

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED
DETAILED NOTIFICATION
NOTIFICATION No. - RO.No.67/16.
RECRUITMENT FOR THE POST OF Assistant Engineer (Elect., & Civil)

Applications are invited On-line through APTRANSCO WEBSITE www.aptransco.gov.in and <http://aptransco.cgg.gov.in> from **20.03.2017 to 12.04.2017** (to 11.04.2017 for payment of fees) from eligible Engineering Graduates for filling up the following vacancies on regular basis in APTRANSCO Engineering Service.

The desirous eligible Candidates may apply ON-LINE by satisfying themselves with the terms and conditions of this recruitment.

Name of the Zone	Asst. Engineer/ Electrical			Asst. Engineer/ Civil		
	Open	L	Total	Open	L	Total
Visakapatnam	18	28	46	2	2	4
Vijayawada	18	27	45	-	-	-
Kadapa	18	27	45	4	2	6
Total	54	82	136	6	4	10

Open: Local & Non-Local

L: Local

These vacancies are subject to variation at the time of recruitment based on the necessity.

Percentage of reservation: BC-25% + 4% Muslim reservation subject to orders of Government from time to time.

SC- 15%, ST-6%, PH-3%

33 1/3 % reservation for women is applicable as per rules.

FEE: Each applicant must pay Rs.150/- (Rupees One hundred and fifty only) towards Application Processing Fee.

- i) Applicants under General category must also pay **RS.350/- (Rs Three hundred and fifty)** towards Examination Fee. (Applicants belonging to SC/ST/BC Communities and PH need not pay this fee).
- ii) Candidates belonging to States other than Andhra Pradesh will be considered in general category only and are required to pay the above-prescribed fee.

Starting date for Payment of Fee and Application submission is **20.03.2017**.

Last date for payment of Fee is **11.04.2017**.

Last date for submission of Application is **12.04..2017 up to 7 P.M**

Place: Hyderabad
Date :17.03.2017

Sd/-
EXECUTIVE DIRECTOR
(HRD &PIg)

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Detailed notification for Assistant Engineer (Elect., & Civil)

INSTRUCTIONS

I. Instructions for Scanning of Photograph with Signature

Photo width= 3.5cm

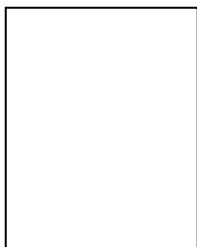


Photo Height= 4.5cm

Signature Space = 1.5 cm

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 colors 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: Shall not be more than **42** years as on **01.03.2017**.

Upper age limit will be relaxed up to 5 years in respect of SC/ST/BC candidates and up to 10 years in respect of P.H candidates.

2.EDUCATIONAL QUALIFICATIONS:

- a) **Assistant Engineers/Electrical:** Must possess BE/B.Tech/ A.M.I.E, Electrical & Electronics Engineering or equivalent qualification in the similar discipline from any recognized University in India on regular basis as on 01.03.2017.
- b) **Assistant Engineers/Civil:** Must possess BE/B.Tech/ A.M.I.E, Civil Engineering or equivalent qualification in the similar discipline from any recognized University in India on regular basis as on 01.03.2017.

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III. SELECTION PROCEDURE:

- i) The selection of candidates for appointment will be made 100% on Written examination.
- ii) Only those candidates who qualify in the written examination by being ranked high, community wise will be called for verification of Original Certificates in 1:1 ratio.
- iii) 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%

Or as per Rules

Note: Mere securing minimum qualifying marks doesn't vest, any right to a candidate for being called for verification of original certificates.

IV. Details of Written Examination:

- i) **Syllabus:** Section (A): Questions on core academic curriculum of respective discipline. The syllabus for the written examination is placed at Annexure -I -(70 marks).
Section (B): Questions on analytical aptitude - (30 marks).

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.

- iii) **Date of examination:**

The written examination for recruitment of Assistant Engineer (Elect., & Civil) will be held on **30.04.2017 at 10 AM to 12 Noon.**

- iv) **Examination Centers:** The written examination for recruitment of Assistant Engineer/ Elect., & Civil will be held at different centers located only in **Vijayawada.**

- v). **Instructions to Candidates at the time of Written Examination:**

1. The test is of two hours duration. The date and time will be indicated on the Hall ticket. Candidates should reach the test center in time. Candidates will be allowed in to the examination hall half an hour before the scheduled starting time. Candidates will not be allowed into the examination hall after the test has started and will not be permitted to leave examination hall before the closure of test time under any circumstances.
2. The test will be of objective type with multiple-choice questions with only one answer being correct among the four alternatives suggested.
3. The candidate will be supplied carbonless O M R (Optical mark Reader) answer sheet consisting of two (2) copies the original copy and the duplicate copy below. Do not attempt to separate or displace them while answering without the carbon impression paper will be provided to the candidates. The candidate has to indicate his response to each question by darkening the appropriate bubble with a **Black Ball Point pen**. No corrections with **white fluid** will be permitted.
4. The candidate has to bring a good quality **Black Ball point pen** to the examination hall.
5. The candidate has to handover the original OMR Sheet to the invigilators in the examination centre and are however permitted to take away the **duplicate OMR Sheet** along with question paper after the examination. If any candidate in violation of the above instructions takes away the original OMR Sheet, his/her candidature to the recruitment will be rejected besides invocation of penal provisions including debarment of the candidature for all future recruitments to be conducted by the AP Transco.

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6. The candidate has to follow meticulously all the instructions given on the question paper booklet and OMR Answer Sheet, else his answer sheet may not be valued.
7. Usage of Calculators/mathematical tables is not permitted. Candidates should not bring cell phones or any other electronic gadgets to the examination hall.
8. The provisional key will be publicized one day after the examination

V. TERMS AND CONDITIONS OF SERVICE:

1. **Scale of Pay: Rs.41155-1700-44555-1985-54480-2280-63600**
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 at the substations of APTRANSCO for a minimum period of 3 years.
4. The candidate will be governed by the rules and regulations applicable or as framed by the AP Transco 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 what so ever 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 APTRANSCO for a MINIMUM period of 5 Years after completion of Training-cum-Probation period (2 years).
- (ii) During the above bond period the candidates will deposit his/her original certificates such as Degree, date of birth and community, etc with APTRANSCO. The Certificates so deposited with APTRANSCO shall not be returned during the above bond period.
- (iii) The Candidate who leaves the APTRANSCO 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 APTRANSCO 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 to the Corporation.

VII. HOW TO APPLY:

HOW TO UPLOAD THE APPLICATION FORM:

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

I Step:-Payment of fee through Payment Gateway (Bill Desk/Atom). Candidates need to visit the payment link on website <http://aptransco.cgg.gov.in> and provide basic details like Name, Father/Husband Name, Date of Birth and Community (BC,SC,ST,OC) and whether Physically Handicapped (PH). Based on the details of community and other details, system will indicate the fee applicable. The candidates have to pay the indicated fee and obtain a receipt with JOURNAL NUMBER printed on it.

II Step:-After Payment of fee the applicant has to visit the website <http://aptransco.cgg.gov.in> and access the online application form. APTRANSCO can provide link to this website on APTRANSCO website. The applicant has to provide details of JOURNAL NUMBER given on the payment receipt to access the application form. The candidate has to fill all the relevant details and upload "scanned copy of passport photo with signature below the photo" and submit to the system. ON successful submission system will alert the applicant to download pdf document containing the details submitted by the applicant with unique application number (Reference ID) as acknowledgment.

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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 application form with **Reference ID** for future reference.
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 Andhra Pradesh should apply.
6. For any problems related to Online submission and downloading of Hall-Tickets please contact **Help Desk No.040-23120403/040-23120404**(Call Time: 10:30 A.M to 1:00 P.M & 2:00 P.M to 5:00 P.M) or log on to <http://aptransco.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 (Registration fee).
- ii) Applicants under General category must also pay **RS.350/- (Rs.Three hundred and fifty only)** towards Examination Fee. (Applicants belonging to SC/ST/BC Communities and PH need not pay this fee).
- iii) Candidates belonging to States other than Andhra Pradesh will be considered in general category only and are required to pay the above-prescribed fee.

Mode of Payment of Fee: Payment of fee through Payment Gateway (Bill Desk/Atom). Candidates need to visit the payment link on website and provide basic details like Name, Father/Husband Name, Date of Birth and Community (BC,SC,ST,OC) and whether Physically Handicapped (PH). Based on the details of community and other details, system will indicate the fee applicable. The candidates have to pay the indicated fee and obtain a receipt with JOURNAL NUMBER printed on it.

Submission of Application: After Payment of fee the applicant has to visit the website <http://aptransco.cgg.gov.in> and access the online application form. APTRANSCO can provide link to this website on APTRANSCO website. The applicant has to provide details of JOURNAL NUMBER given on the payment receipt to access the application form. The candidate has to fill all the relevant details and upload "scanned copy of passport photo with signature below the photo" and submit to the system. ON successful submission system will alert the applicant to download pdf document containing the details submitted by the applicant with unique application number (Reference ID) as acknowledgment.

NOTE:

1. AP Transco 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.
3. Incomplete/incorrect application form will be summarily rejected. AP Transco 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.
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 AP Transco will not be held responsible for any kind of discrepancy.
6. Applicants must compulsorily upload his/her own scanned photo with signature in jpg format only.

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General

Candidates belonging to States other than Andhra Pradesh will be considered in general category only and are required to pay the above-prescribed fee.

The candidate should not furnish any false tampered, fabricated information or suppress any material information while filling up the application form.

Candidates called for verification of certificates will be required to furnish documentary proof in evidence of the following as and when called for.

Age: Proof of age as recorded in SSC certificate or equivalent.

- a) Qualification of BE/B. Tech/AMIE or equivalent from any recognized University in India.
 - b) 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 01.07.2017 in respect of SC/ST & BC candidates clearly indicating the Sub-Caste and group.
 - c) Physically Handicapped certificate indicating the minimum 40% of disability for PH-OH & VH and > 75% for HH issued by the concerned competent medical board.
 - d) Study Certificate / 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 .
- Candidates will be required to appear for written test as and when conducted at their own cost.
 - 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 degrees awarded by the Universities/institutions that are recognized by the U.G.C, D.E.C (Under IGNOU) and AICTE as the case shall only be considered.
 - The decision of the Selection Committee/APTRANSCO is final in selection and allotment of candidates.
 - If the particulars furnished in the online Application Form do not tally with the Original documents produced by the Candidates, his/her candidature will be rejected.
 - The persons already in Government Service/autonomous bodies/other Corporations etc.. whether in permanent or temporary capacity or as work charged employees must take print out of the application after properly filled and get it endorsed by his/her employer and keep it with him/her ready, so as to, submit the same as and when called for.

IX. BREAK UP OF VACANCIES

Consequent to implementation of the spirit of A. P. Public Employment (Organization of Local Cadres & Regulation of Direct Recruitment) order, 1975 which popularly known as "The Presidential Order" in APTRANSCO, the break-up of vacancies, Zone-wise, are as follows:

Name of the Zone	Asst. Engineer/ Electrical						Asst. Engineer/ Civil					
	Open		L		Total		Open		L		Total	
	G	BL	G	BL	G	BL	G	BL	G	BL	G	BL
Visakapatnam	18	2	28	4	46	6	2	-	2	1	4	1
Vijayawada	18	2	27	2	45	4	-	-	-	1	-	1
Kadapa	18	3	27	3	45	6	2	1	4	-	6	1
Total	54	7	82	9	136	16	4	1	6	2	10	3

Open : Local & Non - Local ; L- Local

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COMMUNITY WISE BREAK-UP OF VACANCIES:

ASSISTANT ENGINEER (ELECTRICAL)

Zones	OC		BC-A		BC-B		BC-C		BC-D		BC-E		SC		ST		PH		Total	
	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W		
VSP																				
Open	6	3	1	1	1	1	-	-	-	-	1	-	1	1	-	1	1	OH	-	18
Local	8	4	2	-	2	1	-	-	2	1	1	-	3	2	2	-	-	-	-	28
BL	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	OH	-	2
BL	-	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-	-	-	HH	4
VJA																				
Open	4	4	2	-	1	-	-	-	1	1	1	-	1	1	-	1	1	OH	-	18
Local	8	4	1	-	3	1	-	-	2	-	1	-	4	1	2	-	-	-	-	27
BL	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	HH / OH	-	2
BL	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	HH	2
KDP																				
Open	6	2	1	1	-	1	-	-	2	-	1	-	2	1	-	-	1	OH	-	18
Local	8	4	2	-	2	1	-	-	1	1	1	-	3	1	2	1	-	-	-	27
BL	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	VH	-	3
BL	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	HH	3

ASSISTANT ENGINEER (CIVIL)

Zones	OC		BC-A		BC-B		BC-C		BC-D		BC-E		SC		ST		PH		Total	
	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W	G	W		
VSP																				
Open	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2
Local	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	VH	-	1
VJA																				
Open	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Local	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	VH	-	1
KDP																				
Open	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2
Local	-	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	4
BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	VH	-	1
BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Open : Local & Non-local, L : Local, G : General, W : Women, BL: Backlog, PH : Physically Handicapped VH: Visually Handicapped, HH: Hearing Handicapped, OH: Orthopedic Handicapped.

X. ZONAL/ LOCAL:

The selection list will be drawn into two parts. The first part will comprise 40% of the posts consisting of combined merit list of local as well as non-locals and the remaining second part will comprise the balance 60% of the posts consisting of locals only and the posts will be filled only following the rule of reservation.

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a) The candidates will be selected and allotted to Zones/Sub Stations as per their Rank in the merit list and as per zonal preferences for allotment of non-local candidates against vacancies available. Selection shall be made on State Wide merit, in respect of non-local candidates and allotment of Zones shall be made as per the preference given by candidates against the actual vacancies.

b) While the Corporation calls for preference of candidates in respect of zones in the application form, it is hereby clarified that the said preferences are only indicative for being considered to the extent possible but not binding. Therefore, the APTRANSCO has the power to assign a successful candidate to any of the notified posts in the Zone in respect of non-local candidates, for which he/she is considered to be qualified and eligible, subject to fulfilling the selection criteria. Mere claim of preference for any zone for allotment against vacancy does not confer a right to selection for that Zone in particular or any Zone in general.

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 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 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 areas 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 determine 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
- (iv) If, however, a candidate has resided in more than one Mandal during the relevant 4/7 years period but with in 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.
- (v) In cases where visually handicapped and hearing impaired persons, studied in the special schools meant for them, the native place of parents of such visually handicapped and hearing impaired persons will be the local area.
- (vi) In terms of G.O. Ms.No.132, GA (SPF&MC) Department, dt:13.06.2016 candidates who migrate to any part of the State of Andhra Pradesh from the State of Telangana within a period of three years from the 2nd day of June, 2014 shall be regarded as the local in the State of Andhra Pradesh at the place of his residence and be treated at par with the local candidates residing in that area, in accordance with such guidelines as may be issued by the Government of Andhra Pradesh for the purpose of employment.

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Note: At the time of verification, candidates who have migrated from Telangana to Andhra Pradesh in between 2nd June,2014 and 1st June, 2017 shall produce local

Status certificate as laid out in circular memo No.4136/SPF & MC/2015 - 5, Dated.08/08/2016.

NOTE:

- A. Single certificate, whether of study or Residence would suffice for enabling the candidate to apply as a "**LOCAL CANDIDATE**".
- B. Resident 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. Each of the following Zones comprises the Districts mentioned against each Zone

Sl.No	Zones	Districts
1	Visakhapatnam (VSP)	Srikakulam, Vizianagaram Visakapatnam. East & West Godavari
2	Vijayawada (VJA)	Krishna, Guntur, Prakasham & Potti Sreeramulu Nellore
3	Kadapa (KDP)	Chittoor, Kadapa, Anantapur and Kurnool.

Presidential Order is not applicable to Corporate Head Office.

PART-II-DEBARMENT:

- ✓ Candidates should make sure of their eligibility to the post applied for and that the declaration made by them in the format of application regarding their eligibility is correct in all respects. Any candidate furnishing in correct information or making false declarations regarding his/her eligibility at any stage or suppressing any information is liable to be debarred from appearing for any examinations conducted by the Corporation and summarily of their candidature for this recruitment.
- ✓ Any candidate is or has been found impersonating or procuring impersonation by any or resorting to any other irregular or improper means in connection with his/her candidature for selection or obtaining support of candidature by any means such a candidates may in addition to rendering himself/herself liable for Criminal Prosecution, will also be liable to be debarred permanently.
- ✓ Corporation s decision to be final. The decision of the Corporation in all aspects and all respects pertaining to the application and its acceptance or rejection as the case may be. Conduct of examination and at all consequent stages culminating in the selection or otherwise shall be final in all respects and binding on all concerned. The Corporation also reserves its rights to alter and modify regarding time and conditions laid down in the notification for conducting the various stages upto selection duly intimating details thereof to all concerned, as warranted by any unforeseen circumstance arising during the course of this process, or as deemed necessary by the Corporation at any stage.

ANNEXURE - I

**Syllabus for Written Test of AP Transco
Assistant Engineer (Electrical) - 2017**

Electric Circuits: Network graph, KCL, KVL, node and mesh analysis, star/ delta transformation; electromagnetic induction; mutual induction; ac fundamentals; harmonics, transient response of dc and ac networks; sinusoidal steady-state analysis, resonance, ideal current and voltage sources, Thevenin's, Norton's, Superposition and Maximum Power Transfer theorems, two-port networks, three phase circuits, power measurement .

Electrical Machines: Single phase transformer - equivalent circuit, phasor diagram, tests, regulation and efficiency; three phase transformers - connections, parallel operation; auto-transformer; DC machines - types, windings, generator/ motor characteristics, armature reaction and commutation, starting and speed control of motors; three phase induction motors - principles, types, performance characteristics, starting and speed control; single phase induction motors; synchronous machines - performance, regulation and parallel operation of generators, motor starting, characteristics and applications .

Power Systems: Basic power generation concepts; transmission line models and performance; underground cable, string insulators; corona; distribution systems; per-unit quantities; bus impedance and admittance matrices; load flow; voltage control; power factor correction; economic operation; symmetrical components; fault analysis; principles of over-current, differential and distance protection; protection of alternator, transformer, transmission lines neutral earthing, solid state relays and digital protection; circuit breakers; system stability concepts, swing curves and equal area criterion

Utilization & Control Systems: Principles of feedback; transfer function; block diagrams; steady-state errors; Routh and Nyquist techniques; Bode plots; root loci; lag, lead and lead-lag compensation; Heating - resistance, induction, dielectric; Welding - spot, seam and butt; Electric traction - speed-time curves, tractive effort;

Measurements: Bridges and potentiometers; PMMC, moving iron, dynamometer and induction type instruments; measurement of voltage, current, power, energy and power factor; digital voltmeters and multi-meters; phase, time and frequency measurement; Q-meters; oscilloscopes;

Analog and Digital Electronics: Characteristics of diodes, BJT, FET; amplifiers - biasing, equivalent circuit and frequency response; oscillators and feedback amplifiers; Combinational and sequential logic circuits; multiplexer; Schmitt trigger; A/D and D/A converters; 8-bit microprocessor basics, architecture, programming and interfacing.

Power Electronics and Drives: Semiconductor power diodes, transistors, thyristors, triacs, GTOs, MOSFETs and IGBTs - static characteristics and principles of operation; triggering circuits; phase control rectifiers; bridge converters - fully controlled and half controlled; principles of choppers and inverters; basic concepts of adjustable speed dc and ac drives.

Model Question Paper

The question paper consists of **one hundred** multiple choice objective type questions to be answered on the OMR answer sheet using HB pencil in **2 hours**. A few questions are given as a model below. **Note:** Calculators are not allowed into the Examination Hall. Candidates have to bring their own pencils and erasers.

1.The armature of a d.c machine is made of (A) Silicon steel (B) Wrought iron (C) Cast steel (D) Soft iron	A <input checked="" type="radio"/>	B <input type="radio"/>	C <input type="radio"/>	D <input type="radio"/>
2.The main drawbacks of d.c shunt generator is that (A)Shunt circuit has high resistance (B) Generator voltage is small (C)	A <input type="radio"/>	B <input type="radio"/>	C <input checked="" type="radio"/>	D <input type="radio"/>

Terminal voltage drops considerably with load (D) It is expensive				
3.Transformers usually transfer electrical energy from primary to secondary with change in (A) Frequency (B) Voltage (C) Power (D) Time period	A	B	C	D

Syllabus for Written Test of AP Transco Assistant Engineer (Civil) - 2017

1. Strength of Materials: Simple stresses and strains. Hook's law. Stress-strain curve for mild steel, elastic constants, compound bars, temperature stresses, strain energy, resilience, impact loading, SFD and BMD for simply supported, cantilever and overhanging beams. Centre of gravity and moment of inertia, bending and shear stress distributions. Theory of pure torsion, helical spring, thin and thick cylinders, analysis of trusses by method of joints and method of sections, combined direct and bending stresses, column and struts, deflection of beams-double integration, moment area and conjugate beam methods.
- 2.Reinforced Concrete: Basic reinforcing materials, tests on cement and aggregates. Structural concrete and its grades, workability tests and concrete mix design. Singly and doubly reinforced beams, working stress design of rectangular and flanged beams, shear, bond, development length and torsion in beams, one-way and two-way slabs, axially and eccentrically loaded columns, isolated and combined footings. Basic concepts of limit state design and its applications to the design of beams, slabs and columns.
- 3.Steel Structures: Grades of steels, design of simple and compound beams, riveted and welded joints, riveted and welded connections'-eccentric framed and seated, simple and compound columns, slab and gusseted bases, grillage foundations, roof trusses, plastic analysis – plastic bending of beams, shape factor, plastic analysis theorems, and analysis of fixed, propped cantilever beams by static and kinematics methods.
- 4.Fluid Mechanics & Machinery : Fluid properties, pressure measurements, manometers, forces on plane and curved surfaces, center of pressure, principle of buoyancy, stability of floating and submerged bodies, metacentre, Kinematics of fluid flow, equation of continuity. Euler's and Bernoulli's equations, Impulse-momentum, flow measuring devices – orifices and mouth pieces, notches and weirs, flow through pipes, open channel flow, impact of jets – stationary and moving vanes (flat and curved), radial vanes, hydraulic turbines, pumps and machinery.
- 5.Soil Mechanics: Physical properties of soils, classification and identification, permeability, capillarity, seepage, compaction, shear strength, Earth pressure, slope stability.
Foundation Engineering : Stress distribution in soils, bearing capacity, settlement analysis, pile foundation, Cofferdams, Caissons, Dewatering, Bracing for excavations, site investigations, Newmark charts, Machine foundation.

Model of Question Paper

The Question paper consists of **one hundred** multiple choice objective type questions to be answered on the OMR Answer sheet using HB pencil in **2 hours**. A few questions are given as a model below.

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The maximum value of Poisson's ratio for any material is (a) 1 (b) 0.5 (c) 0.25 (d) 0.1	A O	B ●	C O	D O
The modular ratio for M 20 grade concrete is (a) 13.33 (b) 18.67 (c) 20 (d) 10	A O	B ●	C O	D O
The maximum permissible deflection for a simply supported steel beam of span 6.5 m is (a) 5 mm (b) 10 mm (c) 20 mm (d) 30 mm	A O	B O	C ●	D O