

# CESCOM Exam Pattern 2019

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S. No.	Exam Type	Name of the Subjects	Total Marks	Exam Duration
1.	Objective Type	General Awareness & Aptitude	25 marks	2 Hrs
4.		Concerned Subjects	75 Marks	

## CESCOM Syllabus 2019

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### Civil Engineering

- Hydraulic Structures.
- Soil Mechanics and Foundation Engineering.
- Transportation Engineering.
- Environmental Engineering.
- Surveying.
- Steel Structures.
- PSC Structures.
- Fluid Mechanics.
- Hydrology & Water Resources Engineering.
- Construction and Project Management.
- Environmental Studies
- Bridge Engineering.
- Estimation, Costing, and Specifications.
- Civil Engineering Materials and Construction.
- Solid Mechanics, Structural Analysis.
- Concrete Technology.
- Reinforced Concrete Structures.

### Electrical Engineering

#### Electrical Machines

- D.C. Machine
- 1 phase and 3 phase transformers.

- Parallel operation of 1 phase /3 phase transformers.
- Autotransformers.
- 3 phase induction motors.
- Characteristics and applications.
- Starting and applications of synchronous motors.

## **Power Generation, Transmission, and Distribution**

- Different types of power stations.
- Power factor improvement.
- Switch gears.
- Cable; Different type of cables
- Cable rating, & derating factor.

## **Estimation and costing**

- Evaluation of lighting scheme
- Electric installation of machines and relevant IE rules.
- Earthing practices and IE Rules.

## **Utilization of Electrical Energy Syllabus**

- Illumination, Electric heating.
- Electroplating, Electric Welding.
- Electric drives and motors.

## **Basic concepts**

- Concepts of resistance, inductance, capacitance.
- Concepts of current, voltage, power, energy and their units.

## **Circuit Law**

- Kirchhoff's law.
- Simple Circuit solution using network theorems.

## **Magnetic Circuits**

- Concepts of flux, MMF, Different kinds of magnetic materials, reluctance, Magnetic calculations.

- Electromagnetic induction, self, and mutual induction.

## **AC Fundamentals**

- Poly Phase system
- Star and delta connection
- 3 phase power
- DC and sinusoidal response of RL and RC circuit.

## **Measurement and Measuring Instruments**

- Power Measurement and energy,
- Two wattmeter method of 3 phase power measurement.
- Measurement of frequency.
- Ammeter and voltmeter.
- Extension of range wattmeter.
- Megger, Multimeters, Energy meter AC Bridges.
- Signal Generator, Use of CRO, CT, PT & their applications.

**General Intelligence and Reasoning.** It would include questions related to Mathematical operations, Series, Odd One Out, Logical Venn Diagrams, Analogy, Word Based Problems, Problems Solving, Drawing Inference, Coding-Decoding, Non Verbal Reasoning etc.

**Quantitative Ability.** This paper will include question on problems relating to Number Systems, Time & Work, Menstruation, Ratio and Proportion, Average, Profit and Loss, Discount, Percentage, Time and Distance, Simple and Compound Interest, Statistical Chart, Trigonometry, Geometry etc.

**General English & Comprehension.** In addition to the testing of candidates understanding of English language, its vocabulary, grammar, sentence structure, synonymous, antonyms, Comprehension and its correct usage etc.

**General Awareness.** The test will include questions relating to India and its neighboring countries especially pertaining to sports, history, culture, Geography, Physics, Chemistry, Computer Science, Environmental Science, Economics scene, Current Events, General policy including Indian Constitution and scientific research etc. These questions will be such that they do not require special study of any discipline.

8. **\*\* KANNADA LANGUAGE TEST FOR APPLICANTS OF GROUP-A&B POSTS BEFORE THE APTITUDE TEST ONLY:**

Candidates applying for the posts of **Assistant Executive Engineer (Elec.), Assistant Engineer (Elec./Civil) and Assistant Accounts Officer** should have passed the SSLC examination or any other examination declared as equivalent to by the State Government or any examination higher than SSLC examination in which Kannada is the main language or an optional subject (but not one of the subjects in a composite paper) or if they have studied and passed in Kannada Medium are exempted from passing the compulsory Kannada Language Test.

Candidates who have not studied and passed Kannada language, such candidates are required to pass a Kannada Language Test which will be conducted before the Aptitude Test. The said test shall comprise of a maximum of 150 marks and the candidate must score a minimum of 50 marks. Candidates who pass the Kannada Language Test only are eligible to be considered for appearing for the APTITUDE TEST.

The syllabus for Kannada Language Test, date and venue of Kannada Language Test will be intimated at a later date through KPTCL & ESCOMs Websites.

The Kannada Language Test will be conducted only at BENGALURU.

9. **APTITUDE TEST:**

An online Aptitude Test of two (2) hours duration will be conducted for 100 marks with multiple choice answers. Each question will carry One (1) mark. There will be negative marking and 0.25 marks shall be deducted for each wrong answer. There will be no marks for unanswered questions.

The online question paper will be in English version only for Group A & B Posts [Assistant Executive Engineer (Elec.), Assistant Engineer (Elec./Civil) & Assistant Accounts Officer] and Group-C post [ Junior Engineer (Elec./Civil) ].

The candidates who have applied for other Group-C posts (Assistant and Junior Assistant) can take the Aptitude Test either in Kannada or English language. However, they will have to exercise their option in the online application.

Candidates will have to appear for the Online Aptitude Test in any one of the following preferred centres:

1. Bengaluru
2. Mysuru
3. Davanagere
4. Mangaluru
5. Hubballi – Dharwad
6. Belagavi
7. Kalaburgi (Gulbarga)

- Candidates may prefer any one of the centre noted above for appearing for the online Aptitude Test. Efforts will be made to accommodate the candidates in the preferred centre based on the availability of necessary infrastructure. In case of inability to consider their preference, other test centre will be allotted. The management if required, may conduct the Aptitude Test at districts other than the districts noted above. **Preference of the test centre exercised by the applicant will not confer any right for allotment of the same.** The candidate will have to appear for the Aptitude Test at the allotted centre and venue. Any request for change of centre will not be entertained.

- List of eligible candidates for the online Aptitude Test along with other details viz., date, time & venue will be published in KPTCL/ESCOMs Web Site at a later date.
- The candidates will have to appear for the Aptitude Test at their own cost.

**Aptitude Test syllabus:**

1.	Assistant Executive Engineer (Elec.) and Assistant Engineer (Elec.)	:	75 marks - VTU syllabus of Electrical / Electrical & Electronics discipline. 25 marks - General awareness & Aptitude.
2.	Assistant Engineer(Civil)	:	75 marks - VTU syllabus of Civil Engineering discipline. 25 marks - General awareness & Aptitude
3.	Assistant Accounts Officer	:	75 marks - M.Com, Bangalore University syllabus/ MBA(Finance), VTU syllabus. 25 marks - General awareness & Aptitude.
4.	Junior Engineer (Elec.)	:	75 marks - Diploma syllabus - Electrical/Electrical & Electronics discipline of Department of Technical Education, GoK. 25 marks - General awareness & Aptitude.
5.	Junior Engineer (Civil)	:	75 marks - Diploma syllabus - Civil Engineering discipline of Department of Technical Education, GoK. 25 marks - General awareness & Aptitude
6.	Assistant	:	20 Marks - Computer Literacy.
7.	Junior Assistant	:	40 Marks - General awareness and Aptitude. 40 Marks - General English/General Kannada.

**10. GENERAL INSTRUCTIONS:**

- (i) No person who has been convicted of an offence involving moral turpitude or who has been temporarily debarred or disqualified by the Union or any State Public Service Commission from appearing for Examination or Selections conducted by it shall ordinarily be appointed unless the Company after review of all the circumstances considers him/her suitable for such appointment.
- (ii) Candidates who obtain appointment by furnishing false information in the application are liable to be terminated.
- (iii) All correspondence (either through post or e-mail or SMS) will be made against the details furnished in the application. **Correspondence for change of address, e-mail & mobile number at a later date will not be entertained.**
- (iv) Candidates claiming Caste/Category reservation will have to produce certificate in the prescribed format as and when called for. The details of formats are as below:
  - a. SC and ST : Form-D
  - b. Category-I : Form-E
  - c. Category-IIA, IIB, IIIA & IIIB : Form-F
- (v) Candidates are expected to know the criteria for claiming reservation under SC, ST, Category- I, IIA, IIB, IIIA, IIIB, H-K reservation as well as norms for horizontal reservation under each quota prevailing in Government of Karnataka as on the last date prescribed for submission of application.
- (vi) The decision of KPTCL & ESCOMs in matters relating to eligibility of the candidates will be final and binding.
- (vii) Canvassing in any form for appointment will be a disqualification.