



# TAMIL NADU PUBLIC SERVICE COMMISSION

Advertisement No. 542  
Notification No.13/2019

DATED: 19.04.2019

Applications are invited only through online mode up to **20.05.2019** for direct recruitment to the following post.

Individual communication regarding the date and time of Certificate Verification, Oral Test and Counselling will not be sent to the Candidates, and the above details will be made available in the Commission's Website. Candidates will be informed of the above fact only through SMS and e-mail.

Name of the Post and Post Code	Name of the Service and Service Code.	No. of vacancies	Scale of Pay
Laboratory Assistant in Department of Fisheries (Code No.1765)	Tamil Nadu Fisheries Subordinate Service (Code No.031)	1 [2014-15] (GT-G)	Rs.35,900-1,13,500/- (Level 13)

It is mandatory for the 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 should apply online for this recruitment. [The One-Time Registration will be valid for 5 years from the date of registration. Thereafter, the registration should be renewed by paying the prescribed fee.]

## 2. DISTRIBUTION OF VACANCY

The rule of reservation of appointment is **not applicable** for the post of Laboratory Assistant since the cadre strength of this post is 'one'.

## 3. IMPORTANT DATES AND TIME

Date of Notification	19.04.2019	
Last date for submission of online application	20.05.2019	
Last date for payment of Examination Fee through Bank (State Bank of India or HDFC Bank)	22.05.2019	
<b>Date of Written Examination</b>		
Paper – I (Subject Paper) (Degree Standard)	22.06.2019 FN	10.00 A.M. to 01.00 P.M
Paper – II (General Studies) (Degree Standard)	22.06.2019 AN	02.30 P.M. to 04.30 P.M

#### 4. FEES

a)	<p><b><u>Registration Fee</u></b></p> <p>For One-Time Registration (Revised with effect from 01.03.2017 vide G.O.(Ms).No.32, Personnel and Administrative Reforms (M) Department, dated 01.03.2017)</p> <p><b><u>Note</u></b></p> <p>Those who have registered in the One -Time Registration system and paid the Registration fee of Rs.150/- and received the Registration ID need not pay the Registration fee i.e., Rs.150/- and it is enough to pay the Examination fee alone.</p>	Rs.150/-
b)	<p><b><u>Examination Fee</u></b></p> <p><b><u>Note</u></b></p> <p>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 fee concession noted below.</p>	Rs.150/-

#### **EXAMINATION FEE CONCESSION**

Category	Concession	Condition
(i) Scheduled Castes/ Scheduled Caste (Arunthathiyars), Scheduled Tribes	Full Exemption	--
(ii) Differently Abled Persons, Destitute Widows of all communities	Full Exemption	(i) For Differently Abled Persons, the disability should be not less than 40%. (ii)For Destitute Widows, the Destitute Widow certificate should have been obtained from the RDO / Sub Collector/ Assistant Collector
(iii) Most Backward Classes / Denotified Communities, Backward Classes (Other than Muslims), Backward Class (Muslims)	Those who have not availed three free chances so far in the previous recruitments may avail exemption from payment of Examination fee.	Should not have availed three free chances in the previous recruitments.
(iv) Ex-Servicemen	Those who have not availed two free chances so far in the previous recruitments may avail exemption from payment of Examination fee.	(i) Should not have availed two free chances in the previous recruitments. (ii) Fee concession will not apply for those Ex-Servicemen who have already been recruited to any class or service or category.

**Note :**

- (i) The three / two free chances allowed are not for **EACH POST** but for **ANY THREE / TWO APPLICATIONS ONLY**. The claim for exemption from payment of examination fee made in any application which is rejected / admitted or withdrawn will be counted as a free chance availed.
- (ii) Failure to pay the prescribed fee along with the application in-time, will result in the rejection of application.
- (iii) The number of free chances availed by the applicant means, the total number of free chances hitherto availed by the applicant in his/her earlier applications submitted to the Commission for any post / recruitment.
- (iv) If the Examination fee concession claimed in the application is found to exceed the admissible limits, as announced above, the application **will be rejected at any stage of selection**. The number of free chances availed by the applicants will be counted from all the previous applications submitted through One Time Registration and / or submitted directly without One Time Registration.

**[For further details regarding Examination Fee concession, refer to para. 12 of the "[Instructions to Applicants](#)".]**

**5. MODE OF PAYMENT OF EXAMINATION FEE**

- Examination fee of Rs.150/- (Rupees One Hundred and Fifty only) is payable online through Net banking / Credit card / Debit card or it can be paid offline at State Bank of India / HDFC Bank within 2 days from the date of submission of online application, by choosing the option in the online application.
- Applicants have to register their basic particulars through One-Time Registration which is mandatory on payment of Rs.150/- (Rupees One Hundred and Fifty only) towards Registration fee and then should apply online for this recruitment. The One-Time Registration will be valid for 5 years from the date of registration. Thereafter, the registration should be renewed by paying the prescribed fee. Applicants who have already registered in One-Time Registration system by paying Rs.50/- before 01.03.2017 and having validity and those who have registered for One-Time Registration on or after 01.03.2017 by paying Rs.150/- towards One-Time Registration are exempted from paying the registration fee for this recruitment.
- Applicants have also to pay the service charges applicable to the State Bank of India / HDFC Bank.
- Applicants can avail exemption from paying Examination fees as per eligibility criteria.
- **Offline mode of payment in the form of Demand Draft / Postal Order etc., will not be accepted and the applications forwarded with such modes of payment will be summarily rejected.**

**[For further details refer para 2 (13-23) of "[Instructions to Applicants](#)".]**

**Note:**

**The fees once paid to the Tamil Nadu Public Service Commission will not be refunded to the applicants under any circumstances.**

## 6. QUALIFICATIONS

### (A) AGE LIMIT (As on 01.07.2019)

Category of Applicants	Maximum Age
SCs, SC(A)s, STs, MBCs/DCs, BCs, BCMs and Destitute Widows of all castes	No maximum age limit
'Others' [i.e., Applicants not belonging to SCs, SC(A)s, STs, MBCs/DCs, BCs and BCMs]	<b>30 years</b> (Should not have completed)

#### Note

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** to apply even if they are within the age limit.

**Explanation:** - "No maximum age limit" shall mean that the candidates should not have completed 58 years of age either on the date of Notification or at the time of selection/ appointment to the post.

[For further details regarding Age limit refer para 5 of "[Instructions to Applicants](#)" and Section 3(r) of [Tamil Nadu Government Servants \(Conditions of Service\) Act, 2016](#)]

#### Age Concession

SCs, SC(A)s, STs, MBCs/DCs, BCs, BCMs		'Others' i.e. Applicants not belonging to SCs, SC(A)s, STs, MBCs/DCs, BCs, BCMs	
Differently Abled Persons	Ex-Servicemen	Differently Abled Persons	Ex-Servicemen
No maximum age limit		40 years	48 years

#### Note

- The above mentioned age concession will not apply to those Ex-Servicemen applicants who had already been recruited to any class or service or category.
- Instructions given with regard to maximum age limit under para 5 of the "[Instructions to Applicants](#)" will apply to this recruitment.

### (B) EDUCATIONAL QUALIFICATION (As on 19.04.2019)

Applicants should possess the following or its Equivalent qualification from any University or Institution recognized by the University Grants Commission as on 19.04.2019 i.e. date of this Notification.

Educational Qualification
A First or Second class Degree in Zoology (OR) Botany (OR) Chemistry as main subject"
"Provided that other things being equal preference shall be given to candidates, who possess previous experience in research work for a period of not less than one year in any one of the recognised Research Stations"

**Note**

- i. The Degree qualification prescribed for the said post should have been obtained by passing the required qualification in the order of studies, viz., SSLC+ HSC or its equivalent + UG Degree from the recognised Institutions 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 this Notification)**

- ii. 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. A list of Equivalence of qualification in the related subject is available in **Annexure - I** to this Notification. (Refer also to the Disclaimer annexed to this Notification)

**[For further details regarding Equivalence of Qualification refer para 10 of the [“Instructions to Applicants”](#)]**

**(C) CERTIFICATE OF PHYSICAL FITNESS**

Candidates selected for appointment to this post will be required to produce a Certificate of Physical Fitness in the form prescribed below before their appointment.

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

**(D) KNOWLEDGE IN TAMIL**

Applicants should possess adequate knowledge in Tamil on the date of this Notification.

**[For details refer para 11 of the Commission’s [“Instructions to Applicants”](#)]**

**7. CONCESSIONS**

- (i) Concessions in the matter of Age and Fees allowed to SCs, SC(A)s, STs, MBCs/DCs, BCs,BCMs, Destitute Widows, Differently Abled Persons, Ex-Servicemen and other categories of persons are given in paras. 12 to 14 of the [“Instructions to Applicants”](#).
- (ii) Persons claiming concessions referred to above and other claims made in the application, have to produce evidence for such claims when called for by the Tamil Nadu Public Service Commission, otherwise their application will be liable for rejection.

**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. [Proviso to Section 3(j)(vii) of [Tamil Nadu Government Servants \(Conditions of Service\) Act, 2016](#)]

## 8. SCHEME OF EXAMINATION: OBJECTIVE TYPE (OMR METHOD) AND ORAL TEST:-

Subject	Duration	Maximum Marks	Minimum Qualifying Marks for selection	
			SCs,SC(A)s,STs, MBCs/DCs,BCs and BCMs	Others
<b><u>i. Paper- I (Subject Paper)</u></b> <b><u>any one of the following Subject:</u></b> <b>(Degree Standard)</b> <b>(200 Questions)</b> <b>Zoology (Code No.270)</b> <b>(OR)</b> <b>Botany (Code No.268)</b> <b>(OR)</b> <b>Chemistry (Code No.243)</b>	3 hours	300	171	228
<b><u>ii. Paper - II (General Studies)</u></b> <b>(100 Questions) (Code No.003)</b>  General Studies (Degree Standard) - 75 Questions <b>AND</b> Aptitude and Mental Ability (SSLC Standard) - 25 Questions	2 hours	200		
<b><u>iii. Interview and Records</u></b>	---	70		
	<b>Total</b>	570		

### Note

- (i) The Syllabi for Examination is furnished in the **Annexure - III** of the Notification and also available in the Commission's website [www.tnpsc.gov.in](http://www.tnpsc.gov.in)
- (ii) The questions in Paper - I and Paper - II will be set both in English and Tamil.
- (iii) In the application, candidates should choose and specify any one of the subjects mentioned in the 'Scheme of Examination' in which they had obtained the Degree qualification.

## 9. EXAMINATION CENTRES

Examination will be held at the following centres: -

Name of the Centre	Centre Code
Chennai	0100
Madurai	1000
Coimbatore	0200

**Note**

- (i) Request for change of Examination Centre / Venue will not be entertained.
- (ii) Candidates will be required to appear for the Written Examination / Certificate Verification / Oral Test at their own expenses.
- (iii) The Commission reserves the right to increase / decrease the number of Examination Centres and to re-allot the candidates with respect to the number of candidates opted for each centre.

**10. SELECTION PROCEDURE**

**Selection will be made in two successive stages** i.e., (i) Written Examination and (ii) Oral Test in the form of an interview. Final selection will be made on the basis of total marks obtained by the candidates in the Written Examination and Oral Test taken together. Candidate's appearance in both the papers of the Written Examination and in the Oral Test is compulsory. A candidate who has not appeared in any one of the papers in Written Examination or Oral Test will not be considered for selection, even if he/she secures qualifying marks in the Written Examination or Oral Test. Based on the marks obtained by the candidates in the Written Examination, the 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 Oral Test.

**[For further details refer paragraph 23 (b) of "[Instructions to Applicants](#)"]**

**11. NO OBJECTION CERTIFICATE / INFORMATION TO THE EMPLOYER**

No Objection Certificate obtained from appropriate authority shall be produced at the time of Certificate Verification/ Counselling. No Objection Certificate should be produced in the format prescribed under para 15 (g) of Commission's "[Instructions to Applicants](#)". Any violation of this instruction will be liable for rejection of application and forfeiture of his/her Candidature.

**12. GENERAL INFORMATION**

- A. The rule of reservation of appointment is not applicable for Direct recruitment to this post.**
- B. The number of vacancies advertised is only approximate and is liable for modification / reduction with reference to vacancy position, at any time before finalization of selection.
- C. The selection for appointment to this post is purely provisional subject to final orders pending on the Writ Petitions, if any, filed before the Hon'ble Madras High Court and Madurai Bench of Madras High Court.
- D. Reservation of appointment to **Destitute Widows, Ex-Servicemen and Differently Abled Persons** **will not apply** to this recruitment.
- E. The Differently Abled Persons who apply under other eligible category should submit / upload a copy of Differently Abled Certificate from the competent authority specifying the nature of physical handicap and the degree of disability as per para 14(b) of "[Instructions to Applicants](#)" for their claim, when called for by the Tamil Nadu Public Service Commission.
- F. Evidence for claims made in the online application should be uploaded / submitted within stipulated time when the documents are called for by the Tamil Nadu Public Service Commission. Any subsequent claim made thereafter on submission of online application will not be entertained. Failure to submit the documents within the stipulated time limit **will entail rejection of the application.**



- G. Correct and True information regarding arrest, convictions / debarment / disqualification by any recruiting agency, criminal or any disciplinary proceedings initiated / pending or finalized, participation in agitation or any Political Organization, candidature in election for Parliament/State Legislature/Local Bodies etc., if any, should also be furnished to the Commission at the time of submission of online application i.e., the details thereof, originals of the Judgement, order or G.O dropping further action in Departmental proceedings or any document that may prove the suitability of such candidate for a Government 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 then and there. Failure to report on the part of candidate will be considered as suppression of material information and will attract suitable penal action.
- H. Incomplete applications and applications containing wrong claims or incorrect particulars relating to category of reservation / age / communal category / educational qualification / PSTM / physical qualification and other basic eligibility criteria **will be liable for rejection.**
- I. **One-Time Registration is not an application for any Post / Recruitment.** Though the details/particulars were furnished in the One-Time Registration by the applicants, the details/particulars furnished in the online application submitted for this recruitment alone will be taken into consideration. Tamil Nadu Public Service 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.

### 13. OTHER IMPORTANT INSTRUCTIONS

- a) **Applicants should ensure their eligibility for Examination:** The applicants applying for the Examination should go through all instructions carefully and ensure that they fulfil all eligibility conditions for admission to Examination. **Their admission to all stages of the Examination will be purely provisional subject to satisfaction of the eligibility conditions.** Mere issue of memo of admission to the applicant will not imply that his/her Candidature has been fully cleared by the Commission.
- b) The **Hall Tickets** for eligible candidates will be made available in the Commission's website <http://www.tnpsc.gov.in> or [www.tnpsceexams.net](http://www.tnpsceexams.net) or [www.tnpsceexams.in](http://www.tnpsceexams.in) for downloading the same by candidates. **Hall Tickets will not be sent by post.** Hence, the candidates should watch Commission's website before the scheduled date of Examination. The candidates must comply with each and every instruction given in the Hall Ticket.
- c) **Grievance Redressal Cell for guidance of applicants:** In case of any guidance/ information / clarification of their applications, candidature etc., applicants can contact Tamil Nadu Public Service Commission's Office in person or over Telephone No.044-25332833 / 25332855 or the Commission's Office Toll-Free No.1800 425 1002 on all working days between 10.00 a.m. and 05.45 p.m or **Commission's e-mail id [contacttnpsc@gmail.com](mailto:contacttnpsc@gmail.com).**
- d) **After Notification, during the process of recruitment till publication of result, no information, under Right to Information Act, would be furnished.**
- e) **Mobile Phones and other articles Banned:**
- Except the permitted writing material (i.e. 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 thing or instrument, 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. (For further details refer "[Instructions to Applicants](#)").
  - iii. Candidates are advised in their own interest not to bring any of the banned items including Mobile Phones to the Venue of the Examination, as arrangements for safekeeping cannot be assured.
- f) Unless specific instruction is given, applicants are not required to submit along with their application any certificates (in support of their claims regarding age, educational qualifications, physical qualification, community, physical disability etc.,) which should be submitted when called for by the Commission. 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 Written Examination / Certificate Verification / Oral Test, it is found that they do not fulfil any of the eligibility conditions, their Candidature for the Examination will be liable for rejection / cancellation by the Commission. (For further details refer to the "[Instructions to Applicants](#)")
- g) If any of their claims is found to be incorrect, it will lead to rejection of their Candidature and suitable penal action including debarment.
- h) UNFAIR MEANS STRICTLY PROHIBITED:** No candidate shall copy from the papers of any other candidate 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. [For further details refer "[Instructions to Applicants](#)".]
- i) CONDUCT IN EXAMINATION HALL:** No candidate 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 severely viewed and penalised. [For further details refer "[Instructions to Applicants](#)".]
- j) For violation of "[Instructions to Applicants](#)" in any manner, suitable penalty will be imposed as per the "[Instructions to Applicants](#)" or as deemed fit by the Commission.

#### 14. HOW TO APPLY

- (i) Applicants should apply only through online mode in the Commission's Website <http://www.tnpsc.gov.in> , <http://www.tnpscexams.net> , <http://www.tnpscexams.in>
- (ii) 'One-Time Registration' (OTR) and 'Applicant's Dashboard' are 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 5 years from the date of registration. All the applications should be submitted using the One-Time Registration ID and password registered by the applicant.
- (iii) To apply under One-Time Registration, applicants should have scanned image of their photograph, certificate 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.
- (iv) Applicants who have already registered in One-Time Registration on or before 29.09.2015 shall use their existing user ID and Password to create applicant Dashboard in the new One-Time Registration system. No applicant is permitted to create more than one registration ID in One-Time Registration.

- (v) Applicants should enter the Unique ID and password to view the already available information and update them.
- (vi) One-Time Registration is not an application for any post. It is just a collection of information from the applicants and giving a separate dashboard to each applicant to facilitate them to maintain their own profile. Applicant who wishes to apply for any post shall click "[Apply](#)" against the post notified in the Commission's Website and use the same USER ID and PASSWORD given for ONE-TIME REGISTRATION.
- (vii) Applicants should select the name of the post(s) and service to which they wish to apply.
- (viii) An online application uploaded without the photograph, specified documents and signature will be rejected.
- (ix) All the particulars mentioned in the online application including Name of the Applicant, Post applied, Educational qualifications, Communal category, Date of Birth, Address, e-mail ID, Centre of Examination etc. will be considered as final and no modifications will be allowed after the last date specified for applying online. Since certain fields are firm and fixed and cannot be edited, applicants are requested to fill in the online application form with utmost care and caution as no correspondence regarding change of details will be entertained.

(x) **PRINT OPTION**

- a) After submitting the online application, applicants can print / save their Application in PDF format.
- b) On entering user ID and password, applicants can download their application and print the same if required.
- c) Candidates need not send the printout of the online application or any other supporting documents to the Commission. The application and certificates will be verified only when the candidates come up for Certificate Verification.

(xi) **One-Time Registration will not be considered as an application for any post.**

## 15. UPLOAD / SUBMISSION OF DOCUMENTS

The candidates must upload/submit the necessary documents **whenever called for specifically** by the Tamil Nadu Public Service Commission.

## 16. LAST DATE FOR SUBMITTING ONLINE APPLICATION

The Online Application can be submitted up to 20.05.2019 till 11.59 p.m., after which the link will be disabled.

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

### Warning

- All the Recruitments conducted by the Tamil Nadu Public Service Commission are purely merit based.
- Tamil Nadu Public Service Commission hereby cautions the candidates against touts and agents who cheat by making false promises of securing job through unfair means.
- Tamil Nadu Public Service Commission shall not be responsible or liable for any loss that may be caused to any candidate on account of indulging into any sort of actions with such unscrupulous persons.

### எச்சரிக்கை

- தேர்வாணையத்தின் தெரிவுகள் அனைத்தும் விண்ணப்பதாரர்களின் தர வரிசைப்படியே மேற்கொள்ளப்படுகின்றன.
- பொய்யான வாக்குறுதிகளை சொல்லி, தவறான வழியில் வேலை வாங்கி தருவதாக கூறும் இடைத்தரகர்களிடம் விண்ணப்பதாரர்கள் மிகவும் கவனமாக இருக்குமாறு எச்சரிக்கப்படுகிறார்கள்.
- இதுபோன்ற தவறான மற்றும் நேர்மையற்ற நபர்களால் விண்ணப்பதாரர்களுக்கு ஏற்படும் எந்தவொரு இழப்புக்கும் தேர்வாணையம் எந்தவிதத்திலும் பொறுப்பல்ல.

**Secretary**

**DISCLAIMER**

“The Government Orders relating to Equivalence of Qualification are available in the Tamil Nadu Public Service Commission’s website. However, the applicants while applying for the examination should furnish the details of Equivalence of Qualification declared in the form of Government Orders issued on or before the date of this Notification if any, which are not mentioned in Annexure - I to the Notification and produce the same while submitting the documents, failing which their Application will be rejected. The Government Orders issued regarding Equivalence of prescribed qualification after the date of this Notification will not be accepted.”

**Secretary**

**ANNEXURE- I**

**The following qualifications are declared as Equivalent to the prescribed Educational Qualification**

<b>S.No</b>	<b>Qualification</b>	<b>G.O. in which ordered</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.
2.	Five years integrated course offered by Annamalai University as equivalent to corresponding UG Degree. B.Sc Chemistry B.Sc Zoology	G.O.(Ms) No75, Personnel and Administrative (M) Department, dated 30.06.2011
3.	B.Sc Plant Biology and Plant Biotechnology awarded by Bharathiyar Univesity be considered as equivalent to B.Sc Botany	G.O.(Ms).No.268, Higher Education (H1) Department dated 20.09.2012
4.	B.Sc Environmental Zoology awarded by Bharathidasan University be considered as equivalent to B.Sc Zoology	G.O.(Ms)No.58, Higher Education (K2) Department dated 15.04.2013
5.	1. B.Sc Advanced Zoology and Biotechnology awarded by University of Madras as equivalent to B.Sc Degree in Zoology 2. B.Sc Plant Biology and Plant Biotechnology awarded by Madras University as equivalent to B.Sc Botany of University of Madras	G.O.(Ms)No.117, Higher Education (K2) Department dated 02.07.2013
6.	1. B.Sc Zoology specialization in Biotechnology offered by Holy Cross College(Autonomous) Trichy awarded by Bharathidasan University as equivalent to B.Sc Zoology, University of Madras 2. B.Sc Applied Zoology semester course awarded by Madurai Kamaraj University as equivalent to B.Sc Zoology semester course	G.O.(Ms)No.270, Higher Education (K2) Department dated 31.12.2013
7.	1. B.Sc (Special) Zoology(Biotechnology) awarded by Lady Doak College affiliated to Madurai Kamaraj University is equivalent to B.Sc Zoology. 2. B.Sc Advanced Zoology and Biotechnology awarded by Manonmanium Sundaranar University till 2009-10 (Subsequently a nomenclature of the said course has been changed as B.Sc Zoology ) is equivalent to B.Sc Zoology.	G.O.(Ms)No.27, Higher Education (K2) Department dated 13.02.2014
8.	1. B.Sc Botany(Vocational Biotechnology) awarded by Periyar University is equivalent to B.Sc Botany 2. B.Sc (Special) in Botany (Specialization in Industrial Microbiology) awarded by Lady Doak College, Madurai Kamaraj University is equivalent to B.Sc Botany. 3. B.Sc Zoology with Biotechnology awarded by AVVM Sri Pushpam College (Autonomous), Bharathidasan University is equivalent to B.Sc Zoology	G.O.(Ms)No.112, Higher Education (K2) Department dated 18.07.2014

9.	<ol style="list-style-type: none"> <li>1. B.Sc Plant Biology and Plant Biotechnology awarded by Bharathidasan University equivalent to B.Sc Botany</li> <li>2. B.Sc Plant Biology and Plant Biotechnology offered by St.Joseph's College (Autonomous) Trichy affiliated to Bharathidasan University as equivalent to B.Sc Botany</li> </ol>	G.O.(Ms)No.171, Higher Education (K2) Department dated 30.09.2014
10.	<ol style="list-style-type: none"> <li>1. B.Sc Plant Biology and Plant Biotechnology awarded by St.Xavier's College (Autonomous) Palayamkottai affiliated to Manonmanium Sundaranar University equivalent to B.Sc Botany.</li> <li>2. B.Sc Zoology (Vocational) awarded by Mother Teresa Women's University equivalent to B.Sc Zoology.</li> <li>3. B.Sc Advanced Zoology and Biotechnology (Sericulture) awarded by Manonmanium Sundaranar University equivalent to B.Sc Zoology.</li> </ol>	G.O.(Ms)No.72, Higher Education (K2) Department dated 20.04.2015
11.	B.Sc (Zoology) with allied subject wise vocational Industrial Microbiology awarded by Periyar University, Salem is equivalent to B.Sc Zoology	G.O.(Ms)No.58, Higher Education (K2) Department dated 01.03.2016
12.	<ol style="list-style-type: none"> <li>1. B.Sc Zoology (Vocational Stream Sericulture) awarded by Periyar University as equivalent to B.Sc Zoology.</li> <li>2. B.Sc Special Chemistry with Cheminformatics awarded by Lady Doak College affiliated to Madurai Kamaraj University equivalent to B.Sc Chemistry.</li> </ol>	G.O.(Ms)No.232, Higher Education (K2) Department dated 18.11.2016

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**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, Employee ID with 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 6(B) of the Notification No. 13/ 2019, dated 19/04/2019 : Yes / No
9. Whether Attendance Register / Attendance Rolls / Pay Register, Pay Disbursement 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.

**\* Explanation :** *Previous experience in research work in their field of Study in which they had obtained the Degree qualification for a period of not less than one year in any one of the recognised Research Stations.*

**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****ZOOLOGY (DEGREE STANDARD)****CODE NO: 270****UNIT I**

**Non-Chordata:** General organisation - Classification with diagnostic features upto classes. Evolutionary relationship among taxa, symmetry.

**Protozoa:** Structure, reproduction and life history of Amoeba, Paramecium, Trypanosoma, Plasmodium, Monocystis, Leishmania - locomotion, nutrition, economic importance. **Porifera:** Sponges canal system, skeleton, reproduction and economic importance.

**Coelenterata:** Diploblastic organization - life history of obelia and Aurelia, Metagenesis - Polymorphism in Hydrozoa. Corals and Coral formation - relationships of Cnidaria and Acnidaria. Helminthes: Structure and life history of Planaria, Fasciola, Teania, Ascaris and Wucheriria - parasitic adaptations - Helminthes in relation to man.

**Annelida:** Nereis, earthworm and leech - Coelom and metamerism - modes of life in polychaetes. Onychophora: Structure, affinities and distribution of Peripatus.

**Arthropoda:** Prawn, Scorpion and Cockroach - Larval forms and parasitism in Crustacea - Mouth parts, vision, respiration and excretion. Metamorphosis and social life in insects.

**Mollusca:** Freshwater mussel, pila, sepia. Echinodermata: General organisation - Water vascular system. Larval forms and affinities.

**UNIT II**

**Prochordata:** Amphioxus, Balanoglossus - Ascidian retrogressive Metamorphosis, neoteny and affinities.

**Chordata:** General Organisation - Characters, Outline, classification upto class level.

**Pisces:** Locomotion, migration, respiration, Parental care, economic importance; structure and affinities of dipnoi.

**Amphibia:** Origin of amphibians – Respiration, Parental care - South Indian amphibians.

**Reptiles:** Origin - Conquest of land - adaptations to live on land, adaptive radiation - Temporal Vacuities - identification of poisonous and non-poisonous snakes - poison apparatus – South Indian snakes.

**Birds:** Origin - flight adaptations - mechanism of flight - double respiration - migration - Flightless birds.

**Mammals:** Dentition, skin derivatives - distribution - adaptive radiation. Protothria, Metatheria, eutheria and their Phylogenetic relationships.

**UNIT III**

**Cell and Molecular Biology:** Cellular Organelles - Structure and function - Plasma membrane, Mitochondria, Golgi bodies, Endoplasmic reticulum and Ribosomes – Nucleus and Nucleolus. Cell division, cell cycle; Chromosomes - DNA structure and function, replication of DNA, Genetic code - RNA and protein synthesis. Gene expression, regulation of gene expression in prokaryotes and Eukaryotes. Recombinant DNA - Genetic engineering, its uses in agriculture, industries and medicine.

**UNIT IV**

**Genetics:** Mendelian concepts, multiple alleles, blood groups, Rh-factor. Linkage, crossing over - mutation (Natural and induced); Sex chromosomes, Sex determination and Sex Linked inheritance - Chromosome number and form ploidy - cytoplasmic inheritance – Karyo types – chromosome mapping, Normal and abnormal genetic disorders; Bio-chemical genetics – Eugenics. Human genome Project. Bio-statistics: Mean, Median and standard deviation. Bio-informatics: DNA and Protein sequence analysis, Prediction functional structure, protein folding, Phylogenetic tree construction.

**UNIT V**

**Bio Chemistry:** Bio-molecules, Structure and role of carbohydrates, lipids, proteins and amino acids - Glycolysis and kreb's cycle - oxidation, reduction - oxidative phosphorylation - energy conservation and release, cyclic AMP, ATP; enzymes – mechanism; Hormones-classification biosynthesis and function.

**Physiology:** With reference to mammals, digestion, nutrition, balanced diet - assimilation, intermediary/metabolism. Composition of blood - Coagulation, Transport of oxygen, Carbon dioxide, Blood pigments, Mechanism of respiration. Muscles, mechanism of muscle contraction. Temperature regulation, Acid base balance and homeostasis, Nerve impulses and conduction, neurotransmitters. Receptors- photo, phono and chemo reception. Nephron and urine formation. Endocrine glands, testis, ovary and pituitary organs and their inter relationship. Physiology of reproduction in humans, Hormonal development in insects, pheromones and their uses. Bioluminescence. Biological clock. Physiology of immune response- Antigens – Immuno globulins - humoral and cell mediated immunity. T and B cells, mechanism of antibody formation - Immunodeficiency diseases; vaccination.

**UNIT VI**

**Development Biology:** Gametogenesis – fertilization, Pathenogenesis, type of eggs – blastulation, cleavage and gastrulation in frog and chick. Morphogenetic movements – organizer, potency, organogenesis with reference to ear, eye, kidney, brain. Formation and fate of extra embryonic membranes in chick.

Placentation- types, functions. - metamorphosis in Frog – Regeneration. Stem cells-sources, types and their uses in human welfare, IVF, embryo transfer and cloning - Aging and senescence.

**UNIT VII**

**Environmental Biology:** Biotic and abiotic factors, their role, Intra and inter specific association. Biogeochemical cycles. Ecosystem- structure and function of ecosystems, types of ecosystems. Ecological succession, Community structure - Stratification. Population and Population dynamic - Habitat ecology. Wild life, need for conservation management and methods of conservation. Sanctuaries with special reference to Tamil Nadu. Pollution - air, water and land - Perspective policy planning for the environment.

**UNIT VIII**

**Evolution:** Origin of life - Evolutionary theories - Contributions of Lamarck, Darwin and De Vries - present status of Darwinism and Lamarkism - modern synthetic concept - Hardy Weinberg Law - Polymorphism and mimicry in evolution. Speciation: evolutionary species concept – Isolation, mechanisms and their role, role of hybridization in evolution. Fossils and Fossilization, Indian fossils, Geological time scale. Origin and evolution of horse and man - Culture evolution and Biochemical evolution.

**Animal distribution:** Zoogeographical distribution - Continental and island fauna - Continental drift - Discontinuous distribution, adaptive radiation. Natural resources and their conservation. Alternative sources of energy.

**UNIT IX**

**Economic Zoology:** Parasitism and Commensalism - Protozoan Parasites and diseases, helminthes parasites and diseases of man and domestic animals; Beneficial and harmful insects. Insect pests on crops and stored products - Control methods. IPM. Sericulture, apiculture, lac culture, seaweed culture, vermiculture, - oyster culture and pearl formation, poultry, pisciculture and induced breeding, Shell fisheries, Aquaculture practices in Tamil Nadu and their impact on the environment and on agriculture.

**UNIT X**

**Instrumentation and Bio-techniques:** Microscopy-Phase contrast, fluorescent, TEM, SEM. Colorimetric techniques, Centrifugation techniques. Fixation, staining techniques. Electrophoretic techniques: Principles, AGE and PAGE. DNA finger printing, RFLP, RAPD and AFLP.

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**PAPER-I****BOTANY (DEGREE STANDARD)****CODE NO: 268****UNIT – I : PHYCOLOGY, MYCOLOGY & LICHENOLOGY**

**Phycology** - Fritsch's classification of Algae - pigmentation - Thallus organization - Life cycles-patterns of Algae - Evolutionary trends in the Sexuality of Algae - Economic importance - Algae as food, fodder, fertilizer and medicines - phytoplanktons and their role.

**Mycology** - Classification of fungi (Alexopoulos and Mims 1979) - structure, reproduction and economic importance of Phycomycetes, Ascomycetes, Basidiomycetes and Deuteromyces.

Lichenology - structure, reproduction and economic importance of lichens.

**UNIT- II : BRYOLOGY AND PTERIDOLOGY**

**Byrophytes** - General characteristics, structure; reproduction and alternation of generations.

**Pteridophytes** - General characteristics - Psilopsida, Lycopsida, Sphenopsida and Pteropsida - Stellar organisation - origin of heterospory and seed habit.

**UNIT –III : GYMNOSPERMS AND PALEOBOTANY**

A comparative account of vegetative and reproductive structure of Cycadales, Coniferales and Gnetales - Structure of wood in Gymnosperm - Economic importance of Gymnosperms – Paleobotany, Geological Time Scale - Fossilization methods - Fossil types.

**UNIT- IV : ANGIOSPERM MORPHOLOGY, TAXONOMY AND ECONOMIC BOTANY**

Root and Stem modification in relation to habitat. Inflorescence: Raceme, Cyme and Special types

Pollination – Types, Agents (Biotic and Abiotic) and contrivances promoting cross pollination.

Taxonomy - Angiosperm Classification - Bentham and Hooker's system - International code of Botanical Nomenclature (outline). Characteristics features and Economic importance of the following families:-

- 1) Magnoliaceae
- 2) Rutaceae
- 3) Anacardiaceae
- 4) Leguminosae
- 5) Asteraceae
- 6) Apiaceae
- 7) Euphorbiaceae
- 8) Arecaceae
- 9) Poaceae

Economic Botany of Plants yielding wood timber, fibre, oil and medicines.

**UNIT- V : ANATOMY AND EMBRYOLOGY**

**Anatomy**:- Meristems and types. Permanent tissues, Simple and Complex tissues - Normal and Abnormal secondary thickening.

**Embryology:-** Microsporogenesis, Megasporeogenesis - types of embryo sacs (Mono-bi-and tetrasporic). Double fertilization and Triple fusion, Types of Endosperm - Embryo development in Dicots and Monocots. Apomixis and Polyembryony Culture techniques - anther and embryo.

#### **UNIT-VI : GENERAL MICROBIOLOGY AND PLANT PATHOLOGY**

Morphology, reproduction and economic importance of Bacteria. Viruses - Bacteriophages, Cyanophages, Mycophages, their general structures and multiplication. Mycoplasma - Structure. Fermentation and Antibiotic production.

Plant Pathology:- Name of the causative organism, etiology and control measures of the following plant diseases.

- 1) Blast of Paddy
- 2) Wilt of Cotton
- 3) Citrus Canker
- 4) Powdery Mildew
- 5) Red rot of Sugarcane
- 6) Little leaf of Brinjal
- 7) Bunch Top of Banana
- 8) Early and late Blights of Potato
- 9) Rust and Smut diseases.

#### **UNIT – VII : PHYSIOLOGY, BIOCHEMISTRY AND BIOPHYSICS**

**Physiology:-** Water relations of plants - absorption and translocation of water and minerals - mineral nutrition - Photosynthesis, Photochemical reactions and carbon fixation pathways – Respiratory metabolism: aerobic and anaerobic respiration. Enzymes: Role as biocatalysts - Nitrogen Metabolism: Nitrogen cycle - Nitrogen fixation - Nitrate reduction. Plant growth substances chemical nature and physiological functions of auxins, gibberellins, cytokinins, ethylene, abscisic acid and Brassinosteroids.

#### **Biochemistry and Biophysics**

Biopolymers: A brief account of Carbohydrates, Lipids, Proteins and Nucleic acids and their monomers. An elementary account of thermodynamics - definition of energy - structure and role of ATP.

#### **UNIT – VIII : CYTOLOGY, GENETICS AND EVOLUTION**

**Cytology:** Organization of Prokaryotic and Eukaryotic cells. Cell organelles - structure and function. Chromosomes: morphology structure and their role. Cell division: Mitosis and Meiosis.

**Genetics:** Mendelism - Interaction factors - linkage and crossing over, multiple, alleles, mutation, structure, replication and role of nucleic acids.

**Evolution:** Origin of life: Theories of evolution Darwin, Lamarck and De Vries.

#### **UNIT –IX : ECOLOGY, ENVIRONMENT AND CONSERVATION BIOLOGY**

**Ecology:** Ecosystem concept - Plant communities: Hydrophytes, Xerophytes, Mangroves. Plant succession primary and secondary - Climax formation.

**Environment:** water, air and land, Garbage disposal, Environmental Protection Agencies, Pollution monitoring and control.

**Ecosystem:** Components and functions – Global warming, Green house effect, Ozone Layer Depletion

**Conservation Biology:** Conservation and sustainable development/ Productivity of Soil, forests and natural resources.

## **UNIT-X : HORTICULTURE AND PLANT BREEDING**

**Horticulture:** Importance and scope of Horticulture, Classification of Horticultural Plants - Fruits, Vegetables and Ornamentals.

Garden design and types:- Rockery, Bonsai, Kitchen garden, Lawn making, Floriculture. Cultivation of Commercial Flowers – Jasmine; plant propagation methods - cutting, grafting, layering (Rose) budding, stock - scion relations in Mango,

**Plant Breeding:** Hybridization techniques Plant breeding methods employed in the following crops:-

- 1) Cotton
- 2) Sugarcane
- 3) Paddy

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**PAPER-I****CHEMISTRY (DEGREE STANDARD)**

Code No.243

**UNIT I****PHYSICAL CHEMISTRY:-**

**a) Gas law and Kinetic Theory:-** Ideal gas equation - Deviation from ideal behaviour - vander waals equation for real gases - Molecular velocities - the Maxwell's distribution of molecular velocities –heat capacity and viscosity of gases.

**b) Solid State:-** Crystal systems - Bravaislattice - Unit Cell - Miller Indices – Symmetry elements in crystals - Bragg's equation - Radius ratio's and packing in crystals – Determination of crystal structures by Braggs method – structure of Nacl, Kcl, Zns and spinals.

**c) Thermodynamics:-** Intensive and extensive variables - First law of thermodynamics – CP and CV relation - Hess's law of constant heat summation - Kirchoff's equation – Second law of thermodynamics - Carnot theorem - entropy and probability, Joule Thomson effect - Free energy and Chemical equilibrium - Temperature and pressure dependence and - Gibb's and Helmholtz functions – Heterogeneous equilibrium and Le – Chatlier principle.

**UNIT II**

**d) Chemical Kinetics:-** Rate laws - rate constant - order and molecularity of reactions I, II, III, and Zero order reaction Arrhenius theory - collision theory and Transition state theory - catalysis.

**e) Electro-Chemistry:-** 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 (DG, DH, DS and K) - Over potential and hydrogen over voltage - Arrhenius theory - Debye 'Huckel equation - Kohliraush's law - Ostwald's dilution law - Determination of PH and Pka of acids by potentiometric methods.

**UNIT III**

**f) Chemical spectroscopy:-** Elementary ideas of microwave, infrared, Raman, uv, NMR, ESR and Mass spectroscopy.

**g)Pharmaceutical chemistry:-** Terminology pharmacology, pharmacotheraies, 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, anesthetics, antidepressants, antipsychotic etc.

**UNIT IV**

**h) Colloids and surface Chemistry:-** Classification – preparation, purification - properties - Tyndall effect- Gels - Emulsions Absorption - Langmuir isotherms – Heterogeneous catalysis.

**i) Physical properties and Chemical constitution:-** Surface tension - parachor and its application to structural problems – Dipole moment - applications of dipole moment measurements to structural studies of simple inorganic and organic molecules – magnetic properties of matter, diamagnetism, paramagnetism, ferromagnetism and antiferromagnetism - Applications to structural problems.



**UNIT V****INORGANIC CHEMISTRY:-**

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

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

**l) Compounds of Boron:-** Electron deficient nature of boron compounds - preparation and properties of halides and nitrates of boron - diborane – Borazine, silicones and structures of silicates

**UNIT VI****l) LANTHANIDES AND ACTINIDES:-**

Occurrence Electronic configuration oxidation state, magnetic properties and complexation behaviour - comparison of lanthanides and actinides, lanthanide contraction and their position in the periodic table.

**m) Fertilisers:-** Ammonium nitrate, ammonium phosphate, Superphosphate and Diammonium Phosphate, NPK fertilisers.

**n) 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 tracers in industry, medicine, agriculture.

**UNIT VII**

**o) Co-ordination Chemistry:-** Redo Nomenclature - theories of co-ordination compounds - Werner, valence bond, crystal field and ligand field theories - Effective atomic number - isomerism - Metal Carbonyls of iron and Nickel.

**p) Analytical Chemistry:-** i) Principles of volumetric analysis - different types of titrations gravimetric analysis - separation and purification techniques.

**UNIT VIII****ORGANIC CHEMISTRY:-**

**q) Types of reactions:-** Nucleophilic, electrophilic, free radicals, addition and elimination reactions.

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

**UNIT IX**

**s) Nature of Bonding:-** Hybridisation (Sp, Sp<sup>2</sup> & Sp<sup>3</sup>) and Geometry of molecule – cleavage of bonds - homolytic and heterolytic fission of carbon – carbon bonds – Reaction intermediates - free radicals, carbocations and carbonions - their stability.

**t) Stereo Chemistry:-** 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 - applications of ORD and CD Techniques.

#### **UNIT X**

**u) Dyes:-** Classification and Properties of dyes – methyl orange, congo red, malachite green, fluorescein and indigo.

**v) Carbon hydrates:-** Classification and reactions - Glucose, Fructose, Sucrose and lactose - structure of glucose and fructose.

**w) Aromatic Substitution:-** Mechanism of nitration, Halogenation, sulphuration and Friedel Crafts reaction - Orientation effects - nucleophilic substitution - Benzyne mechanism.

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**PAPER- II****GENERAL STUDIES (DEGREE STANDARD)****CODE NO:003****UNIT- I: GENERAL SCIENCE**

**Physics** Universe-General Scientific laws-Scientific instruments-Inventions and Discoveries - National scientific laboratories-Science glossary - Mechanics and properties of matter-Physical quantities, standards and units-Force, motion and energy-Electricity and Magnetism, Electronics and Communication -Heat, light and sound-Atomic and nuclear physics-Solid State Physics – Spectroscopy- Geophysics - Astronomy and space science.

**Chemistry** Elements and Compounds-Acids, bases and salts-Oxidation and reduction-Chemistry of ores and metals-Carbon, nitrogen and their compounds-Fertilizers, pesticides, insecticides-Biochemistry and biotechnology-Electrochemistry-Polymers and plastics.

**Botany** Main Concepts of life science-The cell-basic unit of life-Classification of living Organism -Nutrition and dietetics-Respiration-Excretion of metabolic waste- Bio-communication.

**Zoology** Blood and blood circulation-Endocrine system-Reproductive system-Genetics the science of heredity-Environment, ecology, health and hygiene, Bio- diversity and its conservation-Human diseases-Communicable diseases and non- communicable diseases-prevention and remedies- Alcoholism and drug abuse-Animals, plants and human life.

**UNIT- II: CURRENT EVENTS**

**History** Latest diary of events – National--National symbols-Profile of States-Defence, national security and terrorism-World organizations-pacts and summits-Eminent persons & places in news-Sports & games-Books & authors -Awards & honours-Cultural panorama-Latest historical events - India and its neighbours-- Latest terminology- Appointments-who is who?

**Political Science** 1.India's foreign policy-2. Latest court verdicts – public opinion-3. Problems in conduct of public elections - 4. Political parties and political system in India- 5. Public awareness & General administration- 6. Role of Voluntary organizations & Government.,- 7. Welfare oriented Government schemes, their utility.

**Geography** Geographical landmarks-Policy on environment and ecology.

**Economics** Current socio-economic problems-New economic policy & govt. Sector.

**Science** Latest inventions on science & technology-Latest discoveries in Health Science- Mass media & communication.

**UNIT-III: GEOGRAPHY**

Earth and Universe-Solar system - Atmosphere hydrosphere, lithosphere- Monsoon, rainfall, weather and climate-Water resources - rivers in India- Soil, minerals & natural resources-Natural vegetation-Forest & wildlife - Agricultural pattern, livestock & fisheries-Transport including Surface transport & communication - Social geography – population density and distribution-Natural calamities – disaster management-Climate change - impact and consequences - mitigation measures-Pollution Control.

## **UNIT-IV: HISTORY AND CULTURE OF INDIA**

Pre-historic events--Indus valley civilization-Vedic, Aryan and Sangam age- Maurya dynasty-Buddhism and Jainism-Guptas, Delhi Sultans, Mughals and Marathas-Age of Vijayanagaram and the bahmanis-South Indian history-Culture and Heritage of Tamil People - Advent of European invasion-Expansion and consolidation of British rule-Effect of British rule on socio-economic factors-Social reforms and religious movements-India since independence-Characteristics of Indian culture-Unity in diversity –race, colour, language, custom-India-as secular state-Organizations for fine arts, dance, drama, music- Growth of rationalist, Dravidian movement in TN-Political parties and populist schemes- Prominent personalities in the various spheres – Arts, Science, literature and Philosophy – Mother Teresa, Swami Vivekananda, Pandit Ravishankar , M.S.Subbulakshmi, Rukmani Arundel and J.Krishnamoorthy etc.

## **Unit-V: INDIAN POLITY**

Constitution of India-. Preamble to the constitution- Salient features of constitution- Union, State and territory- Citizenship-rights amend duties- Fundamental rights- Fundamental duties- Human rights charter- Union legislature – Parliament- State executive- State Legislature - assembly- Status of Jammu & Kashmir- Local government – panchayat raj – Tamil Nadu - Judiciary in India – Rule of law/Due process of law- Indian federalism – center – state relations- Emergency provisions- Civil services in India- Administrative challenges in a welfare state- Complexities of district administration- Elections - Election Commission Union and State. Official language and Schedule-VIII- Amendments to constitution- Schedules to constitution- Administrative reforms & tribunals- Corruption in public life- Anti-corruption measures – Central Vigilance Commission, lok-adalats, Ombudsman, - Comptroller and Auditor General of India- Right to information - Central and State Commission- Empowerment of women- Voluntary organizations and public grievances redressal- Consumer protection forums.

## **UNIT-VI: INDIAN ECONOMY**

Nature of Indian economy-Need for economic planning-Five-year plan models-an assessment - Land reforms & agriculture-Application of science in agriculture- Industrial growth - Capital formation and investment-Role of public sector & disinvestment- Development of infrastructure - National income- Public finance & fiscal policy- Price policy & public distribution- Banking, money & monetary policy- Role of Foreign Direct Investment (FDI) - WTO-globalization & privatization - Rural welfare oriented Programmes - Social sector problems – population, education, health, employment, poverty-HRD - sustainable economic growth- Economic trends in Tamil Nadu -Energy Different sources and development- Finance Commission -Planning Commission- National Development Council.

## **UNIT-VII: INDIAN NATIONAL MOVEMENT**

National Renaissance-Early uprising against British rule-1857 Revolt- Indian National Congress-Emergence of national leaders-Gandhi, Nehru, Tagore, Nethaji - Growth of militant movements -Different modes of agitations-Era of different Acts & Pacts-World war & final phase struggle-Communalism led to partition-Role of Tamil Nadu in freedom struggle - Rajaji, VOC, Periyar, Bharathiar & Others-Birth of political parties /political system in India since independence.

**Unit-VIII: APTITUDE & MENTAL ABILITY TESTS (SSLC Standard)**

Conversion of information to data - Collection, compilation and presentation of data - Tables, graphs, diagrams-Parametric representation of data - Analytical interpretation of data - Simplification - Percentage - Highest Common Factor (HCF) - Lowest Common Multiple (LCM) - Ratio and Proportion-Simple interest-Compound interest- Area - Volume - Time and Work - Behavioural ability - Basic terms, Communications in information Technology - Application of Information and Communication Technology (ICT) - Decision making and problem solving-Logical Reasoning-Puzzles - Dice-Visual Reasoning-Alpha numeric Reasoning-Number Series - Logical Number/Alphabetical/Diagrammatic Sequences.

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**Annexure - IV**  
**Tentative Timeline for the Recruitment Process for the post**  
**of Laboratory Assistant**

<b>Sl. No.</b>	<b>Process</b>	<b>Timeline</b>
<b>1.</b>	<b>Publication of Examination results</b>	<b>July 2019</b>
<b>2.</b>	<b>Certificate Verification</b>	<b>August 2019</b>
<b>3.</b>	<b>Oral Test</b>	<b>September 2019</b>
<b>4.</b>	<b>Final Result</b>	<b>September 2019</b>

**Secretary**