



# TAMIL NADU PUBLIC SERVICE COMMISSION

NOTIFICATION No.05/2018

DATED:28.02.2018

Applications are invited only through online mode upto 26.03.2018 for Direct Recruitment to the following posts included in the Combined Engineering Services Examination.

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.]

Sl. No.	Name of the Post	Name of the Service	No. of Vacancies	Scale of Pay
1	<b>Assistant Engineer (Civil)</b> , Water Resources Department, PWD (Post Code No. 1656)	<b>Tamil Nadu Engineering Service</b> (Service Code No.011)	70+1*C/F (BC(OBCM) Deaf)	<b>(Pre-Revised)</b> Rs. 9300 - 34800 + Grade pay Rs.5100/- p.m.
2	<b>Assistant Engineer (Civil)</b> , Buildings, PWD (Post Code No. 3656)	<b>Tamil Nadu Engineering Service</b> (Service Code No.011)	23	
3	<b>Assistant Engineer (Electrical)</b> PWD (Post Code No.1657)	<b>Tamil Nadu Engineering Service</b> (Service Code No.011)	42	
4	<b>Assistant Engineer (Civil)</b> in Highways Department (Post Code No.1661)	<b>Tamil Nadu Highways Engineering Service</b> (Service Code No.011)	160 +1*C/F - SC Deaf + 4**ST	
5	<b>Assistant Engineer</b> in Rural Development and Panchayat Raj Department (Post Code No.1660)	<b>Tamil Nadu Panchayat Development Service</b> (Service Code No.011)	29** (24-SC/SC(A) + 5-ST)	

\*Carried forward Vacancies

\*\*Shortfall Vacancies

## 2. DISTRIBUTION OF VACANCIES

The rule of reservation of appointments is applicable for each post separately in this recruitment, except to the shortfall vacancies. The distribution of vacancies will be announced later after receipt of orders from the Government regarding identification of suitable categories of Differently Abled Persons towards 4% reservation for these posts.

## 3. IMPORTANT DATES AND TIME

Date of Notification	28.02.2018	
Last date for submission of application	26.03.2018	
Last date for payment of Fee through Bank(State Bank of India or Indian Bank)	28.03.2018	
<b>Date of Written Examination</b>		
Paper – I (Subject)	20.05.2018 FN	10.00 A.M. to 01.00 P.M
Paper – II (General Studies)	20.05.2018 AN	02.30 P.M. to 04.30 P.M

#### 4. FEES

a)	<p><b><u>Registration Fee</u></b> 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>i. Applicants who have already registered in One Time Registration system within the validity period of 5 years are exempted.</p> <p>ii. Those who have registered in the One-Time Registration system and paid the registration fee 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> For Examination</p> <p><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.</p>	Rs.200/-

#### **EXAMINATION FEE CONCESSION**

Category	Concession	Condition(s)
(i) Scheduled Castes/ Scheduled Caste (Arunthathiyars) and Scheduled Tribes	Full Exemption	--
(ii) Differently Abled Persons, Destitute Widow of all communities	Full Exemption	<p>(i) For Differently Abled Persons, the disability should be not less than 40%.</p> <p>(ii) For DWs, the DW certificate should have been obtained from the RDO / Sub Collector / Assistant Collector.</p>
(iii) Most Backward Class / Denotified Communities, Backward Classes (Other than Muslim), Backward Class (Muslim)	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.	<p>(i) Should not have availed two free chances in the previous recruitments.</p> <p>(ii) Fee concession will not apply to those who have already been recruited to any class or service or category.</p>

**Note:**

- (i) The three / two free chances referred to above are not for **EACH POST** but for **ANY THREE / TWO APPLICATION ONLY**. The claim for exemption from payment of examination fee made in any application which is rejected/admitted or withdrawn will be counted as free chance availed.
- (ii) Failure to pay the prescribed fee along with the application in-time will be liable for 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 application 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 previous applications submitted through One Time Registration and / or submitted directly without One Time Registration.

(For further details regarding examination fee concession, refer [para 12 of "Instructions to Applicants"](#)).

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

- Examination fee Rs.200/- (Rupees Two hundred only) is payable by online through Net Banking/Credit card/Debit card or it can be paid by offline at State Bank of India / Indian 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 / Indian Bank.
- 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 forwarded with such modes of payment will be summarily rejected.

(For further details regarding the mode of Examination fee concession, refer [para 2\(14\) of "Instructions to Applicants"](#)).

## 6. QUALIFICATIONS

### (A) AGE LIMIT (as on 01.07.2018)

Sl. No.	Category of Applicants	Maximum Age
1.	SCs, SC(A)s, STs, MBCs/DCs, BCs, BCMs and Destitute Widows of all Castes.	No Age limit
2.	'Others'	should not have completed 30 Years

#### **Note**

Applicants not belonging to SC, SC(A), ST, MBC/DC, BC(OBCM), BCM] 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 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**

##### **(i) For Differently Abled Persons**

Differently Abled Persons are eligible for age concession upto 10 years over and above the maximum age limit prescribed for "others"

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

- The maximum age limit for Ex-servicemen is 48 years
- The above mentioned age concession will not apply to the Ex-servicemen applicants those who have already been recruited to any class or service or category.

### (B) EDUCATIONAL QUALIFICATION (as on 28.02.2018)

Applicants should possess the following or its equivalent qualification awarded by any University or Institution recognized by the University Grants Commission/AITUC as the case may be.

Sl. No.	Name of the post	Qualification
1	<b>Assistant Engineer (Civil)</b> in Water Resources Department, Public Works Department	B.E degree in Civil Engineering or Civil and Structural Engineering OR A pass in Sections A and B of the Institution Examinations under Civil Engineering branch, subject to the following further conditions namely:- I. Should furnish evidence of having undergone practical training in surveying for a period of not less than one year. or II. Should have put in service for a period of not less than one year in Public Works Department as Overseer or Junior Engineer. or III. Should hold the Upper Subordinate or L.C.E Diploma of the College of Engineering, Guindy or L.C.E. Diploma awarded by the State Board of Technical Education and Training, Chennai
2.	<b>Assistant Engineer (Civil)</b> in Buildings, PWD	
3.	<b>Assistant Engineer (Electrical)</b> in PWD	A degree in Electrical Engineering or Electronics and Communication Engineering OR A pass in Sections A and B of the Institution Examination with Electrical Engineering as a subject.

4.	<b>Assistant Engineer (Civil)</b> in Highways Department	A degree in Civil Engineering OR A pass in Sections A and B of the Institution Examinations under Civil Engineering Branch.
5	<b>Assistant Engineer</b> in Rural Development and Panchayat Raj Department.	A degree in Civil Engineering OR A pass in Sections A and B of the Institution of Engineers (India) under Civil Engineering Branch, subject to the condition that he/she should furnish evidence of having undergone practical training in surveying for a period of not less than one year.

Provided that other things being equal, preference shall be given to those who have undergone one year Apprenticeship Training under the Government of India Scheme or the State Government Apprenticeship Scheme

### **Note**

- i) The qualification prescribed for these posts should have been obtained by passing the required qualification in the order of studies, viz., 10<sup>th</sup> + HSC or its equivalent + Bachelor's Degree + PG 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 and practical Training if any should have been acquired on or before the date of notification).
- ii) Candidates having a pass in Sections A & B of the Institution Examinations under Civil Engineering, applying for the post of Assistant Engineer (Civil) PWD may be required to produce the evidence for having undergone Practical Training in surveying for a period of not less than one year or certificate for having put in service for a period of not less than one year in PWD as Overseer or Junior Engineer or to produce the evidence for having Upper Subordinate or LCE Diploma of the College of Engineering, Guindy or LCE Diploma awarded by the State Board of Technical Education and Training, Chennai when called for by Tamil Nadu Public Service Commission.
- iii) The qualifications considered equivalent are indicated in **Annexure-I** to this notification.  
(Refer also to the disclaimer annexed to the notification).
- iv) Applicants claiming equivalence of qualification should upload and submit evidence for equivalence of qualification in the form of G.O. issued prior to the date of this notification when called for, failing which, their application **will be summarily rejected**. The G.Os issued regarding equivalence of prescribed qualification after the date of this notification will not be accepted.  
(For further details regarding equivalence of qualification refer [para10 of "Instructions to Applicants"](#)).

### **(C) CERTIFICATE OF PHYSICAL FITNESS**

Applicants selected for appointment to the posts will be required to produce a certificate of physical fitness in the form prescribed below:

Sl. No.	Name of the Post	Standard of Vision	Form of Certificate of Physical Fitness
1	<b>Assistant Engineer (Civil),</b> Water Resources Department, PWD	Standard-III or better	Form prescribed for Executive post.
2.	<b>Assistant Engineer (Civil),</b> Buildings, PWD		
3	<b>Assistant Engineer (Electrical)</b> PWD		

4	<b>Assistant Engineer (Civil)</b> in Highways Department	Standard-II or better	Form prescribed for Executive post.
5	<b>Assistant Engineer</b> in Rural Development and Panchayat Raj Department		

For appointment to any of the above posts, **colour blindness will be a disqualification**. Candidates with defective vision should produce eye fitness certificate from a qualified eye specialist.

#### (D) KNOWLEDGE IN TAMIL

Applicants should possess adequate knowledge in Tamil.

(For details refer [para 11 of 'Instructions to Applicants'](#))

#### 7. CONCESSIONS

- Concessions in the matter of age and/or fees allowed to SCs, SC(A)s, STs, MBCs/DCs, BCs, BCMs, Destitute Widows, Differently Abled Persons, Ex-servicemen, other categories of persons etc., are given in [para 12 to 14 of 'Instructions to Applicants'](#).
- Persons claiming concessions referred to above and other claims made in the application have to produce evidence for such claims when called for, otherwise his/her 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 (Section 3 (j) of Tamil Nadu Government Servants (Conditions of Service) Act, 2016).

#### 8. SCHEME OF EXAMINATION (OBJECTIVE TYPE) IN OMR/CBT FORMAT AND ORAL TEST

Subject	Duration	Maximum Marks	Minimum Qualifying Marks for selection	
			SCs, SC(A)s, STs, MBCs/ DCs, BC(OBCM)s and BCMs	Others
<b>i. Paper-I(Subject)</b> One of the following subjects in which the candidate has acquired his/her Degree qualification (Degree Standard - 200 questions) <ol style="list-style-type: none"> <li>Civil Engineering (code No.261) Or</li> <li>Electrical Engineering (code No. 259) Or</li> <li>Electronics and Communication Engineering (Code No.304)</li> </ol>	3 Hours	300	171	228
<b>ii. Paper -II General Studies (100 questions) (Subject Code No-003)</b> General Studies (Degree Standard)-75 Questions and Aptitude and Mental Ability(SSLC Standard)-25 Questions	2 Hours	200		
<b>iii. Interview and Records</b>	--	70		
<b>Total</b>		<b>570</b>		

**Note**

- i. The questions in Paper-I for Electrical Engineering & Electronics and Communication Engineering will be set in English only. The questions in Paper-I for Civil Engineering will be set in both Tamil and English. The questions in Paper-II (General Studies) will be set both in Tamil and English.
- ii. The applicants who possess the equivalent educational qualification should choose the subject to which his qualification is declared as equivalent for appearing in Paper-I (Subject)
- iii. The syllabi for Paper I (Subject) & Paper II (General Studies) are as at **Annexure-II** to this Notification.
- iv. Refer para 22 of "Instructions to Applicants" in regard to Instructions to be followed while appearing for competitive Examinations conducted by the Commission.

**9. CENTRE FOR EXAMINATION**

Examination will be held at the following Centres:

Name of the Centre	Centre Code	Name of the Centre	Centre Code	Name of the Centre	Centre Code
Chennai	0100	Salem	1700	Nagercoil	0800
Madurai	1000	Thanjavur	1900	Kancheepuram	0700
Coimbatore	0200	Chidambaram	0302	Karaikudi	1804
Tiruchirappalli	2500	Vellore	2700	Pudukkottai	1500
Tirunelveli	2600	Ramanathapuram	1600	Udhagamandalam	1300

**Note**

- (i) Request for **change of venue will not be complied with** (For further details refer ["Instructions to Applicants"](#)).
- (ii) **The Commission reserves the right to increase/ decrease the number of examination centres and to re-allot the applicants.**
- (iii) Applicants should appear for the Written Examination / Certificate Verification/ Oral Test at their own expenses.

**10. SELECTION PROCEDURE**

**Selection will be made in two successive stages** i.e., (i) Written Examination and (ii) Oral Test in the shape of an interview. Final selection will be made on the basis of the total marks obtained by the Applicants at the Written Examination and Oral Test taken together subject to the rule of reservation of appointments. Applicant's appearance in the Written Examination and Oral Test is compulsory.

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

**Note:**

1. **First, the selection will be made for the carried forward vacancies.**
2. **Secondly, the selection will be made for regular vacancies following the rule of reservation.**
3. **Thirdly, the selection for shortfall vacancies will be made from among SC/SC(A)/ST candidates only.**
- 3(a) **The reservation for Women and Differently Abled Persons will not be applicable for the recruitment of shortfall vacancies. [Section 27(h) of the Tamil Nadu Government Servants (Conditions of Service) Act, 2016]**

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

No Objection Certificate obtained from appropriate authority shall be produced at the time of Certificate Verification. Failure to produce at that time will lead to rejection of application.

For details refer [para 15 \(g\) of 'Instructions to Applicants'](#). Any violation of this instruction will be liable for / end in rejection of application and forfeiture of his/her candidature.

## 12. GENERAL INFORMATIONS

- A. The rule of reservation of appointments is applicable to this recruitment except for the shortfall vacancies for the said post.
- B. In G.O.(Ms.) No.145, Personnel and Administrative Reforms (S) Department, dated 30.09.2010, and G.O.(Ms.)No.40 Personnel and Administrative Reforms(S) Department dated 30.04.2014 the Government have issued orders to fill up 20% of all vacancies in direct recruitment on preferential basis to persons who studied the prescribed qualification in Tamil Medium. The 20% reservation of vacancies on preferential allotment to Persons Studied in Tamil Medium (PSTM) will apply for this recruitment. (Applicants claiming this reservation should have joined and studied the prescribed qualification for the post in Tamil Medium and should have the certificate for the same. Having written the University examinations in Tamil language alone will not qualify for claiming this reservation). If the Applicants with PSTM Certificate are not available for selection for appointment against reserved turn, such turn shall be filled up by Non-PSTM Applicants but belonging to the respective communal category. The PSTM certificate shall be produced / uploaded by the applicant in prescribed format / proforma available in the Commission's website at [www.tnpsc.gov.in](http://www.tnpsc.gov.in) which shall be obtained from the Head of the Institution when called for by the Commission.  
**(For further details refer para 27 (XIX) of "Instructions to Applicants")**
- C. The number of **vacancies advertised is only approximate** and is liable for modification including reduction with reference to vacancy position at any time before finalisation of selection.
- D. The selection for appointment to the above said posts are purely provisional subject to final orders on pending Writ Petitions, if any, filed at Madras High Court and Madurai Bench of Madras High Court.
- E. As per Section 26 and 27(c) of Tamil Nadu Government Servants (Conditions of Service) Act, 2016, reservation of appointment to "Destitute Widows" and "Ex-servicemen" **will not apply** to this recruitment.
- F. If the post is identified as suitable for Differently Abled Persons for any category the reservation of 4% for Differently Abled Persons as per G.O.Ms. No.21, Welfare of Differently Abled Persons (DAP 3.2) Department dated 30.05.2017 will be made applicable. Hence the Differently Abled Persons may apply to this recruitment. Their application will be accepted subject to the orders to be issued by the Government. However, they can apply and should upload a copy of documents referred in para 14(b) of 'Instructions to Applicants' when called for.
- G. The Differently Abled persons should submit/upload copy of Differently Abled Certificate obtained from competent authority specifying the nature of physical handicap and the degree of disability when called for by the Tamil Nadu Public Service Commission.
- H. Whenever vacancies are reserved for women, if no qualified and suitable women applicants are available for selection against the vacancies reserved for them, those vacancies will be filled by other eligible applicants belonging to the respective communal categories.



- I. Wherever vacancies are reserved for Arunthathiyars on preferential basis, even after filling up of 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-se-merit among them and if any posts reserved for Arunthathiyars remain unfilled for want of adequate number of qualified applicants, it shall be filled up by Scheduled Castes other than Arunthathiyars.
- J. Subsequent claims made thereafter on submission of online application will not be entertained. Evidence for claims made in the online application should be uploaded / submitted in time when documents are called for. Failure to submit the documents within the stipulated time limit will entail rejection of application.
- K. Correct and True information regarding arrest, convictions / debarment / disqualification by any recruiting agency, criminal or any disciplinary proceedings initiated / pending or finalised, participation in agitation or any Political Organisation, candidature in election for Parliament / State Legislature / Local Bodies etc, if any, should also be furnished to the Commission at the time of 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 applicants for a Government appointment in such cases must be produced at the stage / time of certificate verification without fail. All such events that occurs 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 Applicant will be considered as suppression of material information and will attract suitable penal action.
- L. Incomplete applications and applications containing wrong claims or incorrect particulars relating to category of reservation / other basic qualification / eligibility wise / age / communal categories / educational qualification / PSTM / physical qualification and other basic eligibility criteria will be liable for rejection.
- M. 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 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 applicants will not imply that his/her candidature has been fully cleared by the Commission.
- b) The **Hall Tickets** for eligible applicants will be made available in the Commission's Website [www.tnpsc.gov.in](http://www.tnpsc.gov.in) or [www.tnpscexams.net](http://www.tnpscexams.net) or [www.tnpscexams.in](http://www.tnpscexams.in) for downloading by applicants. **No Hall Tickets will be sent by post**. So the applicants should watch TNPSC website before the scheduled date of examination.
- c) **Grievance Redressal Cell for guidance of applicants:** In case of any guidance /information / clarification regarding 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.

**d) Communication to Applicants**

Individual communication regarding the date and time of certificate verification, oral test and counselling 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 Tamil Nadu Public Service Commission website in this regard.

**e) Mobile Phones and other Articles Banned**

- i. Applicants are not allowed to bring Pager, Cellular Phone, Calculator, Watches and Ring with Inbuilt Memory Notes etc., or any other Electronic device and Non Electronic devices such as P&G Design Data Book, Books, Notes, Hand Bags and Recording Device either as separate piece or part of something used by the applicant such as Watch or Ring etc., to the examination hall / room on the date of examination.
  - ii. Do not bring into the Examination Hall any article such as books, notes, loose sheets, electronic or any other type of calculators, mathematical and drawing instruments, Log Tables, stencils of maps, slide rules, Text Books, rough sheets etc., except the permitted writing material (i.e. pen).
  - iii. 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"](#)).
  - iv. Applicants are advised in their own interest not to bring any of the banned items including Mobile Phones / Pager 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 certificates and certificates regarding their physical disability etc.) which should be submitted when called for by the Tamil Nadu Public Service Commission. The 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 viz. Written Examination and Oral Test will be purely provisional, subject to their satisfying the prescribed eligibility conditions. If, on verification at any time before or after Written Examination, Certificate Verification and 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 "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 applicant shall copy from the papers of any other applicant or permit his 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 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 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

- 1) Applicants should apply only through online mode in the Commission’s Websites [www.tnpsc.gov.in](http://www.tnpsc.gov.in) / [www.tnpscexams.net](http://www.tnpscexams.net) / [www.tnpscexams.in](http://www.tnpscexams.in)
- 2) One Time Registration (OTR) and applicant 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.
- 3) For applying in One Time Registration, the applicants should have scanned image of their photograph, certificate wherever insisted and signature in CD/DVD/Pen Drive to upload the photo, certificate and signature.
- 4) 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 applicants Dashboard in the new One Time Registration system. No applicant is permitted to create more than one registration ID in One Time Registration.
- 5) Enter the Unique ID and password to view the already available information and update them.
- 6) One Time Registration is not an application for any post. It is just collection of information from the applicants and giving a separate dashboard to each applicant to facilitate them to maintain 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) Select the name of the post or service for which the applicant wishes to apply, if applicable.
- 8) Applicants are required to upload their photograph and signature as per the specifications given in the Guidelines for Scanning and Upload of Photograph and Signature.
- 9) An Online application uploaded without the photograph, specified documents and signature will be rejected.
- 10) All the particulars mentioned in the online application including name of the Applicant, Post applied, Educational Qualifications, Communal Category, Date of Birth, Address, Email 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 the utmost care and caution as no correspondence regarding change of details will be entertained.
- 11) Print Option
  - a) After submitting the application, applicants can print / save their application in PDF format.
  - b) On entering User ID and password, applicants can download their application and print, if required.
  - c) **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 applicants come up for next stage of selection.
- 12) One Time Registration will not be considered as an application for any post.

**15. UPLOAD OF DOCUMENTS**

The candidates must upload / submit the documents **whenever called for specifically**.

**16. LAST DATE FOR SUBMITTING APPLICATION**

The Online Application can be submitted upto 26.03.2018 till 11.59 p.m., after which the link will be disabled.

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

**Secretary**

**DISCLAIMER**

“The Government orders relating to Equivalence of qualification have been hosted in the Tamil Nadu Public Service Commission website. However the applicants while applying for the examination should furnish the details of equivalence of qualification in the form of Government orders issued prior to the date of this notification, if any, which are not mentioned in **Annexure-I** to the notification and produce the copy of the same when called for by Tamil Nadu Public Service Commission, failing which their application will be **rejected**. The Government Orders regarding equivalence of qualification issued after the date of this notification will not be considered for this recruitment.”

**Secretary**

## ANNEXURE- I

Sl. No.	Equivalent Qualifications	G.O.
1	B.E. (Civil and Transportation Engineering) awarded by Bharathiyar University is equivalent to B.E. (Civil Engineering).	G.O.(Ms).No.110, Public Works (B2) Department, dated 30.04.2008.
2	B.E. (Civil Engineering with Diversification in Construction Engineering and Management) awarded by Anna University, B.E. (Civil Engineering and Computer based construction) awarded by Anna University and Madurai Kamaraj University and B.E. (Civil Engineering with Diversification in Environmental Engineering) awarded by the Anna University are equivalent to B.E. (Civil Engineering).	G.O.(Ms).No.232, Public Works (B2) Department, dated 23.07.2008.
3	B.Sc., (Civil Engineering) awarded by Kurukshetra University is equivalent to B.E. (Civil Engineering).	G.O.Ms.No.260, Public Works (B2) Department, dated 16.11.09.
4	B.E. (Civil and Structural Engineering) is equivalent to B.E. (Civil Engineering).	G.O.(Ms) No.102, Agriculture (AA3) Department, dated 11.05.2010.
5	6 years integrated U.G. Level Engineering <b>B.Tech.</b> Degree programme in Civil Engineering (for Speech and Hearing Impaired Students) awarded by Kalasalingam University is equivalent to B.Tech. Degree in Civil Engineering offered by Anna University.	G.O.(Ms) No.41, Higher Education (J2) Department, dated 03.03.2014.
6	(i) B.E. (Environmental Engineering) Degree of Avinashilingam Institute for Home Science and Higher Education for Women Deemed University is equivalent to B.E. (Civil Engineering). (ii) B.E. (Civil Engineering with Diversification in Building Technology) Degree of Anna University is equivalent to B.E. (Civil Engineering).	G.O.(Ms)No.178, Higher Education (J1) Department, dated 17.07.2015.
7	பி.இ.(மின்னியல் மற்றும் மின்னணுவியல்) பட்டப்படிப்பினை பி.இ.(மின்னியல்) பட்டப்படிப்பிற்கு இணையானதாக கருதப்படுகிறது.	அரசாணை (நிலை) எண்.262, உயர்கல்வித் (ஜே2) துறை, நாள் 28.07.09

8	B.E (Electronics & Instrumentation Engineering) Degree awarded by Anna University is equivalent to B.E (Electrical Engineering) and B.E (Electronics and Communication Engineering).	G.O.(Ms).No.178, Higher Education (J1) Department, dated 17-07-2015
9	B.E (Electronics and Communication) awarded by Anna University is equivalent to B.E (Electronics)	G.O.(Ms) No.190, Higher Education(J1) Department, dated 18.11.2014
10	<p>Government of India has recognized the following courses of Section A &amp; B Examination as revised, conducted by the Institution of Engineers (India), Kolkata as equivalent to Degree in the Appropriate branch of Engineering of the Recognized Universities in India.</p> <ol style="list-style-type: none"> <li>1. Civil Engineering</li> <li>2. Electrical Engineering.</li> <li>3. Electronics &amp; Communication Engineering.</li> </ol>	The Gazette of India, February 11, 2006(MAGHA 22, 1927) Part-I–Section 1

**ANNEXURE-II****PAPER-I (DEGREE STANDARD)****(a) CIVIL ENGINEERING****CODE NO: 261****UNIT I : BUILDING MATERIALS AND CONSTRUCTION PRACTICES**

Properties of engineering materials-brick, stones, aggregates, cement (types and grades), concrete (mix design), Concrete admixtures, Self compacting Concrete, steel and new materials. - Construction of stone masonry, brick masonry and R.C.C. and block masonry – construction equipments - Building bye - laws and Development regulations practiced in Tamil Nadu - Provisions for fire safety, lighting and ventilation- Acoustics.

**UNIT II : ENGINEERING SURVEY**

Survey - computation of areas - Chain Survey - Compass surveying - Plane table survey - levelling - fly levelling - L.S. and C.S. - Contour volumes - Theodolite survey - Traversing - Heights and Distances - Geodetic Observations- Tachometry and Triangulation - Use of EDM, GPS and Remote sensing techniques.

**UNIT III : STRENGTH OF MATERIALS**

Stresses and strains -Thermal stresses- elastic constants - Beams and bending - Bending moment and shear force in beams - Theory of simple bending - deflection of beams - torsion - Combined stresses – stresses on inclined planes - Principal stresses and principal planes - Theories of Failure – Analysis of plane trusses.

**UNIT IV : STRUCTURAL ANALYSIS**

Indeterminate beams - Stiffness and flexibility methods of structural analysis - Slope deflection - Moment Distribution method – Arches and suspension cables - Theory of columns - moving loads and influence lines – Matrix method- Stability of retaining walls – plastic theory.

**UNIT V : GEOTECHNICAL ENGINEERING**

Formation of soils - types of soils - classification of soils for engineering practice - Field identification of soils - Physical properties of soils - Three phase diagram - permeability characteristics of soils - stress distribution in soils - Theory of consolidation, shear strength parameters of soils - Compaction of soils. Soil exploration - Soil sampling techniques - Borelog profile - shallow foundations - Terzhagi's bearing capacity theory - Pile foundation - Group action of piles - settlement of foundations.

**UNIT VI : ENVIRONMENTAL ENGINEERING AND POLLUTION CONTROL**

Sources of water - Ground water Hydraulics - Characteristics of water - Water analysis - water treatment - water borne diseases. Sewerage system - Design of sewerage systems - sewer appurtenances - Pumping of sewage - sewage treatment and disposal - Industrial waste treatment - solid waste management - Air, water and Noise pollution control- e waste management.



**UNIT VII : DESIGN OF REINFORCED CONCRETE, PRESTRESSED CONCRETE AND STEEL STRUCTURES**

Design of concrete members - limit state and working stress design concepts - design of slabs - one way, two way and flat slabs - Design of singly and doubly reinforced sections and flanged sections - design of columns and footings – pre-stressing - systems and methods- post tensioning slabs - Design of pre-stressed members for flexure.

Design of tension and compression members - Design of Bolted and welded connections design of members of Truss - designs of columns and bases - design of beams, plate girders and gantry girder.

**UNIT VIII : HYDRAULICS AND WATER RESOURCES ENGINEERING**

Hydrostatics-applications of Bernoulli equation – flow measurement in channels, Applications of Momentum equation, Kinematics of flow.

Water resources in Tamil Nadu - Water resource planning - Master plan for water management flood control –Runoff estimation – hydrograph – flood routing - Soil plant water relationship - Water requirement of crops - Irrigation methods –Design of alluvial canal and design of headworks. Waterlogging and land reclamation - Cross drainage works.

**UNIT IX : URBAN AND TRANSPORTATION ENGINEERING**

Urbanisation trend and impact - Slum clearance and slum improvement programmes - Different modes of transport and their characteristics. Geometric design of highways. – Design and Construction of bituminous and concrete roads - Maintenance of roads.

Railways-Components of permanent way - Signalling, Interlocking and train control. Airport planning-Components of Airport - Site selection – Runways – Planning of terminal buildings. Harbours & Ports- Layout of a harbour - Docks - Breakwaters.

**UNIT X : PROJECT MANAGEMENT AND ESTIMATING**

Construction management - Construction planning - Scheduling and monitoring - Cost control, Quality control and inspection - Network analysis - CPM and PERT methods of project management - Resources planning and resource management. Types of estimates - Preparation of technical specifications and tender documents - Building valuation - law relating to contracts and arbitration.

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**(b) ELECTRICAL ENGINEERING****CODE NO: 259****UNIT – I ELECTRICAL CIRCUITS**

Circuit elements – Kirchoff's Laws – Mesh and Nodal Analysis - Network Theorems and Applications for DC and AC circuits: Thevenin's Theorem, Norton's Theorem, Superposition Theorem, Maximum Power Transfer Theorem – Sinusoidal Steady State Analysis of RL-RC-RLC Circuits- Resonant Circuits - Natural and Forced Response – Transient Response of RL-RC-RLC Circuits-Two-port networks – Three Phase Circuits.

**UNIT – II ELECTRIC AND MAGNETIC FIELDS**

Coulomb's Law-Electric Field Intensity-Electric Flux Density-Gauss's Law- Divergence - Electric Field and Potential due to Point, Line, Plane and Spherical Charge Distributions - Effect of Dielectric Medium - Capacitance of Simple Configurations.

Magnetic Circuits- Magnetomotive force - Reluctance-Faraday's laws-Lenz's law-- Biot- Savart's law - Ampere's law - Fleming's Left and Right Hand Rule-Lorentz force - Inductance - Self and Mutual Inductance-Dot Convention-Coupled Circuits.

**UNIT – III MEASUREMENTS AND INSTRUMENTATION**

Units and Standards – Static and Dynamic Characteristics-Types of Errors-Error Analysis – Measurement of Current, Voltage, Power, Power-factor and Energy – Indicating instruments – Measurement of Resistance, Inductance, Capacitance and Frequency – Bridge Measurements – Instrument Transformers-Electronic Measuring Instruments – Multi meters-True RMS meter-Spectrum Analyzer-Power Quality Analyser- Recording Instruments-X-Y Recorder-Magnetic Recorders-Digital Data Recorder-Oscilloscopes-LED and LCD Display-Transducers and their applications to the Measurement of Non-Electrical Quantities like Temperature, Pressure, Flow-rate, Displacement, Acceleration, Noise level — Data Acquisition Systems – A/D and D/A Converters- Data Transmission Systems.

**UNIT – IV CONTROL SYSTEMS**

Mathematical Modelling of Physical Systems – Transfer Function - Block Diagrams and Signal Flow Graphs and their Reduction using Mason's Rule – Time Domain and Frequency Domain Analysis of Linear Time Invariant (LTI) System – Errors for Different Type of Inputs and Stability Criteria for Feedback Systems – Stability Analysis Using Routh-Hurwitz Array – Nyquist Plot and Bode Plot – Root Locus – Gain and Phase Margin – Basic Concepts of Compensator Design – PI,PD and PID Controllers-State Variable Matrix – System Modeling and Design – Sampled Data System – Stability of Sampled Data System.

**UNIT –V ELECTRICAL MACHINES**

D.C. Machines – Construction, Excitation methods – Armature Reaction and Commutation – Characteristics and Performance Analysis – Generators and Motors – Starting and Speed Control – Testing – Losses and Efficiency.

Transformers-Types-Construction and Operation- Testing – Equivalent Circuits – Losses and Efficiency-All day efficiency – Regulation – Parallel Operation – Three Phase Transformers – Auto-transformer.

Induction Machines – Construction, Principle of operation – Rotating Magnetic Field – Performance, Torque-Speed Characteristics, No-load and Blocked Rotor tests, Equivalent Circuit, – Starting and Speed Control – Single-Phase Induction Motors – Linear Induction Motors – Hysteresis Motors – Reluctance Motors. Synchronous Machines – Construction – Operating characteristics and Performance analysis – Efficiency and Voltage regulation – Parallel operation – V and inverted V curves of synchronous motors – Power factor improvement-BLDC Motor.

### **UNIT –VI POWER SYSTEMS**

Single Line Diagram of Power System-Per Unit Quantities-Power Generation Types— Hydro, Thermal and Nuclear Stations – Pumped storage plants – Co generation— Economic and operating factors – Modelling and performance characteristics of Power transmission lines and Cables-HVDC transmission—Mechanical Design of Transmission Lines-Sag-Insulators -  $Z_{Bus}$  and  $Y_{Bus}$  formulation - Load flow studies — Shunt and Series Compensation- Symmetrical and Un symmetrical Faults Analysis - Transient and Steady-State Stability of Power Systems – Equal Area Criterion-Voltage and Frequency Control – Power System Transients – Power System Protection – Circuit Breakers – Relays –AC and DC Distribution.

### **UNIT –VII ANALOG AND DIGITAL ELECTRONICS**

Semiconductor Devices – PN junctions – Transistors – FET – Zener, Photo diodes and their applications – Rectifier circuits – Voltage regulators – Multipliers. Biasing circuits – Small signal amplifiers – Frequency response – Multistage amplifiers – Coupling methods – Large signal amplifiers – Push-pull amplifiers – Feedback amplifiers – Oscillators – Operational amplifiers and its applications – Precision rectifiers – Multivibrators - Voltage Controlled Oscillator-Timer.

Digital logic gate families (DTL,TTL,ECL,MOS,CMOS) – Logic gates - Simplification of Logic Functions- Design of Combination circuits - Sequential logic circuits-latch–Flip-flops– Counters – Registers – Memories(ROM,PLA and FPGA).

### **UNIT - VIII POWER ELECTRONICS AND DRIVES**

Power Semiconductor devices – Ideal and practical attributes of switch - Power Diode-DIAC - SCRs-TRIAC-GTO - power MOSFET-IGBT- Static Characteristics and Principles of Operation\_ Single and Three Phase AC to DC Converters – Single and Three Phase AC to AC converters –DC to DC Converters (MOSFET and IGBT based) - Single and Three Phase Inverters (MOSFET and IGBT based) - Pulse Width Modulation – Sinusoidal Modulation with Uniform Sampling – Uninterrupted Power Supplies-Switched Mode Power Supplies – Speed Control of DC and AC Motor Drives– Applications of Variable Speed Drives.

### **UNIT –IX DIGITAL PROCESSORS AND COMMUNICATION**

Architecture of 8085, 8086 and 8051 – Instruction Sets – Assembly Language Programming – Interfacing for memory and I/O: 8255 Programmable Peripheral Interface – 8253 Programmable Timer Interface – 8279 Programmable Keyboard and Display Interface – 8257 Direct Memory Access Interface - Embedded processors(ARM and PIC basics only).

Classification of Signals – Properties of Discrete Fourier Transforms - FFT Computation – FIR Filters – IIR Filters: Butterworth Filters – Chebyshev Filters.

**Digital Communication Systems:** Pulse Code Modulation and Demodulation – Adaptive Delta Modulation - Frequency Division and Time Division Multiplexing – Data Communication Network Topologies - 7-layer OSI Protocol.

**UNIT –X RENEWABLE ENERGY SOURCES AND STORAGE DEVICES**

Renewable Energy – Sources and Features - Solar Radiation Spectrum - Radiation Measurement-Solar Photovoltaic Cell -Operating Principle- Microhydel - Operating principle- Wind Energy Source- Wind Patterns and Wind Data- Site Selection-Types of Wind Generators-Fuel Cells-Batteries-Super Capacitors.

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**(c) ELECTRONICS AND COMMUNICATION ENGINEERING  
(DEGREE STANDARD)**

**UNIT - I: SEMICONDUCTOR THEORY AND ELECTRONIC DEVICES**

Intrinsic and extrinsic semiconductors, Energy Band Diagrams, Diffusion and Drift current densities, Hall effect. PN junction diode, current equation, Transition and Diffusion capacitances, Zener diode, Tunnel diode, Varactor diode, Photo diode, Schottky diode, LED, BJT, FET, JFET, MOSFET, SCR, UJT, TRIAC, IC fabrication.

**UNIT - II: CIRCUIT THEORY, SIGNALS AND SYSTEMS**

Kirchoff's laws, Nodal and Mesh analysis, Network theorems: Superposition, Thevenin, Norton, Maximum Power Transfer, Miller; Delta-Wye conversion, Transients and resonance in RLC circuits, Magnetically coupled circuits, Mutual inductance.

Continuous and Discrete time signals, Energy and power signals, Fourier series, Fourier transform analysis of continuous time signals and systems, Laplace transform analysis, Convolution integral, DTFT and Z transform analysis of discrete time signals and systems, Convolution sum, Recursive and Non-recursive systems, Sampling Theorem.

**UNIT - III: ANALOG ELECTRONIC CIRCUITS**

BJT, JFET, MOSFET amplifiers: Biasing analysis, Small signal analysis and frequency response, BJT and MOSFET Multistage amplifiers: Differential, Darlington, cascode and cascade; Feedback amplifiers, Tuned amplifiers, RC and LC oscillators, Power amplifiers. Rectifiers and wave shaping circuits, Operational Amplifier characteristics and applications, CMRR, Slewrate, Waveform generators, Active filters, Timers, PLL, VCO, ADC, DAC, Regulators and Converters.

**UNIT - IV: CONTROL SYSTEMS AND INSTRUMENTATION**

Control system components, feedback, transfer function, transient and steady analysis of LTI systems, Frequency response, Bode, Polar, Nyquist plots, Routh-Hurwitz and Nyquist stabilities, Lag, Lead, Lag-lead compensation, State variable model.

**UNIT – V: ELECTRONIC COMMUNICATION**

AM, FM, PM modulation and demodulation, Superheterodyne receiver, AGC, PAM, PWM and PPM, Entropy, Mutual information, Channel capacity, PCM, DPCM, ADPCM, DM, ADM, Source encoding techniques, TDM and FDM, line coding techniques, ASK, FSK, PSK, QPSK, QAM – Bandwidth, SNR, BER, Error Probability, Eye Diagram, Bandpass Sampling, clock and carrier synchronization, Error control coding, Spread spectrum modulation methods.

**UNIT – VI: ELECTROMAGNETIC FIELDS AND ANTENNAS**

Theorems: Divergence, Stokes, Coulomb; Poisson and Laplace Equation, Ampere's law, Biot-Savort law, Gauss law for magnetic fields, Maxwell's equations, Displacement current, Uniform plane waves, Polarization, reflection and refraction of plane waves at different boundaries, Poynting vector.

Transmission line equation, Characteristic impedance, impedance matching, Smith chart, Attenuators and Equalizers, Lattice diagram, TE, TM and Tem waves, Rectangular guides,

Dielectric slab wave guides, TE and TM wave in circular guides, Cavity resonator and Q for dominant mode.

Antennas: Dipole, Horn, Reflector, Slot, spiral, logperiodic microstrip; Broadside and End fire array, adaptive array, antenna gain, radiation pattern, polarization, VSWR, Radiowave propagation.

### **UNIT – VII: COMMUNICATION SYSTEMS**

Wireless Link budget, Wireless channel characteristics: coherence bandwidth, Doppler spread; Flat, Frequency selective, Fast and slow fading; FDMA, TDMA, CDMA, Capacity calculation, Frequency reuse, Channel assignment, Handoff, trunking and grade of service. Minimum shift keying Gaussian Minimum shift keying, OFDM, cyclic prefix, PAPR, Adaptive equalization, Diversity, Rake receiver, MIMO Systems, Beam forming, Capacity in fading and non-fading channels.

Microwave signal generation: Klystron, Magnetron, TWT, GUNN Diode, IMPATT, TRAPATT; Devices: Directional Coupler, T Junctions, Isolator, Circulator, Couplers, Iris, Probes. Microwave transistors – Stability analysis, Microwave measurements – power, VSWR, Frequency, Dielectric constant.

Light Propagation in optical fibres, Ray and mode theory, Fibre structure, Fibre materials, merits of optical fibre communication, Fibre attenuation and dispersion characteristics, Materials for optical sources, LED and LASER Diodes, Optical detection, PIN and Avalanche Photo diodes, WDM Concept, optical networks.

Satellite orbits – Kepler's laws, Geostationary satellite, transponders, GPS receiver DBS/DTH.

OSI/TCP/IP model - functions and protocols of layers, Routing algorithms, Congestion control algorithms, MAC Protocols.

### **UNIT – VIII: DIGITAL SIGNAL AND IMAGE PROCESSING**

DFT, FFT, Overlap and save methods, Butterworth and chebyshev filters, impulse invariant and bilinear transform methods, realization structures, FIR design methods, product quantization, limit cycle oscillations, scaling, Decimation and interpolation, multirate signal processing.

Brightness, Contrast, Hue, Saturation, RGB, HSI Models, Mach band Effect, Image sampling, DCT, Histogram Equalization, Mean and median filters, Region growing segmentation, JPEG standard.

### **UNIT – IX: VLSI AND EMBEDDED SYSTEMS**

CMOS inverter, Combinational logic circuits, Elmore's Constant, Pass transistor logic, Power dissipation, static and dynamic registers. Clock strategies, synchronous and Asynchronous Circuits, Adders and multipliers, PLA, PAL, FPGA. Architecture and instruction set of 8085, 8086 and 8051, assembly language programming. Microprocessor based systems. ARM processor family – architecture, Multiple tasks, multiprocesses and multiprocessors. Scheduling, power optimization strategies, I2C, CAN bus.

**UNIT – X: COMPUTER ENGINEERING**

Number systems, Boolean algebra, Karnaugh map, logic gates, Adders, magnitude comparator, Decoder, Encoder, Mux, Demux, Fliplops, Counters, shift register, Synchronous sequential circuits, Asynchronous sequential circuits, ROM, EPROM, EEPROM.

Fundamentals of Computer architecture, Data path and control unit design, RAM, Optical, Cache and Virtual Memories, Memory allocation, Associative memory, DMA, interrupts, RISC and CISC processors.

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**PAPER-II****GENERAL STUDIES (DEGREE STANDARD/OBJECTIVE TYPE)****(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 & Govt., 7. Welfare oriented govt. 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: L 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 forms.

#### **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 AND MENTAL ABILITY TESTS**

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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