format is enclosed with **Annexure-V** of the notification. The said Certificate should be submitted by the selected candidate to the Appointing Authority at the time of joining to the said post.

Standard of Vision	Form of Certificate of Physical Fitness
Standard III or Better	Form prescribed for Other than Executive and Ministerial posts'

**6. (A) FEES:**

a)	<p><b>Registration Fee:</b> For One Time Registration (Revised with effect from 01.03.2017 vide G.O. (Ms) No.32, Personnel and Administrative Reforms Department, dated 01.03.2017)</p> <p><b>Note:</b> Applicants who have already registered in OneTime Online Registration System and within the validity period of 5 years are exempted.</p>	Rs.150/-
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b)	<b><u>Examination Fee</u></b> <b><u>Note</u></b> The Examination fee <b>should be paid</b> at the time of submitting the online application for this recruitment if they are not eligible for the concession noted below at 6(B) of the Notification.	Rs.100/-
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**Note:**

- (i) Linking Aadhaar number with One Time Registration (OTR) is mandatory for applicants. [\[For further details refer para 2B of 'Instructions to Applicants'\]](#)
- (ii) One Time Registration is valid for five years from the date of registration. After completion of five years, the applicant must renew the One Time Registration by paying the fee prescribed. An applicant should make an online application separately for each and every examination for which he intends to appear. [\[Refer para 2C of 'Instructions to Applicants'\]](#)

**(B) EXAMINATION FEE CONCESSIONS:**

	<b>Category</b>	<b>Concession</b>
(i)	Scheduled Castes/ Scheduled Caste (Arunthathiyars)	Full Exemption
(ii)	Scheduled Tribes	Full Exemption
(iii)	Most Backward Classes / Denotified Communities	Three Free Chances
(iv)	Backward Classes (other than Muslim) / Backward Classes (Muslim)	Three Free Chances
(v)	Ex-Servicemen	Two Free Chances
(vi)	Destitute Widow	Full Exemption
(vii)	Persons with Benchmark Disability	Full Exemption

**Note:**

- (i) The total number of free chances availed, will be calculated on the basis of claims made in previous applications.
- (ii) The number of free chances availed by the applicant will be verified by the Commission at any stage of the selection process.
- (iii) In case an applicant who makes a false claim for exemption from payment of application fee by suppressing information regarding his previous application(s) his candidature shall be rejected after due process and he shall be debarred for a period of one year from appearing for examinations and selections conducted by the Commission.
- (iv) Applicants are directed to carefully choose the options 'Yes' or 'No' regarding availing the fee concession.

- (v) Applicants are advised in their own interest, to keep an account of the number of times fee concession availed, irrespective of the information displayed in the <Application History> of the applicant dashboard.
- (vi) An application (irrespective of the post applied for) claiming fee concession will operate to exclude one chance from the number of free chances allowed.
- (vii) Applicants who have availed the maximum number of free chances permitted / applicants who do not wish to avail of the fee concession / applicants who are not eligible for fee concession, shall choose the option 'No' against the query regarding fee concession. Such applicants shall thereafter pay the requisite fee through the prescribed mode of payment.
- (viii) Failure to pay the prescribed fee in time along with the online application, will result in the rejection of application after due process. (For further details regarding examination fee concessions refer to Para 6 of 'Instructions to Applicants')

## 7. MODE OF PAYMENT OF EXAMINATION FEE:

- CBT Examination fee of Rs.100/- (Rupees One hundred only), is payable by online mode through Net Banking / Credit card / Debit card on or before the last date of submission of online application by choosing the option in the online application.
- Applicants have to pay the service charges also as applicable.
- Applicants can avail exemption from paying examination fee as per eligibility criteria.
- **Offline mode of payment in the form of Demand Draft / Postal Order etc. will not be accepted and the applications of candidates with such modes of payment will be summarily rejected after due process.** (For further details regarding the Examination fee, refer para. 2(J) of "Instructions to Applicants").

## 8. CONCESSIONS:

- (i) Concessions in the matter of age and/or examination fees allowed to SCs, SC(A)s, STs, MBCs/DCs, BCs(OBCM), BCMs, Destitute Widows and Ex-Servicemen are given in [para's 3D, 5 and 6 of the 'Instructions to Applicants'](#).
- (ii) Persons claiming concessions referred to above have to produce evidence for such claims when called for, otherwise their application will be **rejected after due process.**

### **Note:**

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.[Section 3(j) of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016].

### 9. SCHEME OF EXAMINATION: OBJECTIVE TYPE (CBT METHOD):

Subject (CBT Method)	Duration	Maximum marks	Minimum qualifying marks for selection	
			SCs, SC(A)s, STs, MBCs/DCs BC(OBCM)s & BCMs	Others
<b>i. Paper –I (Subject Paper)</b> <b>(Degree Standard)</b> (200 Questions) Pharmacy / Pharmaceutical Sciences (Code No.429) Chemistry (Code No.430)	<b>3 Hours</b>	<b>300</b>	<b>135</b>	<b>180</b>
<b>ii. Paper - II (Objective Type)</b> <b>Part-A</b> Tamil Eligibility Test (SSLC Std) (100 questions/150 marks)		<b>150</b> <b>Note:</b> <i>Minimum qualifying marks – 60 marks (40% of 150)Marks secured in Part-A of Paper-II will not be taken into account for ranking.</i>		
<b>Part-B</b> <b>(General Studies)</b> (100 questions) (150 marks) (Code No:003) <b>General studies</b> (Degree standard) – 75 questions and <b>Aptitude and mental ability test</b> (SSLC standard) - 25 questions		<b>150</b>		
<b>Total</b>		<b>450</b>		



**Note:-**

- a) The candidates who possess a Pharmaceutical Chemistry shall be allowed to write any one of the subject in Paper-I (Pharmacy or Chemistry).
- b) Answer sheets of Paper-I and Part B of Paper II of the candidates will be evaluated, only if the candidates secure minimum qualifying marks in Part-A of Paper-II.
- c) Marks secured in Paper-I and Part-B of Paper-II will only be considered for ranking.
- d) The questions in paper-I (Subject paper) (Pharmacy) will be set in English only and questions for Part-B of Paper-II and paper-I (Subject paper) (Chemistry) will be set both in English and Tamil.
- e) The candidate should appear for all the papers in the CBT Method examination for his / her answers to be evaluated and in case the candidate absents himself / herself for any of the papers, the papers attended will not be evaluated.
- f) If answers of a candidate for one paper is declared deemed not fit for valuation, the answers of the candidate for the remaining papers will not be evaluated.
- g) As per the orders issued in G.O. (Ms) No.49, Human Resources Management (M) Department, dated 23.05.2022, the differently abled candidates can avail exemption from writing Part-A in Paper-II (Objective Type) (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 Disability Certificate as prescribed in G.O. (Ms) No. 08, Welfare of Differently Abled Persons (DAP-3.2) Department dated 21.09.2021. Model format enclosed with Annexure-VI of this notification.

**Instructions to the candidates who are claiming exemption for Tamil Eligibility Test:**

- i. As per the orders issued in G.O. (Ms.) No.49, Human Resource Management (M) Department, dated 23.05.2022, read along with G.O. Ms.No.8, Welfare of Differently Abled Persons (DAP 3.2) Department, dated 21.09.2021, the differently-abled candidates who are even below the 40% of disability can also avail the exemptions from writing Tamil Eligibility Test i.e., Part-A in Paper-II of examination if they have claimed such exemptions in their online application.

- ii. The candidates who have been exempted to write Tamil Eligibility Test shall be allowed to write only General Studies Paper i.e. Part-B in Paper-II.
- iii. Part-A of Paper-II Tamil Eligibility Test shall contain 100 questions from 1 to 100. Part-B of Paper-II the General Studies paper contains 100 questions from 101 to 200 and time duration to write each part of the said examination shall be given 1 Hour and 30 minutes.
- iv. All the exempted candidates with disability who have physical limitation with regard to writing, including that of speed and not availing the services of a scribe shall also be allowed compensatory time of a minimum of thirty minutes for an examination of one and a half hours (1 Hour and 30 minutes.) duration in the General Studies paper as per G.O.Ms.No.8, Welfare of Differently Abled Persons (DAP 3.2) Department, dated 21.09.2021.
- v. The said exempted candidates must also enter into the examination hall in the A.N. session half an hour before the commencement of examination hall.
- vi. In the case of OMR method of examination, they shall be allowed to write the examination from 2.00 P.M. to 4.00 P.M., and in the case of CBT method, they shall be allowed to write the examination from 2.30 P.M. to 4.30 P.M. All the candidates are permitted to leave the examination hall only after the closure of examination even though they are exempted to write Tamil Eligibility Test.
- vii. The disability certificate as prescribed in the Appendix to G.O. (Ms) No. 8, Welfare of Differently Abled Persons (DAP 3.2) Department, dated 21.09.2021, should be obtained from the competent authority (viz. Chief Medical Officer / Civil Surgeon / Medical Superintendent /Notified Medical Authority of a Government Health Care Institution) and it has to be produced / uploaded along with the online application failing which, the application of the candidate (who claims exemption from Tamil Eligibility Test) will be rejected after due process.
- viii. The exemption from Tamil Eligibility Test, Compensatory time and scribe will be provided only if the candidates have made such claims in their online application and uploaded the Medical Certificate as prescribed in Appendix to the G.O. (Ms) No.8, Welfare of Differently Abled Persons (DAP 3.2) Department, dated 21.09.2021.

- h) Refer para 17 of "Instructions to Applicants" in regard to instructions to be followed while appearing for competitive examinations conducted by the Commission.
- i) The syllabus is available in Annexure-III to this Notification and also available in the Commission's website [www.tnpsc.gov.in](http://www.tnpsc.gov.in).

**i) Instructions to candidates appearing for Computer Based Test (CBT)**

- The candidate has to appear for the examination where he has been allotted to the examination. Change of centre or venue is not permitted. He has to carry the Hall Ticket (Admission Card) and same has to be produced at the examination venue. Each candidate will be assigned a Computer to take up the examination. Candidates will be provided with a user name and password to login the system. Necessary instructions will be displayed on screen. Kindly read all the instructions carefully.
- Candidates are not permitted to carry any electronic and / or communication device into the examination hall. They are advised not to bring the electronic gadgets with them.
- Computer Based online Test (CBT) is similar to paper pen shading test.
- In Computer Based online Test, questions with five options each will be displayed in the computer screen.
- Candidate can use only the mouse to select the correct answers and proceed with answering the questions.
- Candidates will be provided with a paper for doing rough work. After closure of the examination, rough sheet will be collected.
- Candidates have 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.
- Candidates can review any question and the answers, and the answers can be changed at any time before the closure of examination. They can skip the questions also, if they desire so.
- The Question and optional answers will be shuffled randomly and displayed to the candidate.
- Candidate can submit their answers at any time during the examination.
- Once the answers are submitted, the candidates have no option to proceed further.
- If the candidate fails to submit their answers, the system will automatically submit the answers to the server, at the closure of the examination.
- No computer knowledge is required to take up the Computer Based online Test. Knowledge in Mouse operation would suffice to take up the Computer Based online Test.
- The question and answers can be zoomed to the required level for the candidates with visual impairment. Candidates have to sign the attendance sheet and affix thumb impression for verification of his/her identity. 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. The Examination Hall will be under camera surveillance. To acquaint with the operation of Mouse and the CBT, the candidates can take up the mock test available in the Commissions website ([www.tnpsc.gov.in](http://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. Candidate can practice the mock test as many times as he/she likes.

- Answer sheet answered other than the subject mentioned by the candidate in the online application /specified in the Hall Ticket will be invalidated.
- Additional instruction for Computer Based Test (CBT) is provided at [Annexure VII](#)

#### **10. CENTRES FOR EXAMINATION:**

**The CBT Examination for the posts will be held at 7 district centres only.**

Sl.No.	Name of the Centres	Centre Code
1.	Chennai	0101
2.	Coimbatore	0201
3.	Madurai	1001
4.	Salem	1701
5.	Trichy	2501
6.	Thirunelveli	2601
7.	Vellore	2701

#### **Note:**

1. Applicants should choose any two of the above centres for writing the examination. Applicants will be allotted a venue in one of these two centres. However, applicants with benchmark disability (differently abled applicants), shall be permitted to choose only one district centre. (for further details refer para 2-Q of Instructions to Applicants).
2. Request for change of examination centre will not be permitted (For further details refer para 17(A)(ii) of "Instructions to Applicants")
3. The Commission reserves the right to increase or decrease the number of examination centres and to re-allot the applicants accordingly.
4. Applicants should appear for the CBT examinations / certificate verification at their own expenses.

#### **11. SELECTION PROCEDURE:**

The Selection will be made in single stage, based on the marks obtained by the applicants in the written examination and subject to the rule of reservation of appointments. A tentative list of eligible candidates for certificate verification will be announced in the Commission's website. After verification of the original certificates the eligible candidates will be summoned for final selection.

The applicant who has not appeared for any of the subjects in the CBT examination will not be considered for selection, even if he/she secures the minimum qualifying marks for selection. (For further details refer to para 18(C) of the 'Instructions to Applicants').

Note:

1. First, the selection will be made for the backlog vacancies / carried forward vacancies (Section 27 of the Tamil Nadu Government Servants (Condition of Service) Act 2016)
2. Secondly, the selection will be made for the regular vacancies following the Rule of Reservation of Appointments

## **12. (A) EMPLOYMENT DETAILS:**

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 Organisations or Public Sector Units constituted under the authority of the Government of India or of a State in India, whether in regular service or in temporary 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.** Candidates should produce No Objection Certificate when called for. [For further details refer para. 14 (P) of "Instructions to Applicants"]

## **(B) DECLARATION REGARDING CRIMINAL CASES (OR) DISCIPLINARY CASES:**

- (i) Candidates who have declared pending criminal or disciplinary cases in their online application, must upload the copy of First Information Report (FIR) or memorandum of charges / show cause notice, as the case may be. Failure to upload such papers along with online application, shall result in rejection of candidature after due process.
- (ii) Candidates who have declared conviction in criminal cases or punishment in disciplinary cases, in their online application, must upload the relevant court orders and/or release orders or memorandum of proceedings, as the case may be, along with online application. Failure to upload such papers, shall result in rejection of candidature after due process.
- (iii) In case of any criminal case is filed / disciplinary action is taken against or conviction / punishment is imposed on a candidate after submission of the on-line application at any stage of the recruitment process before the completion of entire selection process such candidates should report this fact to the Commission in the next immediate stage. Failure to comply with these instructions shall result in rejection of candidature after due process and debarment for a period of one year. [Para. 14 (S) & 2W of "Instructions to Applicants"] Any violation of instruction therein will result in rejection of application and forfeiture of his/her candidature after due process.

## **13. GENERAL INFORMATION:**

**(A)** The rule of reservation of appointments is applicable to this recruitment.

As per Sections 26 and 27(c) of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016, reservation of appointment to "Destitute Widows" and "Ex-servicemen" will not apply to this recruitment.

**(B) Persons Studied in Tamil Medium**

- (i) As per Section 2(d) of the Tamil Nadu Appointment on preferential basis in the services under the State of Persons Studied in Tamil Medium Act, 2010, as amended by Act 35 of 2020, **Person studied in Tamil medium means a person who has studied through Tamil medium of instruction upto the educational qualification prescribed for direct recruitment in the rules or regulations or orders applicable to any appointment in the services under the State.**
- (ii) 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/she had studied **the entire duration of the respective course(s) through Tamil Medium of instruction.**
- (iii) Candidates must upload / produce documents as evidence of having studied in the Tamil Medium, all educational qualification upto the educational qualification prescribed.

**Example:**

***If the prescribed educational qualification is Post Graduate Degree, then the candidate should have studied from the First Standard to SSLC, Higher Secondary Course, Degree and Post Graduate Degree through Tamil Medium of instruction. (Refer para 14 (R) of Instructions to Applicants).***

- (iv) If no such document as evidence for 'PSTM' is available, a certificate from the Principal/Head Master / District Educational Officer / Chief Educational Officer / District Adi Dravidar Welfare Officer/ Controller of Examinations / Head / Director of Educational Institution / Director / Joint Director of Technical Education / Registrar of Universities, as the case may be, in the prescribed format must be uploaded at time of submission of online application for each and every educational qualification up to the educational qualification prescribed.
- (v) Failure to upload / produce such documents at time of submission of online application as evidence for 'Persons Studied in Tamil Medium' for all educational qualification up to the educational qualification

prescribed, shall result in the rejection of candidature after due process.

- (vi) Documents uploaded at time of submission of online application 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.

(For further details refer to para. 14 (R) of 2 (w) of the "Instructions to Applicants")

- (C) The selection for appointment to the post is purely provisional subject to the final orders in the Writ Petitions, if any, pending on the files of the Hon'ble High Court of Madras and Madurai Bench of Madras High Court.
- (D) This post is included under the list of post of Group-A & B category which are identified as suitable for 4% reservation to Differently Abled Persons vide G.O.(Ms).No.20, Welfare of Differently Abled (DAP 3.2) Department, dated 20.06.2018. The suitable Differently Abled Persons categories detailed below:

**LV, HH, LD, LC, DF, AC, ASD, SLD.**

However, the turns allotted for differently abled persons have not arisen among the turns to be utilized for this recruitment.

[LV-Low Vision, HH-Hard of Hearing, LD-LoCo-Motor Disability, LC-Leprosy Cured, DF-Dwarfism, AC-Acid Attack Victims, ASD-Autism Spectrum Disorder, SLD – Specific Learning Disability]

- (E) If no qualified and suitable women applicants are available for selection against the vacancies reserved for them, those vacancies will be filled by male applicants belonging to the respective communal categories.[Section 26(5) of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016].
- (F) Wherever vacancies are reserved for Arunthathiyars on preferential basis, even after filling the vacancies reserved for SC (Arunthathiyars) on preferential basis, if more number of qualified Arunthathiyars are available, they shall be entitled to compete with the Scheduled Castes other than Arunthathiyars in the inter-merit among them and if any posts reserved for Arunthathiyars remain unfilled for want of adequate number of qualified applicants, it shall be filled by Scheduled Castes other than Arunthathiyars. [Section 27 of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016].
- (G) Evidence for all the claims made in the online application should be uploaded / submitted in time when documents are called for. Any subsequent claim made after submission of online application will not be entertained. Failure to upload/ submit the documents within the

stipulated time limit will entail rejection of application after due process.

- (H) Suppression of following material information in the online application regarding (i) free chances availed (ii) Employment in the Service of the Indian Union or a State in India or in the employment of Local Bodies or University or Quasi Government Organization or Public Sector units constituted under the authority of the Government of India or of a State in India in regular service or temporary service (iii) Wilful suppression of criminal cases / disciplinary action pending / punishments if any, against the applicant (iv) violation of undertaking given by the applicant in the online application etc., may invite suitable penal action including debarment for a specific period as decided by the Commission for various recruitments/ selections conducted by the Commission, besides rejection of application after due process.
- (I) Correct and true information regarding arrest, convictions, criminal or any disciplinary proceedings initiated / pending or finalised, debarment / disqualification by any recruiting agency, if any, should also be furnished to the Commission at the time of application. The details thereof, i.e. originals of the judgement / order / G.O. dropping further action in the departmental proceedings or any document that may prove the suitability of such applicants for appointment in such cases must be produced at the stage / time of certificate verification without fail. All such events that occur after the submission of application and till the date of his / her selection and appointment shall be reported to the Commission forthwith. Failure to report on the part of the applicant will be considered as suppression of material information and will attract suitable penal action.  
[For further details refer para 12 of the "Instructions to applicants"]
- (J) Incomplete applications and applications containing wrong claims or incorrect particulars relating to category of reservation / eligibility / age /gender / communal category / educational qualification / medium of instruction / physical qualification / other basic qualifications and other basic eligibility criteria will be summarily rejected after due process.
- (K) One Time Registration is not an application for any post / recruitment. Though the details/particulars have already been furnished by the applicants under One Time Registration system, the claims made in the online application for this recruitment alone will be taken into consideration. The Commission will not be responsible for any consequences arising out of furnishing of incorrect and incomplete



details in the application or omission to provide the required details in the application for this recruitment.

(L) **DETERMINATION OF COMMUNITY FOR TRANSGENDER:**

(i) The Transgender candidates, who do not possess any community certificate may choose to be considered under Most Backward Classes as per G.O. (Ms) No.28, Backward Classes, Most Backward Class and Minorities Welfare Department, dated 06.04.2015 or under 'Others'.

(ii) The 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.

(iii) The Transgender candidates who belong to the 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 future. {Refer G.O.(Ms.) No.90, Social Welfare and Nutritious Meal Programme [SW8(2)] Department, dated 22.12.2017 and Para. 14 (F) (vi-xi) of "Instructions to Applicants"}

(M) **RESERVATION IN EMPLOYMENT FOR TRANSGENDER:**

(i) The Transgender candidates who identify themselves as 'Female' shall be considered against both 30% reservation for women as well as 70% reservation for the General category (both Men & Women).

(ii) The Transgender candidates, who identify themselves as 'Male' or 'Transgender', shall be considered against the 70 % reservation for General category (both Men & Women).

(iii) The above concessions shall be granted subject to production of certificate identifying them as Transgender or Transgender (Male) or Transgender (Female), as the case may be, issued by the Tamil Nadu Transgender Welfare Board (TNTGWB)."

**14. OTHER IMPORTANT INSTRUCTIONS:**

- (a) **Applicants should ensure their eligibility for the examination.** Before applying for / appearing for the examination, the applicants should ensure their eligibility for such examination and that they fulfil all the conditions in regard to age, educational qualifications, number of chances for fee

concession, etc., as prescribed by the Commission's notification. 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 / oral test / counselling or inclusion of name in the selection list will not confer on the candidates any right to appointment. The candidature is therefore, provisional at all stages and 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.

[Refer Para. 11 (B) (C) and (D) of "Instructions to Applicants"]

- (b) The memorandum of admission (hall ticket) for eligible applicants will be made available in the Commission's website [www.tnpscexams.in/](http://www.tnpscexams.in/) [www.tnpsc.gov.in](http://www.tnpsc.gov.in) for downloading by applicants. The memorandum of admission will **not** be sent by post. The applicants must comply with each and every instruction given in the memorandum of admission.

[Refer in Note (g) under Para 2(V) of "Instructions to applicants"]

- (c) **ONLINE CORRESPONDENCE** :Applicants 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. Queries relating to One Time Registration/ online application may be sent to [helpdesk@tnpscexams.in](mailto:helpdesk@tnpscexams.in). Other queries maybe sent to [grievance.tnpsc@tn.gov.in](mailto:grievance.tnpsc@tn.gov.in) [Refer in Note (h),(i),(j) under Para 2(V) of "Instructions to applicants"]

- (d) **COMMUNICATION TO APPLICANTS:** Individual communication regarding the date and time of Certificate Verification, Oral Test and Counselling (as applicable) will not be sent to the applicants by post. The details will be made available on the Commission's website. **Applicants will be informed of the above fact only through SMS and e-mail and they should watch the Commission's website in this regard. Commission is not responsible for non-delivery of SMS/e-mail due to any reasons.**

- (e) **During the process of recruitment from Notification till completion of selection process, No information / clarification on the selection particulars / details will be furnished to any particulars / representation including petitions received under Right to Information Act, CM Cell Petitions, GRC would be furnished.**

- (f) **MOBILE PHONES AND OTHER ARTICLES BANNED:**

- (i) Except the permitted writing material (Black ball point pen), applicants are not allowed to bring cellular phones, electronic or any other type of calculators, watches and rings with inbuilt memory notes, recording devices either as a separate piece or part of something used by the

applicant such as watch or ring etc., or any other electronic devices and 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, rough sheets, hand bags etc., into the examination hall / room.

- (ii) If they are found to be in possession of any such things or instruments, they will not be allowed to write the examination further, besides invalidation of answer paper and / or debarment. If it is considered necessary, they will be subjected to thorough physical search including frisking on the spot.
- (iii) Applicants 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. (For further details refer Para 17-E to "Instructions to Applicants").
- (g) Applicants applying for the examination should ensure that they fulfil all the eligibility conditions for admission to the examination. Their admission at all the stages of examination for which they are admitted by the Commission will be purely provisional, subject to their satisfying the prescribed eligibility conditions. **If, on verification at any time before or after the CBT examination / certificate verification / oral test, it is found that they do not fulfil any of the eligibility conditions, their candidature for the recruitment will be summarily rejected after due process.**
- (h) If any of their claims is found to be incorrect, it will lead to rejection of their candidature after due process and suitable penal action including debarment.
- (i) **UNFAIR MEANS STRICTLY PROHIBITED:** No applicant shall copy from the papers of any other applicant or permit his / her papers to be copied or give or attempt to give or obtain or attempt to obtain irregular assistance of any description.
- (j) **CONDUCT IN THE EXAMINATION HALL:** No applicant should misbehave in any manner or create a disorderly scene in the examination hall or harass the staff employed by the Commission for the conduct of the examination. Any such misconduct will be viewed seriously and penalised.
- (k) For violation of "Instructions to Applicants" in any manner, suitable penalty will be imposed as per Para 17-E to "Instructions to Applicants" or as deemed fit by the Commission.
- (l) Tentative answer keys will be hosted in the Commission's website within 6 working days from the date of conduct of objective type examination. 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.

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.

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.

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

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.

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. [Refer Para 17(D) (iv) to (xii) of "Instructions to Applicants"]

## **15. HOW TO APPLY:**

- (1) Applicants should apply only through online mode in the Commission's websites [www.tnpsc.gov.in](http://www.tnpsc.gov.in) or [www.tnpscexams.in](http://www.tnpscexams.in)
- (2) "One Time Registration" using Aadhaar is mandatory before applying for any post. Applicant 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. All the applications should be submitted using the One Time Registration ID and password registered by the applicant.
- (3) To apply under One Time Registration System, applicants should have a scanned image of their photograph, certificates specified, if any, and signature in CD/DVD/Pen Drive to upload the same, as per the specifications given in the guidelines for scanning and uploading of photograph and signature.
- (4) No applicant is permitted to create more than one registration ID under One Time Registration System.
- (5) Applicants should enter the Unique ID and Password to view the already

available information and update them. They shall not share the ID / PASSWORD with any other Person or Agency.

- (6) **One Time Registration is not an application for any post.** It is just a collection of information from the applicants and provides a separate dashboard to each applicant to facilitate maintenance of their own profile. Applicants who wish to apply for this recruitment shall click "Apply" against the recruitment notified in the Commission's website using the same USER ID and PASSWORD given for ONE TIME REGISTRATION.
- (7) Applicants should select the name of the post for which the applicant wishes to apply.
- (8) Online applications uploaded without the photograph, signature and the documents specified in the Annexure-IV will be rejected after due process.
- (9) **Online Application Correction Window:**  
After the last date for submission of online application, the candidates are allowed to edit their online application during the Online Application Correction Window period as mentioned in Para 4 of the Notification (Important Date and Time). After the last date of Correction Window period, no modification is allowed in the online applications. The applications will 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 application caused due to editing the details already submitted in online application. Request / representation addressed to the Commission for modification of claims in the online application, in any mode, will not be entertained.
- (10) **PRINT OPTION:**
  - a) After submitting the application, applicants can save / print their application in PDF format.
  - b) On entering user ID and password, applicants can download their application and print, if required.
  - c) Applicants need not send the printout of the online application or any other supporting documents to the Commission.

[For further details refer para 2 of "Instructions to Applicants"]

## **16. UPLOAD OF DOCUMENTS:**

- I. In respect of recruitment to this post, the applicants shall mandatorily upload the certificates / documents (in support of all the claims made / details furnished in the online application) at the time of submission of online application itself. It shall be ensured that the online application shall not be submitted by the applicants without mandatorily uploading the required certificates.

The applicants shall have the option of verifying the uploaded certificates through their OTR. If any of the credentials have wrongly been uploaded or not uploaded or if any modifications are

to be done in the uploading of documents, the applicants shall be permitted to upload / re-upload the documents till two days prior to the date of hosting of hall tickets for this post (i.e. twelve days prior to the date of examination (CBT Method))

Refer **Annexure-IV** for the list of documents to be uploaded by the Applicants. For further details refer para 2W of "Instructions to Applicants"

- II. Intimation to the Candidates: Individual Communication regarding the Date and Time of Certificate Verification (CV) and Counselling will not be sent to the applicants by Post, the details will be made available in the Commission's website. However, the Commission provides an additional facility to the candidates by informing the above said date and time of Certificate Verification etc., via SMS and e-mail through their registered Mobile Number and email ID. Candidates are directed to watch the Commission's website periodically for all updates and intimations. Commission is not responsible for 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 receive no attention.**

#### **17. LAST DATE FOR SUBMISSION OF APPLICATION:**

Online application can be edited/ submitted upto 20.10.2023 11.59 p.m. after which the link will be disabled. Online application correction window period is from 25.10.2023-12.01 AM to 27.10.2023-11.59 PM. The applicants are permitted to upload / re-upload the documents upto 22.11.2023 till 11.59 P.M. after which the link will be disabled.

(For detailed information, applicants may refer to the "[Instructions to Applicants](#)" at the Commission's website [www.tnpsc.gov.in](http://www.tnpsc.gov.in)).

#### **DISCLAIMER**

The Government orders relating to Equivalence of qualification are available on the Tamil Nadu Public Service Commission's website. However, if the applicant 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, applicants should furnish the details of the same while applying and should produce a copy of the Government orders, when called for by the Tamil Nadu Public Service Commission, failing which their application 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".

SECRETARY

**ANNEXURE-I****EQUIVALENT QUALIFICATIONS WITH RESPECT TO THE POST OF JUNIOR ANALYST**

<b>Sl.No.</b>	<b>Equivalent Qualification</b>	<b>Government Orders</b>
1.	M.Sc., (Chemistry 5 years Integrated Course) offered by Annamalai University is considered eligible wherever B.Sc, Chemistry is prescribed.	G.O.Ms.No.75, Personnel and Administrative Reforms (M) Department, dated 30.06.2011

**ANNEXURE-II**  
**FORMAT OF EXPERIENCE CERTIFICATE**  
**[ONLY FOR PREFERENTIAL QUALIFICATION]**

1. Name and Address of the Institution / Organisation :
2. Whether the said Institution / Organisation is a recognized / registered one? :
3. Registration Number of Institution / Organisation if any :
4. Name of the Employee and Date of Birth :
5. Qualification possessed by the Employee on the Date of Joining Service in the above said Institution / Organisation :
6. Designation and period of Experience of the Employee :
7. Nature of the Work / Duty performed by the Employee (To be mentioned in brief) :
8. Whether the Employee possesses experience as Laid in para 5(B) of the Notification No. /2023, dated 2023. : Yes / No
9. Whether Attendance Register / Attendance Rolls / Pay Register and other records available for this Employee : Yes / No
10. Certificate from the Institution / Organisation : The above said employee is having experience in this Institution / Organisation as stated above. The above particulars furnished by us are correct.

Office Seal:

Date:

Place:

Signature.

Name and Designation of  
The issuing Authority.

**Note:**

Institution / Organisation which issues the certificate is cautioned that issuing of any Certificate containing false details will lead to legal/ penal action on them.



**ANNEXURE-III**  
**SYLLABUS**  
**PAPER-I**

TAMIL NADU PUBLIC SERVICE COMMISSION  
 SYLLABUS  
 PHARMACY/ PHARMACEUTICAL SCIENCES  
**(UG DEGREE STANDARD)**

**Code:429**

**UNIT-I:**

- 1) **Historical background and development of profession of pharmacy:** History of profession of Pharmacy in India in relation to pharmacy education, industry and organization, Pharmacy as a career, Pharmacopoeias: Introduction to IP, BP, USP and Extra Pharmacopoeia.
- 2) **Calculations:**  
**Posology:** Dose calculations based on age, body weight and surface area.  
**Pharmaceutical calculations:** Percentage solutions, Alligation, Proof spirit and isotonic solutions based on freezing point and molecular weight.
- 3) **Surface & interfacial Phenomenon:**  
 Measurement of surface and interfacial tensions, spreading coefficient, surface active agents, HLB Scale, solubilisation and Detergency
- 4) **pH, buffers and isotonic solution:**  
 pH determination, applications of buffers, buffer equation, buffer capacity and buffered isotonic solutions.
- 5) **Unit Operations:** Size reduction, size separation, mixing, filtration, centrifugation evaporation, drying, distillation, heat transfer, compression and Tablet coating.
- 6) **Coarse Dispersion:**  
 Suspension, interfacial properties of suspended particles, settling in suspensions, formulation of flocculated and deflocculated suspension. Emulsions and theories of emulsification, micro emulsion and multiple emulsion, stability of emulsions, preservation of emulsions, rheological properties of emulsions and emulsion formation by HLB method.
- 7) **Micromeritics:** Particle size distribution, mean particle size, number and weight distribution, particle number, methods of determining particle size by different methods, specific surface, methods of determining surface area and derived properties of powders.
- 8) **Pre-formulation studies:** Introduction to pre-formulation, goals and objectives, study of physicochemical characteristics of drug substances
  - a. **Physical Properties:** Crystal & amorphous form, particle size, shape, flow properties, solubility profile (Pka, pH, Partition co-efficient) Polymorphism.
  - b. **Chemical properties:** Hydrolysis, Oxidation, reduction racemisation, polymerisation. BCS classification of drugs and its significant  
 Application of preformulation considerations in the development of solid, liquid oral and parenteral dosage forms and its impact on stability of dosage forms.
- 9) **Pharmaceutical Excipients** – Used in Liquid, Semisolids and solid dosage forms.
- 10) **Quality Control Tests and Evaluation parameters of the following formulations:** Solid dosage forms, Semi solids, Liquid dosage forms, Parenteral, Ophthalmic preparation and Pharmaceutical Aerosols.
- 11) **Cosmetics:** Formulation and preparation of the following cosmetics preparations- Lipsticks, Shampoos, Cold Cream, Vanishing Cream, Tooth Paste, Hair Dyes and Sunscreens.

- 12) **Packaging Material Sciences:** Materials used for packaging of Pharmaceutical Products, factors influencing choice of containers, legal and official requirement for containers, Quality control tests for containers and rubber closures.
- 13) **Bio availability and Bioequivalence:** Definitions and objectives of Bioavailability, absolute and relative bioavailability, measurement of bioavailability in-vitro drug dissolution models, in-vitro-in-vivo correlations, bioequivalence studies, methods to enhance dissolution rates and bioavailability of poorly soluble drugs.
- 14) **Pharmacokinetics:** Definition and introduction to Pharmacokinetics, Compartment models, Non-compartment models, Physiological models, One compartment open model
  - a) Intravenous Injection (bolus)
  - b) Intravenous infusion
  - c) Extra vascular administrations.
 Pharmacokinetic parameters -  $K_E$ ,  $T_{1/2}$ ,  $V_d$ , AUC,  $K_a$ ,  $CL_t$  and  $CL_R$  – definitions, methods of elimination, understanding of their significance and application.
- 15) **Good manufacturing practices (GMP)**
- 16) **Good Laboratory practices (GLP):** Organisation and personnel, Facilities, equipment, Testing facilities operation, Test and control articles, Protocol for conduct of a Nonclinical Laboratory Study, Records and reports, Disqualification of Testing facilities.
- 17) **Warehousing:** Good Warehousing practice, Materials Management.
- 18) **Pilot Plant Scale up Techniques:** General considerations – including significance of personnel requirements, space requirements, raw materials, Pilot plant scale up considerations for solids, liquid orals, semi solids and relevant documentation, SUPAC guidelines, Introduction to platform technology.
- 19) **Quality management systems:** Quality management and certification: concept of quality, Total quality management, Quality by Design (QbD), six sigma concept, out of specifications (OOS) change control, Introduction to ISO 9000 series of quality system standards, ISO 14000, NABL.
- 20) **Indian Regulatory Requirements:** Central Drug Standard Control Organisation (CDSCO) and State Licensing Authority, Organisation, Responsibilities, Certificate of Pharmaceutical products (COPP) Regulatory requirements and approval procedures for New drugs.
- 21) **Over the counter (OTC) Sales:** Introduction and sale of over the counter and Rational use of common over the counter medications.
- 22) **Drug Store Management and Inventory Control:** Organisation of Drug Store, types of materials stocked and storage conditions. Purchase and inventory control: Principles, Purchase procedures, Purchase order, Procurement and stocking, Economic order quantity, Reorder quantity level and methods used for the analysis of the drug expenditure.
- 23) **Novel Drug Delivery Systems:** Ocular Drug Delivery Systems, Transdermal Drug Delivery Systems, Implantable Newer Drug Delivery Systems, Targeted Drug Delivery and Controlled Drug Delivery Systems.

## UNIT-II:

- 1) Study of principle, procedure, merits, demerits and applications of physical, chemical, gaseous, radiation and mechanical method of sterilization. Evaluation of the efficiency of sterilization methods. Sterility indicators.
- 2) Classification and mode of action of disinfectants, factors influencing disinfection, antiseptics and their evaluation, for bacteriostatic and bactericidal actions.  
Sterility Testing of Products (solids, liquids, Ophthalmic and other Sterile products) according to IP, BP and USP

- 3) Principles and methods of different microbiological assay. Methods for standardization of Antibiotics, Vitamins and Amino acids.
- 4) Types of immunity - humoral immunity, cellular immunity
- 5) **Blood products and Plasma Substitutes:** Collection, Processing and Storage of whole human blood, dried human plasma, plasma Substitutes
- 6) Fermentation methods and general requirements, study of media, equipments, sterilization methods, aeration process, stirring. Large scale production fermenter design and its various controls. Study of the production of - Penicillins, Citric acid, Vitamin B12, Glutamic acid, Griseofulvin.

#### UNIT-III:

- 1) Atomic structure and valency, Radioactivity, Radio isotopes and Pharmaceutical applications of Radio Pharmaceuticals, hazards and precautions.
- 2) Sources of impurities in Pharmaceutical substances; Limit test as per I.P; Fundamentals of volumetric Analysis. Errors: Sources, types, methods of minimizing errors, Accuracy, Precision, significant figures.
- 3) A systematic study of inorganic compounds for their preparation, assay and use which includes Gastrointestinal agents, Topical agents and Dental products.
- 4) Preparation and use of Chemical reagents and Volumetric Solutions as per Pharmacopeia in Pharmaceutical Analysis.
- 5) Metal hydride reduction, Wolff kishnar reduction, Clemenson's reduction, Beckmann and Schmidt rearrangement, Oppenauer Oxidation, Claisen-Schmidt condensation.

#### UNIT-IV:

- 1) Chemistry, synthesis and Medicinal uses of the following categories of drugs - Local Anaesthetics, Drugs acting on CNS, ANS, CVS, Anti-infective agents like Sulphonamides, Antibiotics, AntiTB, Anti-Viral, Antiprotozoal, Antifungal, Antimalarials, Antineoplastic agents, Antihistaminics, Diuretics.
- 2) QSAR studies, various approaches in drug design.

#### UNIT-V:

- a) Principles and Pharmacopeial Assay Procedures involving Non-aqueous Titration, Redox, Diazotization, complexometric methods, electrometric titration, gravimetric analysis.
- b) Chromatography- TLC, Column, Paper, GC, Ion exchange, HPLC, HPTLC, Gel electrophoresis.
- c) Theory, principle, instrumentation and applications of colorimetry, UV- Visible Spectrophotometry, Spectrofluorimetry, Nepheloturbidometry, IR, Mass, NMR, RIA, Polarimetry, Refractometry, Thermal method of analysis - TGA, DSC, DTA, atomic absorption spectroscopy.
- d) ICH guidelines- Calibration and validation, calibration of electronic balance, UV spectrophotometer, IR spectrophotometer, Fluorimeter, HPLC, GC, Flame photometer

#### UNIT-VI :

##### a. General Pharmacology:-

Definition, Sources of drugs, essential drugs concept, routes of drug administration, agonist, antagonist, membrane transport, absorption, distribution, metabolism and excretion of drugs.

Enzyme induction, enzyme inhibition.

Principles and mechanism of drug action, Classification of receptors, drug receptor interactions, Signal transduction mechanisms, dose response relationship, therapeutic index, combined effects of drug & factors modifying drug action.

Adverse drug reactions, Drug interactions, Drug discovery and clinical evaluation of new drugs, Pharmacovigilance.

**b. Pharmacology of Drugs acting on central nervous system:**

General anaesthetics and Pre anaesthetic medication, Sedatives and Hypnotics, centrally acting muscle relaxants, Anti- epileptics, Alcohols and disulfiram, Anti-Psychotics, Anti-depressants, anti-anxiety agents, anti-manics and hallucinogens, Drugs used in Parkinson's disease and Alzheimer's disease, CNS-Stimulants and nootropics, Opioid analgesics and antagonists, Drug Addiction, drug abuse, drug tolerance and drug dependence.

**c. Pharmacology of Drugs acting on Peripheral nervous system:**

Neurohumoral transmission in Autonomic nervous system, Para Sympathomimetics, Parasympatholytics, Sympathomimetics, Sympatholytics, neuromuscular blocking agents, Skeletal muscle relaxants (peripheral), Local anaesthetic agents, Drug used in Myasthenia gravis and glaucoma.

**d. Pharmacology of Drugs acting on cardio vascular system:**

Drugs used in congestive heart failure, Anti-hypertensive drugs, Anti-Anginal Drugs, Anti-arrhythmic drugs, Anti-hyperlipidemic drugs, Drugs used in the therapy of shock, Hematinics, Coagulants and anti-coagulants, Fibrinolytics and anti-platelet drugs, Plasma Volume expanders.

**e. Pharmacology of drugs acting on urinary system:**

Diuretics and Anti-diuretics.

**f. Pharmacology of drug acting on respiratory system:**

Anti-asthmatic drugs, Drugs used in the management of COPD [Chronic Obstructive Pulmonary disease], Expectorants, anti-tussives, nasal decongestants, Respiratory Stimulants.

**g. Immuno Pharmacology:**

Immuno sitmulants, immuno suppressants, bio-similars.

**h. Bio-assay:**

Principles and applications of Bio-assay, types of bio-assay, bio-assay of insulin, oxytocin, Vasopressin, ACTH, d-tubocurarine, digitalis, histamine and 5 HT.

**i. Chrono Pharmacology:**

Definition of rhythm and cycles, Biological clock and it's significance

**UNIT–VII:**

**a) Pharmacology of Drugs acting on the Gastrointestinal tract:**

Anti-ulcer agents, Drugs for constipation and diarrhoea, appetite stimulants and Suppressants, Digestants and carminatives, Emetics and anti-emetics.

**b) Pharmacology of drugs acting on endocrine system:**

Anterior Pituitary hormones – analogues and their inhibitors, Thyroid hormones- analogues and their inhibitors, Parathormone, Calcitonin, Vitamin-D, Insulin, oral-hypo glyceemic agents and glucagon.

Adrenocorticotrophic hormone [ACTH] and corticosteroids, Androgens and Anabolic

Steroids, Estrogens, Progesterone, Oral Contraceptives. Drugs acting on uterus.

**c) Autocoids and related drugs:**

Histamine, 5-HT and their antagonists, Prostaglandins, Thromboxanes and Leukotrienes, Angiotensin, Bradykinin and Substance-P, Non-Steroidal anti-inflammatory drugs, Anti-gout drugs, Anti-rheumatic drugs.

**d) Chemotherapy :**

General Principles of chemotherapy, Sulfonamides and co-trimoxazole, Anti-biotics: Penicillins, Cephalosporins, Chloramphenicol, macrolides, Quinolones and fluoroquinolones, tetracycline and amino glycosides, Anti-tubercular agents, Anti-leprotic agents, Anti-fungal agents, Anti-viral drugs, Anthelmintics, Anti-malarial drugs, Anti-amoebic agents, Urinary tract infection and sexually transmitted diseases, Chemotherapy of malignancy.

**e) Principles of toxicology:**

Acute, Sub-acute, Chronic toxicity, genotoxicity, carcinogenicity, teratogenicity, mutagenicity, General Principles of treatment of poisoning, clinical symptoms and management of barbiturates, morphine, organophosphorus compound, lead, mercury and arsenic poisoning.

**UNIT-VIII:**

- (a) Alphabetical, Morphological, Taxonomical, Chemical and Pharmacological classification of crude drugs.
- (b) Adulteration of drugs of natural origin, Evaluation by Organoleptic, Microscopic, Physical, Chemical and Biological methods.
- (c) Plant hormones and their applications.
- (d) Types of plant tissue culture, nutritional requirements, growth and their maintenance. Application of plant tissue culture in pharmacognosy.
- (e) Brief study of basic metabolic pathways and formation of different Secondary metabolites through these pathways - Shikimic acid pathway, Acetate mevalonate pathway.

**UNIT-IX:**

- (a) General introduction, composition, chemistry and chemical classification, general methods of extraction and analysis, bio-sources, therapeutic uses and commercial application of following Secondary metabolites.

Alkaloids : Vinca, Rauwolfia, Belladonna, Opium

Steroids, Cardiac glycosides

and Triterpenoids : Liquorice, Dioscorea, Digitalis

Volatile oils : Mentha, Clove, Cinnamon, Fennel, Coriander

Tannins : Black & Pale catechu

Resins : Benzoin, Ginger, Asafoetida, Colophony

Glycosides : Senna, Aloes

- (b) Isolation, Identification & Analysis of following Phytoconstituents

i) Terpenoids : Menthol, Citral, Artemisin

ii) Glycosides : Glycyrrhetic acid, Rutin

iii) Alkaloids : Atropine, Quinine, Reserpine, Caffeine

iv) Resins: Podophyllotoxin, Curcumin

- (c) Modern methods of extraction, application of latest techniques like Spectroscopy, Chromatography and Electrophoresis in isolation, purification and identification of Crude drugs.
- (d) Basic principles involved in Homeopathy systems of medicine.

**UNIT-X:**

- (a) The Drugs and Cosmetics Act, 1940 and Drugs Rules 1945 (As Amended from time to time)
- (b) The Drugs and Magic Remedies (Objectionable Advertisement) Act, 1954 and Rules, 1955 (As Amended from time to time)
- (c) The Drugs (Price Control) Order 2013 (As Amended from time to time)
- (d) The Narcotic Drugs and Psychotropic substances Act and Rules, 1985 (As Amended from time to time)
- (e) The Pharmacy Act, 1948 (As Amended from time to time)

**TAMIL NADU PUBLIC SERVICE COMMISSION**  
**SYLLABUS**  
**CHEMISTRY (UG DEGREE STANDARD)**

**CODE:430**

**UNIT-I PHYSICAL CHEMISTRY**

(a) Chemical Thermodynamics: Terminology – Systems and surroundings - First Law of thermodynamics -  $C_p$  and  $C_v$  relation - Hess's law of constant heat summation - Kirchoff's equation - extensive and intensive properties- second law of thermodynamics - entropy and entropy as a measure of probability - Free energy and Chemical equilibria - variation of free energy with temperature and pressure - Gibb's and Helmholtz equation – Heterogeneous equilibria and Le Chatlier principle.

**(b)Solid State Chemistry:** Crystalline and amorphous solids - unit Cell - Miller Indices – symmetry elements in crystals (cubic system only)- Bragg's equation - radius ratio's and packing in crystals- determination of crystal structures by Bragg's method – structure of NaCl, Wurzite ,  $TiO_2$  and spinels.

**UNIT-II**

**(c) Chemical Kinetics:**

Rate laws - rate constant - order and molecularity of reactions - I, II, III, and zero order reactions – concept of Arrhenius theory - Collision theory and Transition state theory -catalysis.

**(d)Electrochemistry:** Conductance in electrolytic solution, specific and molar conductance - Ostwald's dilution law - Kohlraush's law - Debye Huckel theory- Types of reversible electrodes - Nernst equation - reference electrode and standard hydrogen electrode - computation of cell e.m.f. -calculations of thermodynamic quantities of cell reactions ( $\Delta G$ ,  $\Delta H$ ,  $\Delta S$  and  $K$ ) Determination of pH and pKa of acids by potentiometric methods.

**UNIT-III**

**(e)Analytical chemistry and Instrumental methods:**

Principle, instrumentation and applications of UV- Visible, IR, Raman, NMR, Mass, GCMS and Atomic Absorption spectroscopy.

**UNIT-IV**

**INORGANIC CHEMISTRY**

**(f) Periodic classification:** Classification based on electronic configuration – periodic properties - atomic and ionic radii, ionisation potential, electron affinity and electronegativity - various scales - Trends along periods and groups.

**(g)Chemical bond:** Lattice energy - VSEPR Theory and its applications - partial ionic character from electronegativity - Fajan's Rule.

**(h) Compounds of Boron:** Electron deficient nature of boron compounds - preparation and properties of halides and nitrides of boron - diborane - Borazine, silicones and structures of silicates

## UNIT-V

**(i) Lanthanides and Actinides:** Position in the periodic table, occurrence, electronic configuration, oxidation state - lanthanide contraction - magnetic properties and complexation behaviour - comparison of lanthanides and actinides.

**(j) Nuclear Chemistry:** Radio activity - detection and measurement - Half-life period - nuclear stability, - n/p ratio - isotopes, isobars and isotones - nuclear reactions - spallation - nuclear fission and fusion - stellar energy Uses of nuclear energy - nuclear power projects in India - Applications of radioactive isotopes in industries, medicine and agriculture.

## UNIT-VI

**(k) Co-ordination Chemistry:** Nomenclature - theories of co-ordination compounds- Werner, valence bond, crystal field theories - Effective atomic number - isomerism.

**(l) Analytical Chemistry:** Principles of volumetric analysis - different types of titrations- Gravimetric analysis - Basic principles - Separation and purification techniques

## UNIT-VII

### ORGANIC CHEMISTRY:

**(m) Nature of Bonding:** Hybridisation ( $sp$ ,  $sp^2$  and  $sp^3$ ) and Geometry of molecules - cleavage of bonds - homolytic and heterolytic fission of carbon - carbon bonds - Reaction intermediates - free radicals, carbocations and carbanions - their stability.

(n) Types of reactions: Nucleophilic, electrophilic, free radicals, addition, elimination, substitution, oxidation and reduction reactions.

## UNIT -VIII

**(o) Electron displacement effects:** Inductive, inductometric, electromeric, mesomeric, resonance, hyperconjugation and steric effects.

(p) Stereochemistry: Optical isomerism and Geometrical isomerism - chirality - optical isomerism of lactic and tartaric acid - Racemisation - Resolution-



asymmetric synthesis - Walden inversion - cis and trans isomerism of maleic and fumaric acids-R-S-Notations - conformational analysis of cyclohexane

### **UNIT-IX**

(q) **Carbohydrates:** Classification, sources, preparation and reactions - Glucose, Fructose, Sucrose and lactose- structure of glucose and fructose.

(r) **Amino acids** – Classification - Zwitter ion - peptide linkage - structure of proteins - structure and functions of DNA and RNA

(s) **Hormones and vitamins** - Classifications, sources and functions

### **UNIT-X**

(t)**Pharmaceutical Chemistry:** Terminology-pharmacology, pharmacotherapies, toxicology, chemotherapy, classification and nomenclature of drugs, sources of drugs, Assay of drugs by biological, chemical and immunological methods, physiological effects of functional groups of drugs - Different types of drugs like analgesics, antibiotics, antiseptics, disinfectants, anaesthetics, antacids, antimalarial antidepressants, antipsychotic and sedatives.

(u) **Nano Chemistry** – Definition – types of nano materials – Nano drugs and their delivery- Applications of nano materials in medicine

**தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையம்**

**பாடத்திட்டம்**

**வேதியியல் (பட்டப்படிப்பு தரம்)**

**குறியீடு :430**

**அலகு-I**

(a) **வேதி வெப்ப இயக்கவியல்:** வெப்ப இயக்கவியலின் சொற்றொடுகள் - அமைப்பு - சுற்றுப்புறம் - வெப்ப இயக்கவியல் முதல் விதி - Cp-Cv தொடர்பு- ஹெஸ்ஸின் வெப்ப மாறாக் கோட்பாடு - கிரிச்சாப் விதி - அக மற்றும் புறப் பண்புகள் - வெப்ப இயக்கவியல் இரண்டாம் விதி - என்ட்ரோபி - என்ட்ரோபி அடிப்படையான நிகழ்தகவின் அளவீடு - கிப்ஸ் கட்டிலா ஆற்றல் மற்றும் வேதி சமநிலை - வெப்பநிலை மற்றும் அழுத்தத்துடன் கட்டிலா ஆற்றலின் மாறுபாடு - கிப்ஸ் ஹெல்மோட்ஸ் சமன்பாடு - பலபடித்தான சமநிலை மற்றும் லீ-சாட்லியர் தத்துவம்.

(b) **திட நிலைமை வேதியியல்:** படிக வடிவமுடைய திடப்பொருள் மற்றும் படிக வடிவமற்ற திடப்பொருள் - அலகுக்கூடு - மில்லர் குறியீடுகள் - படிகங்களின் சமச்சீர் குறியீடுகள் - (கனச்சதுர அலகுக்கூடு மட்டும்) - பிராக் சமன்பாடு - ஆரத்தின் விகிதம் - படிகங்களில் பொதிவுத் திறன் - படிகங்களின் அமைப்பை பிராக் சமன்பாடு மூலம் கண்டறிதல் - NaCl, வுர்ட்சைட், TiO<sub>2</sub> மற்றும் ஸ்பினல்கள் ஆகியவற்றின் அமைப்பு.

**அலகு -II :**

(c) **வினை வேகவியல் :** வினை விதிகள் - வினை மாறிலி - வினைபடி மற்றும் வினையின் மூலக்கூறு எண் - முதலாம், இரண்டாம், மூன்றாம் மற்றும் பூஜ்யபடி வினைகள் - அர்ஹீனியஸ் கொள்கை - மோதல் கொள்கை மற்றும் இடைநிலை கொள்கை - வினைவேகமாற்றவியல்.

(d) **மின்வேதியியல் :** மின்பகுளிகளில் கடத்துதிறன் - நியம கடத்துதிறன் - மோலார் கடத்துதிறன் - ஆஸ்வால்ட் நீர்த்தல் விதி - கோல்ராஷ் விதி - டிபை - ஹீக்கல் கொள்கை - மீள்வகை மின்முனைகளின் வகைகள் - நெர்ன்ஸ்ட் சமன்பாடு - நியம மின் முனைகள் மற்றும் திட்ட ஹைட்ரஜன் மின்முனை - மின்கலத்தின் emf கணக்கிடுதல் - மின்கல வினைக்கான வெப்ப இயக்கவியலின் மதிப்புகளை கணக்கிடுதல் ( $\Delta G$ ,  $\Delta H$ ,  $\Delta S$  மற்றும்  $K$ ) - அமிலத்தின் pH மற்றும் pKa மதிப்பை மின்னழுத்த முறையில் நிர்ணயித்தல்.

**அலகு -III**

**பகுப்பாய்வு வேதியியல் மற்றும் கருவிகளை பயன்படுத்தும் முறைகள்:**

புறஊதா - கண்ணுக்கு புலனாகும் நிறமாலை, அகச்சிவப்பு நிறமாலை, இராமன், NMR, நிறை நிறமாலை (MASS), GCMS, அணு உறிஞ்சுதல் நிறமாலை ஆகியவற்றின் தத்துவம், கருவி மற்றும் பயன்கள்.

**அலகு -IV : கனிம வேதியியல் :**

(f) **தனிமங்களின் வகைப்பாடு :** எலக்ட்ரான் அமைப்பின் அடிப்படையில் தனிமங்களை வகைப்படுத்துதல் — ஆவர்த்தன பண்புகள் — அணு மற்றும் அயனி ஆரம், அயனியாக்கும் ஆற்றல் — எலக்ட்ரான் நாட்டம் மற்றும் எலக்ட்ரான் கவர் தன்மை — பல்வேறு அளவீடுகள் — தொகுதி மற்றும் வரிசையில் ஏற்படும் மாறுபாடுகள்.

(g) **வேதிப்பிணைப்பு :** படிக்கூடு ஆற்றல் — VSEPR கொள்கை மற்றும் அதனுடைய பயன்கள் — எலக்ட்ரான் கவர் தன்மையின் அடிப்படையில் பகுதி அயனிப் பண்பு — பெஜான்ஸ் விதி.

(h) **போரானின் சேர்மங்கள் :** போரான் சேர்மங்களின் எலக்ட்ரான் குறைவுபடும் தன்மை — போரான் ஹைலைடு மற்றும் நைட்ரைட்டுகளின் தயாரித்தல் மற்றும் பண்புகள் — டைபோரேன் — போரசின் — சிலிக்கோன்கள் மற்றும் சிலிக்கேட்டுகளின் அமைப்பு.

**அலகு -V**

(i) **லாந்தனைடுகள் மற்றும் ஆக்டினைடுகள் :** தனிம வரிசை அட்டவணையில் இடம் — கிடைக்கும் விதம் — எலக்ட்ரான் அமைப்பு, ஆக்ஸிஜனேற்ற நிலை, - லாந்தனைடு குறுக்கம் - காந்த பண்புகள் மற்றும் அனைவு சேர்ம பண்புகள் - லாந்தனைடுகள் மற்றும் ஆக்டினைடுகளின் ஒப்பீடு.

(j) **அணுக்கரு வேதியியல் :** கதிரியக்கவியல் - கண்டறிதல் மற்றும் அளவிடுதல் - அரை வாழ்வுக்காலம் - உட்கரு நிலைப்புத் தன்மை -  $n/p$  விகிதம் - ஐசோடோப்புகள், ஐசோபார்கள் மற்றும் ஐசோடோன்கள் - அணுக்கரு வினைகள் - சிதர்ந்தெறிதல் - அணுக்கரு பிளவு மற்றும் இணைவு - விண்மீன்கள் (நட்சத்திர) ஆற்றல் - அணுக்கரு ஆற்றலின் பயன்கள் - இந்தியாவில் அணுக்கரு ஆற்றல் திட்டங்கள் - தொழிற்சாலை, மருத்துவம் மற்றும் விவசாய துறையில் கதிரியக்க தனிமங்களின் பயன்கள்.

**அலகு -VI :**

(k) **அனைவு வேதியியல் :** அனைவுச் சேர்மங்களுக்குப் பெயரிடுதல் — அனைவுச் சேர்மங்களின் கொள்கைகள் — வெர்னர், சகப் பிணைப்பு மற்றும் படிக்கவியல் கொள்கைகள் — நிகர அணு எண் — மாற்றியம்.

(l) **பகுப்பாய்வு வேதியியல் :** பருமனறி பகுப்பாய்வின் கொள்கைகள் — தரம் பார்த்தலின் வகைகள் — எடையறி பகுப்பாய்வின் அடிப்படை கொள்கைகள் — பிரித்தெடுத்தல் மற்றும் தூய்மையாக்கும் முறைகள்.

## அலகு -VII

### கரிம வேதியியல்:

(m) பிணைப்பின் தன்மை: இனக்கலப்பினமாதல் ( $sp$ ,  $sp^2$  மற்றும்  $sp^3$ ) மற்றும் மூலக்கூறின் வடிவம் - பிணைப்பு பிளவுறுதல் - கார்பன்- கார்பன் பிணைப்பின் சமமான மற்றும் சமமற்ற பிளப்புகள் - வினையின் இடைநிலை சேர்மங்கள் - தனி உறுப்புகள் - கார்பன் நேர்மின் அயனி மற்றும் கார்பன் எதிர்மின் அயனி (எதிரயனி) - அவற்றின் நிலைப்புத்தன்மை.

(n) வினையின் வகைகள்: கருகவர், எலக்ட்ரான்கவர், தனி உறுப்புகள் - சேர்க்கை வினைகள், நீக்க வினைகள், பதிலீட்டு வகைகள், ஆக்சிஜனேற்ற-ஒடுக்க வினைகள்.

## அலகு -VIII

(o) எலக்ட்ரான் இடப்பெயர்ச்சி விளைவுகள் - தூண்டுதல், தூண்டுதலை அதிகப்படுத்தும், எலக்ட்ரோமெரிக், மீசோமெரிக், உடனிசைவு, அதிபரஇணைப்பு (மிகை இணைப்பு) மற்றும் கொள்ளிட விளைவுகள்.

(p) முப்பரிமாண வேதியியல் - ஒளி மாற்றியங்கள் மற்றும் வடிவ மாற்றியங்கள் - கைராலிட்டி-லாக்டிக் அமிலம் மற்றும் டார்டாரிக் அமிலத்தின் ஒளி சுழற்சி மாற்றியங்கள் - சுழிமாய்க் கலவையாக்கல் - சுழிமாய்க் கலவையை பிரித்தல் - சீர்மையற்ற தொகுத்தல் - வால்டன் மாற்று - மெலியிக் அமிலம் மற்றும் பியூமாரிக் அமிலத்தின் சிஸ் - டிரான்ஸ் மாற்றியம் - R-S- குறியீடு - வளைய ஹெக்சேனின் இசைவு பகுப்பாய்வு.

## அலகு -IX

(q) கார்போஹைட்ரேட்டுகள் : வகைப்பாடு - மூலங்கள் - தயாரித்தல் மற்றும் பண்புகள், குளுக்கோஸ், ஃபிரக்டோஸ், சக்ரோஸ், லாக்டோஸ்-குளுக்கோஸ் மற்றும் ஃபிரக்டோஸின் வடிவமைப்பு.

(r) அமினோ அமிலங்கள் : வகைப்பாடுகள் - ஸ்விட்டர் அயனி - பெப்டைடு பிணைப்பு - புரதங்களின் வடிவமைப்பு. DNA மற்றும் RNA-களின் அமைப்பு மற்றும் செயல்படும் விதம்.

(s) ஹார்மோன்கள் மற்றும் விட்டமின்கள் : வகைகள் - மூலங்கள் - மற்றும் செயல்படும் விதம்.

## அலகு -X

(t) மருந்தாக்க வேதியியல் : சொற்றொடர் - மருந்தாக்கம் - மருந்தாக்க சிகிச்சைகள் - நச்சுயியல் - கீமோதெரபி, வகைப்பாடுகள் மற்றும் - மருந்துகளின் பெயரிடல் - மருந்துகளின் மூலம் - மருந்துகளை உயிரியல், வேதியியல் மற்றும் நோய் எதிர்ப்பு சக்தி மூலம் மதிப்பீடு செய்தல் - மருந்துகளின் வினைபடு தொகுதியினால் உடலியலில் ஏற்படும் மாற்றங்கள் - வலி நிவாரணி, எதிர்உயிரி, கிருமி நாசினி, மயக்க மருந்து, அமில நீக்கி, மலேரியாவை

தடுக்கும் மருந்துகள், மன அழுத்தத்தை எதிர்க்கும் மருந்துகள் மற்றும் வலிநீக்கும் மயக்க மருந்து, மனநோய் குணப்படுத்தும் மருந்துகள்.

(u) **நானோ வேதியியல்** : வரையறை - நானோ பொருட்களின் வகைப்பாடு - நானோ மருந்துகள் மற்றும் உடலில் உட்செலுத்துதல் - நானோ பொருட்களின் மருத்துவ பயன்பாடுகள்.

**PAPER -II**  
**SYLLABUS FOR WRITTEN EXAMINATION**  
**Part-A**

கட்டாய தமிழ்மொழி தகுதித் தேர்விற்கான பாடத் திட்டம்

(கொள்குறி வினாவிற்கான தலைப்புகள்)

பத்தாம் வகுப்பு தரம்

1. பிரித்தெழுதுதல் / சேர்த்தெழுதுதல்.
2. எதிர்ச்சொல்லை எடுத்தெழுதுதல்.
3. பொருந்தாச் சொல்லைக் கண்டறிதல்.
4. பிழைதிருத்தம் (i) சந்திப்பிழையை நீக்குதல் (ii) மரபுப்பிழைகள், 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, தொழிற்பெயரை / உருவாக்கல்.
10. அகரவரிசைப்படி சொற்களை சீர் செய்தல்.
11. சொற்களை ஒழுங்குப்படுத்தி சொற்றொடராக்குதல்.
12. இரு வினைகளின் 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 (கலைச்சொல்)
17. விடை வகைகள்.
18. பிறமொழிச் சொற்களுக்கு இணையான தமிழ்ச் சொற்களைக் கண்டறிதல்  
(எ.கா.) கோல்டு பிஸ்கட் - தங்கக்கட்டி.
19. ஊர்ப் பெயர்களின் மருஉவை எழுதுக (எ.கா.) தஞ்சாவூர் - தஞ்சை
20. நிறுத்தற்குறிகளை அறிதல்.
21. பேச்சுவழக்கு, எழுத்துவழக்கு (வாரான் - வருகிறான்).
22. சொற்களை இணைத்து புதிய சொல் உருவாக்கல்.

23. பொருத்தமான காலம் அமைத்தல்  
(இறந்தகாலம், நிகழ்காலம், எதிர்காலம்).
24. சரியான வினாச்சொல்லைத் 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 - செயற்கைநுண்ணறிவு  
Super Computer - மீத்திறன் கணினி
31. பொருத்தமான பொருளைத் தெரிவு செய்தல்
32. சொற்களின் கூட்டுப் பெயர்கள் (எ.கா.) புல் -புற்கள்
33. சரியான தொடரைத் தேர்ந்தெடுத்தல்
34. பிழைதிருத்துதல் (ஒரு-ஓர்)
35. சொல் - பொருள் - பொருத்துக
36. ஒருமை-பன்மைபிழை
37. பத்தியிலிருந்து வினாவிற்கான சரியான விடையைத் தேர்ந்தெடு.

**Part-B**  
**GENERAL STUDIES (DEGREE STANDARD)**

**CODE NO.003**

**Topics for Objective Type**

**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 LokAyukta - 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 NitiAyog.
- (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, MaulanaAbulKalam Azad, ThanthaiPeriyar, 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 19<sup>th</sup> and 20<sup>th</sup> 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 ThanthaiPeriyar 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.

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**ANNEXURE-IV**  
**LIST OF DOCUMENTS TO BE SCANNED AND UPLOADED**  
**ALONG WITH THE ONLINE APPLICATION**  
**(Size of each document should be less than 200 KB**  
**in PDF format (Single page or Multiple page))**

1.	SSLC Mark Sheet
2.	HSC Mark Sheet or its equivalent
3.	<u>Educational qualification:</u> i. UG Degree / Provisional Certificate ii. PG Degree / Provisional Certificate iii. IPG Degree /Provisional Certificate iv. Consolidated Mark Sheet for UG, PG and IPG Degree v. Transfer Certificate
4.	G.O. for Equivalence of qualification to the prescribed educational qualification (if applicable)
5.	PSTM Certificate up to prescribed entire qualification(1 <sup>st</sup> std to degree) (if applicable)
6.	Community Certificate from Competent authority (In case of women candidates, mentioning father name) only, not in Husband's Name.
7.	Destitute Widow Certificate (if applicable)
8.	Ex-servicemen (if applicable)
9.	Differently Abled Certificate obtained from the Competent Authority
10.	Exemption for Tamil Eligibility Test (if applicable) (Model format enclosed with Annexure - VI of this Notification.)
11.	Transgender ID Card with Gender (if applicable)
12.	Gazetted copy for name change (if applicable)
13.	No Objection Certificate (if applicable)
14.	Documents / Court Orders proving Acquittal / Conviction or FIR in case of pending cases for Criminal cases registered (if applicable)
15.	Experience Certificate as mentioned in Annexure-II of notification
16.	A passport size photo
17.	Other Documents (if any)

**ANNEXURE-V**

CERTIFICATE OF PHYSICAL FITNESS BY

A SINGLE MEDICAL OFFICER  
THE CIVIL MEDICAL BOARD

Signature of Candidate\_\_\_\_\_

I/We do hereby certify that I/We have examined (full name) Thiru / Thirumathi / Selvan / Selvi \_\_\_\_\_ a Candidate \_\_\_\_\_ for employment under the Government as \_\_\_\_\_ in the \_\_\_\_\_ Office in the \_\_\_\_\_ Department and whose signature is given above and cannot discover that he / she has any disease, communicable or otherwise, constitutional affliction or bodily infirmity / except that his / her weight is in excess of / below the standard prescribed, or except

I / We do not consider this a disqualification of the employment he / she seeks.

His / Her age is according to his / her own statement \_\_\_\_\_ years and by appearance about \_\_\_\_ / \_\_\_\_ years.

I/We also certify that he / she has marks of Small Pox / Vaccination.

	On full Inspiration
Chest measurement in Inches	On full expiration
	Difference expansion

Height in ft.

Weight in kg.

Cardio-Vascular System

Respiratory System

His / Her vision is normal

Hypermetropic/

Myopic/

Astigmatic/

[Here enter the degree of defect and the strength of correction glasses]

Hearing is normal / defective (much or slight)

Urine - Does chemical examination show

(i) Albumen (ii) Sugar State specific gravity:

Personal marks (at least two should be mentioned) For Identification

1.

2.

SIGNATURE:

RANK:

DESIGNATION:

PRESIDENT:

Member (i)

(II)

STATION:

DATE:

STATION:

DATE:

The candidate must make the statement required below prior to his / her Medical Examination and must sign the declaration appended thereto. His attention is specially directed to the warning contained in the note below:-

1. State your name in full:
2. State your age and birth place:
3. (a) Have you ever had small pox, intermittent or any other fever, enlargement or suppuration of glands spitting of blood, asthma, inflammation of lungs, heart disease, fainting attacks, rheumatism, appendicitis?  
OR  
(b) any other disease or accident requiring confinement to bed and medical or surgical treatment?
4. When, where your last vaccinated
5. Have you or any of your near relations been afflicted with consumption, serofula gout, asthma, fits, epilepsy or insanity?
6. Have you suffered from any form of nervousness due to over work or any other cause?

7. Furnish the following particulars concerning your family:

Father's age, if living and state of health	Father's age at death and cause of death	No. of brothers living, their ages, state of health	No. of brothers dead, their ages at and cause of death
(1)	(2)	(3)	(4)

Mother's age, if living and state of health	Mother's age at death and cause of death	No. of Sisters living, their ages and state of health	No. of Sisters dead, their ages at and cause of death
(1)	(2)	(3)	(4)

I declare all the above answers to be to the best of my belief, true and correct.

CANDIDATE'S SIGNATURE

Note:- The candidate will be held responsible for the accuracy of the above statement by willfully suppressing any information he will incur the risk of losing the appointment and if appointed, of forfeiting all claim to superannuation allowance or gratuity.

MedI. I-68.

**ANNEXURE – VI****APPENDIX-I****Certificate regarding physical limitation in an examinee to write**

This is to 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. Over looking spelling mistakes and grammatical errors.
5. Using calculator / assistive devices.
6. \_\_\_\_\_ (any other assistive devices or concessions).

\*strike out the not applicable.

Signature

(Chief Medical Officer/Civil Surgeon/Medical Superintendent/signature of the notified medical authority of a Government health care institution)

Name & Designation

Name of the Government Hospital/ Health Care Centre/The notified medical authority

Place:

Date:

Signature / Thumb impression  
of the Differently abled person

(Photo of the Differently Abled Person  
and Stamp to be fixed here)

Note:

Certificate should be given by a specialist of the relevant stream/ disability

(eg, Visual impairment – Ophthalmologist, Locomotor disability – Orthopedic specialist/ PMR .etc)



### சுருக்கம்

தெரிவுகள் - தமிழ்நாட்டில் உள்ள அனைத்து தெரிவு முகமைகளால் நடத்தப்படும் போட்டித் தேர்வுகளில் தமிழ் மொழித் தகுதித் தேர்வினை எழுதுவதிலிருந்து மாற்றுத்திறனாளி தேர்வர்களுக்கு விலக்களித்தல் - ஆணைகள் வெளியிடப்படுகின்றன.

### மனிதவள மேலாண்மை (எம்)த் துறை

அரசாணை (நிலை) எண்.49

நாள்: 23.05.2022

சுபகிருது வருடம், வைகாசி - 09,

திருவள்ளூர் ஆண்டு 2053

படிக்கப்பட்டது:

1. அரசாணை (நிலை) எண்.133, மனிதவள மேலாண்மை (எம்) துறை, நாள் 01.12.2021.
2. செவித்திறன் குறைபாடு உள்ளவர்களின் பெற்றோர் சங்கத்தின் செயலாளரின், 01.03.2022-ம் நாளிட்ட மனு
3. செயலாளர், தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையம், கடித எண்.5476/RND.E/2018, நாள் 05.05.2022

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### ஆணை:

மேலே படிக்கப்பட்ட அரசாணை (நிலை) எண்.133, மனிதவள மேலாண்மை (எம்) துறை, நாள் 01.12.2021-ல் அரசுத் துறைகளில் உள்ள பணியிடங்கள் அனைத்திலும் தமிழக இளைஞர்கள் பெருமளவில் நியமனம் பெற ஏதுவாக, மாநிலத்தின் தெரிவு முகமைகளால் நடத்தப்படும் அனைத்துப் போட்டித் தேர்வுகளிலும் தமிழ்மொழித் தகுதித்தாள் கட்டாயமாக்கப்பட்டு ஆணைகள் வெளியிடப்பட்டன. அவ்வரசாணைக்கிணங்க, தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையம், போட்டித் தேர்வுகளில் தமிழ் மொழித் தாளினை கட்டாயத்தாளாக இணைத்து, அதற்கேற்ப அறிவிக்கைகளை வெளியிட்டு தெரிவு நடவடிக்கையினை மேற்கொண்டுவருகிறது.

2. மேலே இரண்டாவதாகப் படிக்கப்பட்ட, செவித்திறன் குறைபாடு உள்ளவர்களின் பெற்றோர் சங்கத்தின் மனுவில், காது கேளாத மற்றும் வாய்பேச

(கு.பி.பா.)



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இயலாத மாற்றுத்திறனாளிகள், இரண்டு அல்லது அதற்கு மேற்பட்ட மொழிகளைக் கற்க சிரமப்படுவார்கள் என்றும், இம்மாணவ மாணவியர்கள் சிலர் முன்பருவபள்ளி முதல் பட்டப்படிப்பு வரை முழுமையாக ஆங்கில வழிக் கல்வியில் மட்டுமே கல்வி கற்றிருப்பார்கள் எனத் தெரிவித்து தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையத்தால் நடத்தப்படுகின்ற தொகுதி-IV பதவிகளுக்கான போட்டித் தேர்வில் இத்தேர்வர்களுக்கு தமிழ் மொழித் தகுதித் தேர்வு எழுதுவதிலிருந்து விலக்களித்து அவர்களுக்கென தனியாக பொது ஆங்கில தாளினை நடத்த கோரியுள்ளனர்.

3. மேற்காணும் கோரிக்கை குறித்து மாற்றுத்திறனாளிகள் நலத்துறையுடன் கலந்தாலோசிக்கப்பட்டது. மேலும், இது குறித்து மேலே மூன்றாவதாகப் படிக்கப்பட்ட கடிதத்தில் தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையச் செயலாளர் வழங்கியுள்ள குறிப்புரைமினை ஏற்று, அரசாணை (நிலை) எண்.133, மனிதவள மேலாண்மை (எம்) துறை, நாள் 01.12.2021-ல் ஆணையிடப்பட்டுள்ள கட்டாய தமிழ்மொழித் தகுதித் தேர்வினை எழுதுவதற்கு மாற்றுத் திறனாளிகளுக்கு விலக்களித்து அரசு பின்வருமாறு ஆணையிடுகிறது:-

(அ) தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையத்தால், நடத்தப்படும் தொகுதி - I, II, II-A போன்ற இரண்டு நிலைகளைக் கொண்ட தேர்வுகளில், முதன்மை எழுத்துத்தேர்வில் (Main Written exam) கட்டாய தமிழ்மொழித்தாளானது தகுதி தேர்வாக (Tamil eligibility Test) நடத்தப்படுகிறது. இதுபோன்ற தேர்வுகளில் கட்டாயத் தமிழ்மொழித் தகுதித் தாளினை எழுதுவதிலிருந்து மாற்றுத் திறனாளிகளுக்கு விலக்களிக்கப்படுகிறது.

(ஆ) தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையத்தால், நடத்தப்படும் தொகுதி-III, IV, VII-B, VIII, போன்ற ஒரே நிலை கொண்ட தேர்வுகளில் தமிழ் மொழித்தாளானது, தகுதி மற்றும் மதிப்பீட்டுத் தேர்வாக (Tamil Eligibility-cum-Scoring Test) நடத்தப்படுகிறது. இத்தேர்வுகளில், Board / University-ல் ஆங்கில மொழிப் பாடம் மட்டுமே படித்த மாற்றுத்திறனாளிகளுக்கு, தமிழ் மொழித்தாள் எழுதுவதிலிருந்து விலக்களிக்கப்படுகிறது. அதற்குபதில், ranking மதிப்பீடு செய்வதற்காக, அவர்களுக்கென்று தனியாக பொது ஆங்கிலத்தேர்வு (SSLC standard-ல்) நடத்தப்படும். (இத்தேர்வுகளில் மொழி பெயர்ப்புப்பகுதி இடம் பெறாது).

(இ) அரசாணை (நிலை) எண்.133, மனிதவள மேலாண்மை (எம்) துறை, நாள் 01.12.2021-ல் ஆணையிடப்பட்டுள்ள கட்டாய தமிழ் மொழித் தாளிலிருந்து மாற்றுத்திறனாளிகளுக்கான விலக்கு, தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையம் மட்டுமல்லாமல், மாநிலத்தின் மற்ற தெரிவு முகமைகளால் நடத்தப்படும் அனைத்து போட்டித் தேர்வுகளுக்கும் மற்றும் நியமன அலுவலர்களால் தேவைப்படும் நேர்வுகளில் நடத்தப்படும் எழுத்துத் தேர்வுகளுக்கும் பொருந்தும்.

(ஈ) இவ்வாறான விலக்கு, அரசாணை (நிலை) எண்.62, பள்ளிக் கல்வித்துறை, நாள் 25.03.2022ல் குறிப்பிடப்பட்டுள்ள மாற்றுத் திறனாளிகளுக்குப்

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பொருந்தும். மேற்காண் அரசாணையில் குறிப்பிடப்பட்டுள்ள மாற்றுத்திறனாளிகளின் தொடர்பான விவரப் பட்டியல் கீழ்க்கண்டவாறு:-

(1)	உடல்குறைபாடு - உடல் இயக்கக் குறைபாடு	Physical disability - Locomotor disability, Leprosy cured, Cerebral palsy, Dwarfism, Muscular Dystrophy, Acid Attack victims.
(2)	உடல் குறைபாடு - பார்வைக் குறைபாடு	Physical disability - Visual Impairment - Blindness, Low Vision
(3)	உடல் குறைபாடு - செவித்திறன் குறைபாடு	Physical disability - Hearing Impairment - Deafness, Hard of hearing
(4)	உடல் குறைபாடு - பேச்சு மற்றும் மொழித்திறன் குறைபாடு	Physical disability - Speech and Language disability
(5)	அறிவுசார் குறைபாடு	Intellectual disability, Specific Learning disability (Dyslexia, Dysgraphia, Dyscalculia, Dysprasia), Developmental Aphasia, Autism Spectrum Disorder
(6)	மன நலம் சார்ந்த குறைபாடு - மனநலம் பாதிப்பு	Mental Behaviour - Mental illness
(7)	நாள் பட்ட நரம்பியல் குறைபாடுகள்	Disability caused due to Chronic Neurological conditions, Multiple Sclerosis, Parkinson's disease, Haemophilia, Thalassemia, Sickle Cell disease
(8)	பன்முகக் குறைபாடுகள் (பார்வையின்மையோடு செவித்திறன் குறைபாடு உட்பட)	Multiple Disabilities including deaf, blindness

இவ்விதக்கு 40 சதவிதத்திற்கும் குறைவான குறைபாடுகளைக் கொண்ட மாற்றுத் திறனாளிகளுக்கும் பொருந்தும்.

(உ) இவ்விதக்கிணை பெறவிரும்பும் மாற்றுத்திறனாளிகள் உரிய மாற்றுத்திறனாளி சான்றிதழ் (Disability Certificate) சமர்ப்பித்தல் வேண்டும்.

(ஆளுநரின் ஆணைப்படி)

**மைதிலி கேராஜேந்திரன்**  
**அரசு செயலாளர்**

**பெறுநர்**

செயலாளர், தமிழ்நாடு அரசுப் பணியாளர் தேர்வாணையம், சென்னை - 600 003.

அரசுக் கட்டுதல் தலைமைச் செயலாளர், உள், மதுவிலக்கு மற்றும்

ஆயத்தீர்வை துறை, சென்னை - 600 009.

(த.பி.பா.)



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அரசு கூடுதல் தலைமைச் செயலாளர், நிதித்துறை, சென்னை - 600 009.

அரசு முதன்மை செயலாளர், பள்ளிக் கல்வி துறை, சென்னை - 600 009.

அரசு முதன்மை செயலாளர், உயர்க் கல்வி துறை, சென்னை - 600 009.

அரசு முதன்மை செயலாளர், மருத்துவம் - மக்கள் நலவாழ்வுத் துறை,  
சென்னை - 600 009.

அரசு முதன்மை செயலாளர், சுற்றுச்சூழல், காலநிலை மாற்றம் மற்றும்  
வனத்துறை, சென்னை - 600 009.

✓ அரசு செயலாளர், மாற்றுத் திறனாளிகள் நலத்துறை, சென்னை - 600 009.

அனைத்து துறைச் செயலாளர்கள், சென்னை - 600 009.

அனைத்து துறைத் தலைவர்கள்.

தலைவர், ஆசிரியர் தேர்வு வாரியம், கல்லூரிச் சாலை, சென்னை - 600 006.

தலைவர், மருத்துவப் பணியாளர் தேர்வு வாரியம், சென்னை - 600 018.

தலைவர், தமிழ்நாடு சீருடைப்பணியாளர் தேர்வு வாரியம், சென்னை - 600 002.

உறுப்பினர் செயலர், தமிழ்நாடு வனச் சீருடைப் பணியாளர் தேர்வுக் குழுவும்,  
சென்னை - 600015.

இயக்குநர், வேலை வாய்ப்பு மற்றும் பயிற்சி, சென்னை - 600 032.

நிதி (பொ.நி.மா.க) துறை, சென்னை - 600 009.

#### **நகல்:**

மாண்புமிகு முதலமைச்சர் அவர்களின் செயலாளர் -III,

முதலமைச்சர் அலுவலகம், சென்னை - 600 009.

மாண்புமிகு அமைச்சர் (நிதி மற்றும் மனிதவள மேலாண்மை) அவர்களின்

சிறப்புநிலை நேர்முக உதவியாளர், சென்னை - 600 009.

தலைமைச் செயலாளரின் முதன்மை தனிச்செயலர், சென்னை - 600 009.

மாற்றுத்திறனாளிகள் நலத்துறை இயக்குநர், சென்னை - 600 005.

மனிதவள மேலாண்மைத் துறைச் செயலாளரின் முதன்மை தனிச் செயலாளர்,

சென்னை - 600 009.

மனிதவள மேலாண்மை (நி.சீ. II) துறை, சென்னை - 600 009. (3 படிக்கள்)

(தமிழ்நாடு அரசு இணையதளத்தில் வெளியிடுதல் குறித்து)

இருப்புக் கோப்பு / உதிரி நகல்.

//ஆணைப்படி அனுப்பப்படுகிறது//

23/05/22  
பிரிவு அலுவலர்  
23/5/22

## **ANNEXURE – VII**


### **COMPUTER BASED TEST (CBT)** **IMPORTANT INSTRUCTIONS** **OBJECTIVE TYPE**


- a) One question will be displayed on the screen at a time.
- b) Time available for you 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**. At the beginning of exam, timer will show 180 minutes(240 minutes for Differently Abled candidates with scribe)which will reduce gradually with passage of time. When the timer reaches zero, the examination will end by itself and your examination will be submitted by the system automatically.


#### **c) 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.

2. 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.



3. 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.

#### **d) Answering a Question**

- i) The questions will appear on the screen in ascending order, which can be answered one by one.
- ii) To select your answer of a question, click on the button of one of the options.
- iii) **Click on Save and Next button after answering every question to save your answer.** Otherwise your answer will not be saved.
- iv) To deselect your chosen answer, click on the button of the chosen option again or click on the **Clear Response** button.

#### **e) Instruction for enlarging images**

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

**Any attempt of malpractice found, will render you liable to such action or penalty as Commission may decide.**

**ANNEXURE - VIII****TENTATIVE TIMELINE FOR THE RECRUITMENT PROCESS**

<b>Sl. No.</b>	<b>Process</b>	<b>Timeline</b>
1.	Last date upto which the Online Application can be edited/ submitted/ payment of fees can be made	20.10.2023
2.	Online Application Correction Window period	From 25.10.2023 12.01 A.M to 27.10.2023 11.59 P.M
3.	Last date upto which the applicants are permitted to upload/ re-upload the documents	22.11.2023
4.	Publication of Examination Results	February 2024
5.	Certificate Verification	March 2024

SECRETARY