



**EASTERN POWER DISTRIBUTION COMPANY OF A.P. LIMITED
CORPORATE OFFICE**

P&T COLONY, SEETHAMMADHARA, VISAKHAPATNAM – 530 013

NOTIFICATION

Applications are invited online through APEPDCL WEBSITE <http://apeasternpower.cgg.gov.in> from **28.04.2015** (Payment of Fee upto **27.05.2015 upto 01.00PM only**) from eligible candidates for filling up of the following vacancies including **backlog vacancies** on regular basis in APEPDCL Engineering Service.

The eligible candidates can apply for the available vacancies IN ANY ONE OF THE CIRCLES IN APEPDCL, and their candidature shall be considered for the vacancies existing in that Circle only as per Rule of Reservation and Presidential Order.

The break-up of vacancies (Open/Local) for the post of Sub-Engineer/El. shall be as follows:

SUB-ENGINEERS (ELECTRICAL)

S. No.	Category	CIRCLE (DISTRICT)								Total	
		Srikakulam		Vizianagaram		Rajahmundry (EG District)		Eluru (WG District)			
		O	L	O	L	O	L	O	L	O	L
1	OC						1			0	1
2	OC (W)		1		1					0	2
3	OC-PH-OH		1		1					0	2
4	OC-PH-OH(W)			1				1		2	0
5	BC-A (W)	1							1	1	1
6	BC-B		1							0	1
7	BC-B (W)		1		1					0	2
8	BC-D (W)						1			0	1
9	BC-E	1								1	0
10	BC-E (W)						1			0	1
11	SC (W)								1	0	1
12	ST						1			0	1
13	ST (W)		1		1	1			2	1	4
Total		2	5	1	4	1	4	1	4	5	17

The break-up of Circle-wise Backlog & General vacancies are as follows:

Name of the Circle	Backlog	General	Total Posts
Srikakulam	6	1	7
Vizianagaram	3	2	5
Rajahmundry	3	2	5
Eluru	5	0	5
Total	17	5	22

1. Paste the Photo on any white paper as per the above required dimensions. Sign in the Signature Space provided. Ensure that the signature is within the box.
2. Scan the above required size containing photograph and signature. Please do not scan the complete page.
3. The entire image (of size 3.5 cm by 6.0 cm) consisting of the photo along with the signature is required to be scanned and stored in ***.jpg** format on local machine.
4. Ensure that the size of the scanned image is not more than 50KB.
5. If the size of the file is more than 50 KB, then adjust the settings of the scanner such as the dpi resolution, no. of colours etc., during the process of scanning.
6. The candidate has to sign in full in the box provided. Since the signature is proof of identity, it must be genuine and in full; initials are not sufficient. Signature in CAPITAL LETTERS is not permitted.
7. The signature must be signed only by the candidate and not by any other person.
8. The signature will be used to put on the Hall Ticket and wherever necessary. If the candidate's signature on the answer script, at the time of the examination, does not match the signature on the Hall Ticket, the candidate will be disqualified.

Sample Photo and Signature



e.g. The Technical Specifications of the sample scanned image shown above are:

- Size of the file < 50 KB
- Dpi setting = 200 dpi
- True Colour

The candidate has to upload his/her **Photo with Signature** in the prescribed format by clicking on the **browse** button at the time of submission of application form.

II. ELIGIBILITY:

1. **AGE:** Age not below 18 years and not above 40 years as on date of notification (i.e.28.04.2015). Relaxation in upper age limit permissible upto 5 years for SC/ ST/BC candidates and upto 10 years for Physically Challenged (only Orthopaedically Challenged persons are eligible) candidates and Ex-Servicemen 3 years and length of service rendered in the armed forces (**The age relaxation for Ex-Servicemen is applicable for those who have been released from Armed Forces, otherwise than by way of dismissal or discharge on account of misconduct or inefficiency**)

For in-service contract workers, working in APTRANSCO / AP DISCOMs, the age at the time of entry into the organization as contract worker in the relevant job will be considered.

2. **EDUCATIONAL QUALIFICATIONS:**

Must possess a Diploma in Electrical & Electronics Engineering (DEEE) or Graduation in Electrical Engineering **in addition to Diploma in Electrical & Electronics Engineering (DEEE)** or any other equivalent qualification in Electrical Discipline recognized by the Board/Government of A.P/ India/ UGC/ DEC/ AICTE as the case may be.

Note:

- (i) Degrees / Diplomas awarded under Distance mode through study centers by other State Universities / Institutions (beyond A.P. State and Telangana State) are not legally valid.
- (ii) As per the interim direction in W.P.MP No.34529 of 2014 in W.P. No.27569 of 2014, the Diplomas offered in Correspondence-cum-Contact (CCC) mode by the SBTET need to be treated as valid like any other regular Diplomas offered by the SBTET for all purposes of education and employment. The State Council of Higher Education has also viewed that the cut off date till the year 2009 may be stipulated in respect of B.Tech in CCC mode by SCDE, JNTUH since there is no vertical mobility from Diploma (CCC Mode) to B.Tech (CCC Mode).

Hence, Diplomas under Correspondence Cum Contact Course (CCC) mode till the year 2009 along with other regular diplomas offered by SBTET for all purposes of employment will be considered as per Lr. No.2 / APSCHE / PGP / Clarif / APTRANSCO / Dipl& Deg-Dis.Edn/2014, Dt.17.10.2014 of APSCHE.

- (ii) If there is any deviation from the above qualifications for posts, the candidate shall produce the equivalency certificate from the authority issuing the qualification certificate viz., Registrar of the University or Secretary of the Institute for accepting his/her application.
- (iii) **Candidates with Graduation only in Engineering (EEE) without Diploma in EEE need not apply.**
- (iv) **Candidates with Diplomas other than Electrical discipline need not apply.**

III. **SELECTION PROCEDURE:**

The selection of candidates for appointment as Sub-Engineer / El. will be as follows:

- i) **Written exam will be conducted for 80 Marks for all the candidates. However, weightage will be given to in-service candidates to a maximum of 20 marks for in-service experience in the organization as Contract worker.**
- ii) No Interviews will be conducted.
- iii) Selection shall be made duly following the Rule of Reservation for SC/ST/BC and Physically Challenged (**only Orthopaedically challenged are eligible**), and as per the Presidential order. Reservation to BC-E Group will be subject to the adjudications of the litigation before the Honorable Courts including final orders in Civil Appeal No: (a) 2628-2637 of 2010 in SLP.No.7388-97 of 2010, dated. 25.03.2010 and order from the Government.

- iv) The minimum qualifying marks in the written test for the above selection process shall be as follows:
- | | | |
|-------|---|---------------|
| OC | - | 40% |
| BC | - | 35% |
| SC/ST | - | 30% |
| PH | - | 30% (OH only) |
- Or as per Rules
- v) The in-service contract workers who have been working in the organizations of AP TRANSCO/ AP DISCOMs in **the relevant job on acquiring relevant qualification** will be given weightage marks to a maximum of 20, depending on the length of service in **AP TRANSCO / AP DISCOMs i.e., 1 mark for each completed block of six months of service subject to maximum of 20 marks** as per the **judgment dt. 25.07.2014 of Hon'ble High Court of AP issued in W.A. Nos.110, 117, 134 etc. of 2014 and batch of cases in W.P.No.3753 of 2012.**
- vi) Any disruption or discontinuation of service for a continuous period of 180 days and above for whatever the reason as contract worker shall be considered as if fresh commencement from the date of resumption after such discontinuation or disruption. Service less than six months will not be considered for weightage.
- viii) In-service contract worker shall submit certificate from the concerned Divisional Engineer evidencing length of service, continuity of in-service as contract worker/with recorded evidence through sub-station log books to be certified by the concerned Divisional Engineer and in respect of Corporate Office General Manager/HRD or Divisional Engineer/O&M.
- OR
- With recorded evidence of EPF No. in his name to be certified by the concerned Divisional Engineer and in respect of Corporate Office Pay Officer.
- vii) For computation of period of contract service, the date of joining on such service in the **relevant job on acquiring relevant qualification** shall be reckoned and **the period of service is computed** up to the date of **this notification**.
- viii) Break in service should not exceed more than six months for computation of weightage of marks.

Note: Mere securing minimum qualifying marks doesn't vest any right to a candidate for being called for verification of original certificates and by mere calling the candidate for certificate verification doesn't vest any right to a candidate for selection.

IV. Details of Written Examination:

- i) **Syllabus:** The syllabus for the written examination is placed at **Annexure-IV.**
- ii) **Hall Tickets:** The hall tickets will be placed on the website seven days prior to the date of examination. The candidate has to download the Hall Ticket from the website only. Hall tickets will not be sent to the candidates by post. No correspondence in this regard will be entertained.

- iii) **Date of examination:**
The date of written examination may be viewed at a later date in the APEPDCL website along with other instructions to be followed at the time of written test.
- iv) **Examination Centers:**
The written examination for recruitment will be held at different centers located in Visakhapatnam only.

V. TERMS AND CONDITIONS OF SERVICE:

- 1. **Scale of Pay:** 20535-865-23130-1160-28930-1425-36055-1700-41155
- 2. **Training-cum-Probation:** The candidates appointed to the post shall be placed on Training-cum-Probation for a period of 2 years.
- 3. **Place of posting:** The candidates appointed shall be required to work within jurisdiction of APEPDCL or wherever necessary.
- 4. The candidate will be governed by the rules and regulations applicable or as framed by the APEPDCL and as amended from time to time. The Tripartite Agreement entered into between the APSEB, Govt. of A.P and the Employees Associations is not applicable to these candidates and they shall at no stage be entitled to claim any right whatsoever arising out of the said Tripartite Agreement.

VI. EXECUTION OF BOND:

- i) The candidates appointed will be required to execute a Bond (in Non-Judicial stamp paper worth Rs.110/- (Rupees One hundred and ten only) at the time of joining, to serve APEPDCL for a MINIMUM period of 5 Years after completion of Training-cum-Probation period (2 years).
- ii) During the above bond period the candidates shall deposit his/her original certificates such as Diploma / Degree, date of birth and community, etc with APEPDCL. The Certificates so deposited with APEPDCL shall not be returned during the above bond period.
- iii) The Candidate who leaves the APEPDCL service during the Training-cum-Probation period shall refund the emoluments received by him/her plus Rs.30,000/- (Rupees Thirty Thousand only) by way of liquidated damages.
- iv) The Candidate who leaves the APEPDCL service without serving a minimum period of 5 years after completion of Training-cum-Probation period shall have to pay a sum of Rs.60,000/- (Rupees Sixty Thousand only) by way of liquidated damages.

VII. HOW TO APPLY:

HOW TO UPLOAD THE APPLICATION FORM:

The Applicants have to read the User Guide for Online Submission of Applications and then proceed further.

I Step:- Payment of Fee: The Applicant should pay the prescribed Fee as per the notification in any one of the A.P. Online Centers and obtain Fee paid receipt with Journal Number in the first instance. Applicants can also pay the fee through A.P. Online portal.

Before paying fee he must ensure that he has all the eligibility. The candidates who paid fees without eligibility do not confer any right for refund of money if at a later date found to be ineligible and rejected for examination.

II Step:- Submission of Application: After payment of Fee, the Candidate has to logon to the website <http://apeasternpower.cgg.gov.in> to view the detailed notification, User Guide and Application Form. The applicants have to provide payment details (Journal Number and Date) and upload the scanned copy of passport size photograph with signature (see instructions for scanning and uploading photograph with signature) and then invariably fill all the relevant fields in the Application. Immediately on submission of application, applicant will get an acknowledgement in the form of a downloadable pdf document.

Note:

1. The applicants are required to go through the detailed notification and decide themselves as to their eligibility for this recruitment carefully before applying and enter the particulars completely online.
2. **Candidates are required to retain a photocopy of pdf application form with reference ID for future reference and downloading of hall-tickets.**
3. **Candidates have to submit application only through online mode well in advance of the last date to avoid last day rush.**
4. **Hand written/ Typed/ Photostat copies/ Outside printed Application Form will not be accepted and liable for rejection.**
5. Only applicants willing to serve anywhere in the jurisdiction of APEPDCL should apply.
6. For any problems related to Online submission and downloading of Hall-Tickets please contact **Help Desk No.040-23120406** (Call Time: 9.30 A.M to 1.00 P.M & 1.30 P.M to 5.30 P.M) or log on to <http://apeasternpower.cgg.gov.in> click on to complaint box.

VIII. FEE

- i) Each applicant must pay Rs.150/- (Rupees One Hundred and Fifty Only) **towards Application Processing Fee [including SC/ST/BC/PH (OH) and Ex-servicemen].**

- ii) Applicants under General category must also pay **Rs.350/- (Three Hundred and Fifty ONLY)** towards **Examination Fee** in addition to the Application Processing Fee of Rs.150/- (Total Rs.500/-).
- iii) Applicants belonging to SC/ST/BC Communities, PH (OH) and Ex-servicemen need not pay **Examination fee of Rs.350/-**.
- iv) Candidates belonging to States other than Andhra Pradesh will be considered as Non-Local in General category only, and are required to pay the above-prescribed fee (Rs.150/- + Rs.350/- = Total Rs.500/-)

Mode of Payment of Fee: The Applicant should pay the prescribed Fee as per the notification in any one of the A.P. Online centers and obtain Fee paid receipt with Journal Number (12 digit) in the first instance. Applicants can also pay the fee through AP Online portal.

Submission of Application: After payment of Fee, the Candidate has to logon to the website <http://apeasternpower.cgg.gov.in> to view the detailed notification, User Guide and Application Form. The applicants shall invariably fill all the relevant fields in the Application. Immediately on submission of application the Applicant will get an acknowledgement in the form of a downloadable pdf document. **He has to preserve it for future reference and has to submit whenever called for verification of certificates.**

NOTE:

1. APEPDCL is not responsible, for any discrepancy in submitting through Online. The applicants are, therefore, advised to strictly follow the instructions and User guide in their own interest.
2. Applicant must compulsorily fill-up all relevant fields of application and submit application through website only (online).
3. Incomplete/incorrect application form will be summarily rejected. APEPDCL under any circumstances will not entertain the information if any furnished by the candidate subsequently. Applicants should be careful in filling-up of the application form at the time of submission. If any lapse is detected during the scrutiny, the candidature will be rejected even though he/she comes through the final stage of recruitment process or even at a later stage. Hence they must be careful in filling their Caste, Qualification, which data shall not be altered at a later date.
4. Before payment of fee, submission of application form, the candidates should carefully ensure his/her eligibility for this notification. No relevant column of the application form should be left blank; otherwise application form will not be accepted.
5. The applications received online in the prescribed proforma available in the website and within the time shall only be considered and the APEPDCL will not be held responsible for any kind of discrepancy.

6. Applicants must compulsorily upload his/her own **latest scanned photo** with signature in **jpg** format in prescribed size only.

General

- The candidate should not furnish any false tampered, fabricated information or suppress any material information while filling up the application form.
- The candidates are advised to apply for their local circle (District) to avail the benefit of local reservation.
- Candidates called for verification of certificates will be required to furnish documentary proof (Originals) in evidence of the following as and when called for.
 1. Age: Proof of age as recorded in SSC certificate or equivalent.
 2. Qualification: Must possess a Diploma in Electrical Engineering (or) Graduation in Electrical Engineering **in addition to Diploma in Electrical Engineering** or any other equivalent qualification in Electrical Discipline recognized by the Board/Government of A.P/India/UGC/DEC/ AICTE as the case may be.
 3. Permanent Community certificate issued by MRO in original or Original Caste Certificate issued by Revenue Officer not less than the rank of MRO issued on or after **01-07-2014** in respect of SC/ST & BC candidates clearly indicating the Sub-Caste and group (**Proforma in Annexure-I**).
 4. Physically Challenged (OH) certificate indicating the minimum 40% of disability issued by District Medical Board.
 5. Study Certificate from IV to X Class (**Proforma in Annexure - II**)
 6. Residential Certificate issued by the Officer of the Revenue Department not below the rank of Tahsildar in independent charge of Mandal as the case may be (In respect of candidate who has not studied in any Educational Institutions upto SSC) (**Proforma in Annexure - III**)
 7. N.O.C. from the employer (if already working in any organization).
 8. In-service contract worker shall submit certificate from the concerned Divisional Engineer evidencing length of service, continuity of in service upto the date of this notification as contract worker/with recorded evidence through sub-station log books to be certified by the concerned Divisional Engineer and in respect of Corporate Office General Manager/HRD or Divisional Engineer/O&M
OR
With recorded evidence of EPF No. in his name to be certified by the concerned Divisional Engineer or Pay Officer in respect of Corporate Office.
 9. Latest pass port size photo.
- Candidates will be required to appear for written test as and when conducted at their own cost, **at Visakhapatnam only.**
- Admission for written test or calling the qualified candidates in the written test to furnish documentary proof does not confer any right for appointment.

- The decision of the Selection Committee/APEPDCL is final in selection and allotment of candidates.
- Disqualification:- Conviction in Criminal cases involving moral turpitude declared insolvent.
- Physical Fitness certificate issued by a Medical Officer of the rank not less than that of Civil Surgeon in the prescribed proforma at the time of joining.
- The EPDCL reserves the right to cancel the Notification/Recruitment process at any stage without assigning any reasons.
- The in-service candidates of APTRANSCO / A.P. DISCOMs shall submit the service certificates (**Annexure-VII**) issued by the concerned Divisional Engineer and in respect of Corporate Office General Manager/HRD or Divisional Engineer/O&M, along with pdf Application format, to prepare weightage marks applicable to the candidates.
- The Orthopedically Challenged persons (whose writing speed is affected by Cerebral Palsy) may use scribe/paper writer to write the examination on behalf of them by making a request **to the centre coordinator** at least one day prior to the written test / examination, by giving a suitable undertaking by both the candidate as well as the scribe as per the guidelines and format placed as **Annexure-V & VI**. They may submit their request letters **to the Center Coordinator** well before exam date in order to scrutiny their application and to issue permission.

IX) LOCAL AREA: Each District [(i.e. Srikakulam/ Vizianagaram/ Visakhapatnam/ Rajahmundry (East Godavari) and Eluru (West Godavari)] will be regarded as Local area as defined in the Presidential order

The select list will be drawn into two parts. The first part will comprise 30% of the posts consisting of merit list of local as well as non-locals and the remaining second part will comprise the balance 70% of the posts consisting of locals only and the posts will be filled only following the rule of reservation.

RESERVATION TO LOCAL CANDIDATES: Reservation to the local candidates is applicable as provided in the Rules and as amended from time to time in force on the date of notification. The candidates claiming reservation as Local candidates should obtain the required Study Certificates (from Class-IV to X) or Residence Certificate in the **Proforma in Annexure-II & III** only for those candidates who have not studied in any Educational Institutions as the case may be.

The relevant certificates may be got ready with authorized signature and kept with the candidates to present as and when required.

DEFINITION OF LOCAL CANDIDATE:

- (i) **“LOCAL CANDIDATE”** means a candidate for direct recruitment to any post in relation to that Local area where he/she has studied in Educational

Institution(s) for not less than **FOUR CONSECUTIVE ACADEMIC YEARS** prior to and including the year in which he/she appeared for S.S.C. or its equivalent examination. If however, he/she has not studied in any Educational Institution during the above four years period, it is enough if he/she has resided in that area which is claimed as his /her Local area during the above said period.

- (ii) In case the candidate does not fall within the scope of the (i) above it will be considered if he/she has studied for a period of not less than seven years prior to and inclusive of the year in which he/she has studied for the maximum period out of the said period of seven years AND where the period of his/her study in two or more Local areas are equal such Local area where he/she has studied last (in such Local area) will be taken for determining the Local candidature. Similarly, if he/she has not studied during the above said period in any Educational Institution(s) the place of residence during the above period will be taken into consideration and Local candidature determined with reference to the maximum period of residence or in the case of equal period where he/she has resided last.
- (iii) If the claim of Local candidature is based on study, the candidate is required to produce a certificate from the Educational Institution(s) where he/she has studied during the said 4/7 year period. If, however, it is based on residence, a certificate should be obtained from an officer of the Revenue Department not below the rank of a Tahsildhar in independent charge of a Mandal. **(Proforma in Annexure- II & III)**
- (iv) If, however, a candidate has resided in more than one Mandal during the relevant 4/7 years period but within the same District or Zone as the case may be, separate certificates from the Tahsildhars exercising jurisdiction have to be obtained in respect of different areas.

NOTE:

- a. Single certificate, whether of study or Residence would suffice for enabling the candidate to apply as a “**LOCAL CANDIDATE**”.
- b. **Residence certificate will not be accepted, if a candidate has studied in any Educational Institution up to S.S.C or equivalent examination, such candidates have to produce study certificates invariably.**
- c. The following percentage of reservation of posts in respect of local candidates shall be followed while making direct recruitment in APEPDCL for following the spirit of Presidential Order.

Local Candidates	-	70%
Open Competition	-	30%
- d. Presidential order is not applicable to Corporate Head Office.

ANNEXURE - I
FORM FOR COMMUNITY, NATIVITY AND DATE OF BIRTH CERTIFICATE

Serial No.

S.C.

S.T.

B.C.

Certificate No:

Seal of the
Issuing Office

District Code:

Mandal Code:

Village Code:

COMMUNITY, NATIVITY AND DATE OF BIRTH CERTIFICATE

(1) This is to certify that Sri _____ Son of Sri. _____
of Village/Town _____ Mandal _____
District _____ of the state of Andhra Pradesh belongs to _____ Community
which is recognized as(*) S.C./S.T./B.C. sub-group _____.

The Constitution (Scheduled Castes) Order, 1950

The Constitution (Schedule Tribes) Order, 1950

G.O.Ms.No.1793, Education, dated 25.9.1970 as amended from time to time
(BCs)/SCs, STs list (modification) Order, 1956 S.Cs and S.Ts (Amendment) Act, 1976.

(2) It is certified that Sri _____ is a native
of _____ Village/Town _____ Mandal _____ District of
Andhra Pradesh.

(3) It is certified that the place of birth of Sri _____
is _____ Village/Town _____ Mandal _____ District of
Andhra Pradesh.

(4) It is certified that the date of birth of Sri _____ is ____ Day ____
Month ____ Year _____ (in words)
_____ as per the declaration given by his / father / mother / guardian and as
entered in the school records where he studied.

Signature:

Date:

Name in Capital Letters:

Designation:

(seal)

Explanatory Note:- While mentioning the community, the Competent Authority must mention the sub-caste (in case of Scheduled Castes) and sub-tribe or sub-group (in case of Scheduled Tribes) as listed out in the S.Cs and S.Ts (Amendment) Act, 1976.

ANNEXURE – II
SCHOOL STUDY CERTIFICATE

NOTE: Should be obtained from the Head of Educational Institution(s).

Name of the candidate:

Name of the School:

Admission No.

Class	Name and Place of School	District	Duration of Study giving month and year
I			
II			
III			
IV			
V			
VI			
VII			
VIII			
IX			
X or SSC			

STATION:

DATE:

Signature of the Head of the
Educational Institute(s)

ANNEXURE - III
CERTIFICATE OF RESIDENCE

(To be produced by such candidates who have not studied in any educational institution during the whole or any part* of the relevant 4/7 years period but claim to be local candidates by virtue of residence for Post Codes for which there is reservation for Local Candidates)

It is here by certified

(a) That Sri _____

S/o. _____ appeared for the first time for the
Matriculation (S.S.C) Examination in _____ (Month) _____ (Year).

(b) That he has not studied in any educational institution during the whole/or part of the
4/7 consecutive academic years ending with the academic years ending with the in which
he/she first appeared for the aforesaid examination.

(c) That in the 4/7 years immediately preceding the commencement of the aforesaid
examination he/she resided in the following place / places namely;

Sl.No.	Village	Mandal	District	Period
1				
2				
3				
4				
5				

OFFICE SEAL:

STATION:

DATED:

Officer of Revenue Department not below
the rank of Mandal Revenue Officer
holding independent Charge of a Mandal.

* STRIKE OFF “WHOLE”/PART AS THE CASE MAY BE

ANNEXURE-IV

SYLLABUS

I. ELECTRICAL MACHINES:

D.C. GENERATORS And MOTORS: Expression for emf equation of D.C. Generator, armature windings, armature reaction, types of generators, characteristics. Torque equation of D.C. Motor, characteristics, speed control, starters, losses and efficiency. Testing of D.C. Machines.

TRANSFORMERS: emf equation of single phase transformer, operation of transformer on load, equivalent circuit, vector diagram, open-circuit and short-circuit tests, voltage regulation, losses and efficiency, all-day efficiency, parallel operation of single-phase transformers with equal voltage ratios. Voltage and current relations for three-phase transformer connections. Principle of operation of auto-transformer. Cooling of power transformer, Operation of Buchholz's relay.

ALTERNATION AND SYNCHRONOUS MOTORS: Salient-pole and cylindrical rotor types of construction. Alternator EMF equation and windings, armature reaction, voltage regulation using synchronous impedance, open-circuit and short-circuit tests, voltage variation against load currents at different power factors, parallel operation of alternators; synchronization by lamps method and synchroscope.

Synchronous motors: Starting methods, effect of change of excitation at constant load, V-curves, Hunting, synchronous condenser.

THREE-PHASE INDUCTION MOTORS: Constructional aspects of cage and wound rotor types of induction motors, expression for torque, torque-slip characteristics, full load torque, starting torque and maximum torque, effects of variation of rotor resistance; losses and efficiency; different starting methods; speed control methods.

SINGLE-PHASE INDUCTION MOTORS AND COMMUTATOR MOTORS:

Constructional features and operation of single-phase induction motors: split phase, capacitor and shaded pole types. Principle of operation of A.C. series motor, universal motor, Synchronous motor.

II. POWER GENERATION AND SWITCHGEAR AND PROTECTION:

HYDRO-POWER PLANTS: Functions of different components of Hydel stations, water power equation, surge tank, choice of turbines, storage and pondage; base load and peak load operation, pumped storage plant.

THERMAL POWER PLANTS: Plant line diagram and functions of different components of coal-fired steam power plant; boilers, steam turbines, condensers, superheater, economizer, cooling towers, chimney.

NUCLEAR PLANT: Schematic arrangement and functions of different components in nuclear power reactor.

COMBINED OPERATION OF POWER PLANTS AND ECONOMIC ASPECTS:

Advantage of combined operation of Hydel and Thermal power plants; Load and Load duration curves, load factor, diversity factor and demand factor, capacity factor; types of tariffs, factors influencing tariff design.

FAULTS AND SWITCHING APPARATUS: Short-circuit calculations; fuses and isolators; circuit breakers: theory of arc interruption and different types of oil circuit breakers; lightning arresters and their selection and location.

PROTECTIVE RELAYING: Basic requirements of protective relaying, primary and back-up protection; classification of electromagnetic relays and their principles of operation; time current characteristic curves; induction type over-current relay, distance relays; Merz price protection, differential protection of transformers, bus bar protection.

III. TRANSMISSION AND DISTRIBUTION:**LINE CONDUCTORS, LINE SUPPORTS AND SAG CALCULATIONS:**

Different types of line conductors, conductor sizes commonly used for different voltage levels, Types of line supports, factors influencing the selection, cross-arms; spans, conductor spacings and ground clearances. Sag calculations and stringing charts.

TRANSMISSION LINE PARAMETERS: Determination of inductance and capacitance of round and parallel conductors in single phase and three-phase symmetrically spaced lines.

PERFORMANCE OF LINES: Choice of voltage; short, medium and long lines; calculation of sending-end voltage, regulation and efficiency for short lines; nominal Π and nominal-T methods; Ferranti effect; corona: critical voltages and factors affecting corona.

INSULATORS AND SUBSTATIONS:

Different types of insulators: Pin type, strain type, suspension type and relative merits; voltage distribution across string of suspension insulators, string efficiency and methods of improving arcing horns. Equipment used in substations, bus-bar arrangements.

CABLE AND DISTRIBUTION SYSTEMS: Comparison between overhead lines and under ground cable. Types of cables, insulation resistance; localization of cable faults. Primary and secondary distribution; Feeders and service mains; radial and ring systems of distribution; singlephase a.c. distribution.

IV. MEASURING INSTRUMENTS AND ELECTRIC CIRCUITS:

MEASURING INSTRUMENTS: Indicating instruments: deflecting, controlling and damping torques, pointers and scales; ammeters and voltmeters: moving coil, moving iron, dynamometer, induction types; instrument transformers: C.T and P.T., Wattmeters and measurement of power in three phase systems by two-wattmeter method; measurement of energy: Energy meters; M.D. indicators; trivector meter.

ELECTRIC CIRCUITS: Fundamentals of alternating current quantities, sinusoidal waveform; average and effective values; J-notation for A.C quantities; polar form; single phase series and parallel circuits; impedance triangle, phase, power factor, active and reactive components of power; series and parallel resonance. Three-phase star and delta balanced systems.

V. UTILIZATION OF ELECTRICAL ENERGY:

ELECTRIC DRIVES: Factors governing selection of motors; matching of motors with given loads; electric braking; rating of motor; types of enclosures; motors for particular drive.

ILLUMINATION: Definitions of commonly used terms and units; types of lamps; requirement of good lighting; laws of illumination; terms like : depreciation factor, utilization factor, waste light factor, luminous efficiency, specific energy consumption, space height ratio.

ELECTRIC HEATING AND WELDING: Requirements of good heating materials, materials generally employed, resistance heating; electric furnace; induction heating; dielectric heating welding generator and transformers.

MODEL QUESTIONS

For each of the multiple choice type questions given below blacken the oval corresponding to the correct answer in the O M R Sheet.

1. The form factor for sinusoidal waveform is
1) 1.00 2) 1.11 3) 1.732 4) 2.2
2. The rotor resistance and reactance of a three-phase induction motor is 0.2 ohm and 2 ohm respectively. The per unit slip corresponding to maximum torque is equal to
1) 9.02 2) 0.01 3) 0.1 4) 0.2
3. Load factor is defined as the ratio of
1) Average power demand to maximum power demand
2) Minimum power demand to maximum power demand
3) Maximum power demand to minimum power demand
4) Average power demand to minimum power demand
4. The unit of luminous flux is
1) lux 2) candle power 3) metre candle 4) lumen
5. For 132 KV transmission line, the insulators commonly used are
1) Strain type 2) Pint type 3) Suspension type 4) Shackle type

ANNEXURE-V

Guidelines for use of a Scribe/Paper Writer for Orthopedically Challenged (whose writing speed is affected by Cerebral Palsy) candidates for written examination to the post of Sub-Engineer / El.

The Orthopedically Challenged (whose writing speed is affected by Cerebral Palsy) persons who have applied for the post of Sub-Engineer / El. may use a SCRIBE/PAPER WRITER to write the written test/examination on behalf of them. In such a case, the following rules will apply:

- i) The candidate shall have to arrange his/her own scribe at own cost.
- ii) The candidate should make a request to this effect to the centre coordinator at least one day prior to the examination. It is advised to submit early for scrutiny and permission to the centre head.
- iii) The candidate should bring the documents in support of their disability. It may be noted that persons suffering from not less than 40% of the relevant disability shall alone be eligible for the benefit of reservation.
- iv) Both the candidate as well as the scribe will have to give suitable undertaking as per the format attached that the Scribe fulfills all the stipulated eligibility criteria. In case it later transpires that the scribe did not fulfill any of the laid down eligibility criteria or had suppressed material facts, the candidature of the applicant will stand cancelled, irrespective of the result of the written examination.
- v) Candidates who use a Scribe shall be given an additional time of 20 minutes for every hour of the examination i.e. total time allowed for 1 ½ of hour examination is 30 minutes.

ANNEXURE-VI

The Orthopedically Challenged (whose writing speed is affected by Cerebral Palsy) candidates who are willing utilize Scribe shall fill up the following DECLARATION, and submit the same to the Centre head.

DECLARATION

1. We, the undersigned, Shri/Smt/Kum _____ eligible candidate for the written examination for recruitment of Sub-Engineer / El. / APEPDCL to be held on _____ Registration Number _____, Roll No _____ and Shri/Smt/Kum _____ writer (Scribe) for the eligible candidate, do hereby declare that:-

- i) The candidate is affected by cerebral palsy with loco-motor impairment and his/her writing speed is affected and he/she needs a writer (scribe) as permissible under the Government of India rules governing the recruitment of Physically Challenged persons.
- ii) The scribe is identified by the candidate at own cost and is as per own choice.
- iii) The scribe fulfills the following criteria:

Name of the Candidate	
Name of the Scribe	
Education qualification of Scribe	
Specimen Signature of the Scribed	
Address of the Scribe	
Photograph of the Scribe	

*Copy of academic certificate/mark sheet of the scribe is enclosed in support of the above.

2. As per the rules, the candidate availing services of a scribe is eligible for extra time of 30 minutes for the 1 ½ hour duration of the written examination.
3. We jointly understand that the scribe shall only record the answer as suggested by the candidate in the OMR/Answer Booklet and shall not import his/her knowledge/make any gesture/sound or movement to indicate correctness or otherwise of any answer option.
4. We undertake to comply with the direction of the invigilator at the centre and try not to disturb other examinees.
5. Any misconduct committed by the scribe shall amount to a misconduct committed by the eligible candidate who is using the scribe and is liable for disciplinary action as may be deemed appropriate.
6. We hereby declare that all the above statements made by us are true and correct to the best of our knowledge and belief. We also understand that in case it is detected at any stage of recruitment that we do not fulfill the eligibility norms and/or that the information furnished by us is incorrect/false or that we have suppressed any material fact (s), the candidature of the applicant will stand cancelled, irrespective of the result of the written test (s). If any of these shortcomings is/are detected even after the candidate's appointment, his/her services are liable to be terminated. In such circumstances, both signatories will be liable to criminal prosecution.

Given under our signature:

Signature of the Scribe
Post Address

Signature of the Candidate
Roll No:
Reg. No.
Postal Address

Phone No:
Mobile No:

Phone No:
Mobile No:

Signature of the Invigilator

ANNEXURE – VII

SERVICE CERTIFICATE

This is to certify that on verification of the Log Book, Daily Log Sheet, Attendance Register maintained at _____ / Sub-Station/Office and the Aquitence rolls maintained by the Contractor (_____), Sri _____, S/o|D/o|W/o Sri _____, has worked as _____ for the period from _____ to _____, at _____. He has acquired the requisite diploma qualification on _____. The particulars of Sri _____ are noted below:

I) Particulars of Agreement:

S. No.	Name of the incumbent	Name of the Contractor	Particulars of Agreement		Particulars of Work order		Particulars of check measurement		No. of days present during the period from	Working in sub-station/ section office / any other office	Whether continuing as on date of notification
			Agreement No.	Date	Work Order / Sanction No.	Date	Date	Amount			

II) Particulars of EPF: _____

Sl. No	Name of the incumbent	Name of the contractor	Particulars of remittance of EPF			Period	No. of days
			Challan No.	Date	Amount		

III) Particulars of Group Insurance: _____

Sl. No	Name of the incumbent	Name of the contractor	Insurance Policy No.	Period No. of days	
				From	To

IV) Spells of absence for more than 180 days:

Sl. No	Name of the incumbent	Name of the contractor	Spells of Absence		
			From	To	No. of days

Total No. of Man days (excluding absence period) _____**Days.**

This certificate is issued only for the purpose of enabling **Sri** _____
to apply for the post of _____ in APEPDCL /
APTransco & Other Discoms.

Signature:

Date:

Name in Capital Letters:

Designation:

(Office Seal)

Note:

- The service shall be computed from the date of joining the relevant job on acquisition on relevant qualification only and up to the date of the notification.
- The age of entry into service shall be taken from the date of joining in the relevant job only.
- The certificate must invariably contain date below the signature of the Officer. If the length of service is mentioned “till date” the date should be mentioned in brackets. If the service certificate does not contain the details, it will be summarily rejected and no weightage marks will be awarded.