

Untitled

DEPARTMENTAL EXAMINATION

November 2020

DEPARTMENTAL TEST FOR TECHNICAL OFFICERS - FIRST PAPER (With Books)

Time: Three hours

Maximum Marks: 100

Note:

1. Use only the blue/black ball point pens provided by the Invigilator for filling the OMR sheets.
2. Choose the correct choice and darken the circle completely Don't put a tick mark or a cross mark in the circles.
3. Never use pencils to mark your answers.
4. Never use whiteners over the darkened circles to rectify the errors as they may disrupt the scanning and evaluation process.
5. Multiple markings will be treated as invalid.
6. Writing on the OMR Sheet is permitted only on the specified area and \ any small mark on other area will cause error in evaluation
7. Do not fold the OMR Sheet.
8. If candidate has not filled his Roll Number, Paper Code, Question Booklet Series, Answer sheet will not be evaluated.
9. Put your Signature in the appropriate rectangular boxes.
10. Ensure that the invigilator has signed your OMR Answer Sheet.
11. All the 100 questions are compulsory to be answered. No choice
12. Use only black ball point pens provided by the invigilator for filling the OMR sheets. No other pen should be used.
13. Confirm the correctness of your answer carefully before shading the answer in OMR sheet. Answer choice shaded is final, don't try to change the answer by using eraser, white marker etc. ,
14. Handle the OMR sheet carefully.
15. Unnecessary markings/ shadings/ writings/ Scribbling should not be made in the OMR sheet.

1. Every consumer shall maintain a power factor of in case HT supply .
 (a) 0.92 lag (b) 0.90 lag (c) 0.88 lag (d) 0.85 lag
2. In case of LT supply, the excess demand charges shall not be applicable for
 (a) industrial category (b) Domestic and Agricultural category
 (c) domestic category (d) commercial category
3. is the one who is authorised to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply.
 (a) Area licensee (b) Operation licensee (c) Electricity licensee
 (d) Distribution licensee
4. Which test must be carried out for every bucholz action of the Power transformer?
 (a) Interfacial tension (b) Power factor of oil (c) Acidity and sludge
 (d) Dissolved Gas Analysis
5. For replacement of failed Distribution Transformers EE has the To accord the section.
 (a) 50000 (b) 1 Lakh (c) Full Power (d) 1 Crore
6. "Power Factor" is the ratio of the
 (a) none of these (b) real power to reactive power (c) real power to apparent power
 (d) reactive power to real power
7. In the case of temporary supply, the excess demand charges shall be the difference between the
 (a) none of these (b) maximum computed charges and the minimum charges levied already.
 (c) maximum computed charges and the corresponding current consumption charges already recovered from the consumer.
 (d) minimum charges and the corresponding current consumption charges already recovered from the consumer.
8. In respect of Maintenance of EHV SF6 Circuit Breakers, wherein the breaker operates more than 1000 times a year, after how many operations the major inspection of the SF6 Circuit Breaker has to be carried out?
 (a) Inspection has to be carried out after a maximum of 7000 operations
 (b) Inspection has to be carried out after a maximum of 6000 operations
 (c) Inspection has to be carried out after a maximum of 5000 operations
 (d) Inspection has to be carried out after a maximum of 3000 operations
9. Who shall audit the accounts of the State Commission?
 (a) State Government (b) Central Government (c) Comptroller and Auditor-General of India
 (d) Central Electricity Authority
10. What is the time limit for the consumer to pay the charges from the date of receipt of supply availability notice from the officer concerned?
 (a) 20 days (b) 15 days (c) 10 days (d) 7 days

11. Each distribution licensee shall make arrangements that will enable manual demand disconnection to take place, as instructed by the, under normal and / or contingent conditions.

- (a) PGCIL (b) SLDC (c) SLDC / SSLDC (d) STU

12. What is the electrical facility designed for the purpose of generating or absorbing reactive power ?

- (a) VAR absorber (b) Static VAR Compensator (c) None of these
(d) VAR generator

13. The format for the demand and energy forecasts shall be specified by -----.

- (a) Central Government (b) STU State transmission utility
(c) State government (d) Load Dispatch Centre

14. Who has got the authority to specify and enforce standards with respect to quality, continuity and reliability of service by Licensees?

- (a) Tamilnadu Electricity Regulatory Commission (b) Tamilnadu Transmission Corporation Limited
(c) Central Electricity Regulatory Commission (d) Tamilnadu Generation and Distribution Corporation Limited

15. The promotion of energy efficiency and its conservation and the review of the quality of power supply and consumer satisfaction at district level are part of the activities of the constituted by the Government of Tamil Nadu.

- (a) TNERC (b) STU (c) SLDC (d) District Committees

16. For a connected load not exceeding 4000 watts, the consumer can avail supply under

- (a) Three-phase 4 wire 415 V between phases and 240 V between phase and neutral
(b) None of these (c) either of these two (d) Single-phase 2 wire 240 V between phase and neutral

17. Energy Accounts shall be prepared by the SLDC on a basis.

- (a) quarterly (b) monthly (c) daily (d) weekly

18. By which unit the capacity of the battery is expressed?

- (a) Watt hour (b) Volt Ampere (c) Amps (d) Ampere hour

19. Substation Faults, Earthing problems, Overloading, over Voltages are the problems of

- (a) Commercial Problems (b) Operational Problems (c) Demand Side Management Problems
(d) System Planning Problems

20. What does "Tender" means in the context of The TamilNadu Transparency in Tenders Act 1998?

- (a) Tender bulletin (b) All of the above (c) Formal offer made in pursuance of and invitation by the procuring entity
(d) Set of papers containing schedule of works, technical specification and commercial terms

21. In Electricity Act 2003 "Power System" means
 (a) Any one of the above (b) Substations (c) Generating Stations
 (d) Transmission or main transmission lines
22. In the Distribution System the variation in the voltage levels depends upon which of the following factors?
 (a) All of the above (b) System Loads (c) VAR Generation
 (d) Configuration of the Transmission System and Distribution System
23. In Electricity Act 2003 "Intra-State transmission" means
 (a) Transmission of Electricity from East to West (b) Transmission of Electricity from North to South
 (c) Any system for transmission of electricity other than an inter-state transmission system (d) Transmission of Electricity between two or more states
24. What is the period of publication of District Tender bulletin?
 (a) None of the above (b) Once in every week (c) Once in a fortnight
 (d) Once in every month
25. In Electricity Act 2003 "Chairperson" means
 (a) Chairperson of Appropriate Commission (b) All of the above
 (c) Chairperson of Appellate Tribunal (d) Chairperson of the Authority
26. Under which section, "National Load Dispatch Centre" is established ?
 (a) Section 28 (b) Section 27 (c) Section 25 (d) Section 26
27. What is the time limit to give LT supply by the licensee to the consumer after receipt of application (wherever no extension or improvement works are involved in)?
 (a) Not exceeding One Month (b) Twenty Days (c) Ten Days
 (d) Fifteen Days
28. In respect of substation planning as per TN Electricity Grid Code, Sub-Station Grounding shall be done in accordance with
 (a) IEEE-72 (b) IEEE-80 (c) IEEE-60 (d) IEEE-81
29. The operation behaviour of electrical systems both in normal operation and under fault condition has to be examined by
 (a) System Planning Wing (b) Commercial wing (c) Load Dispatch Centre
 (d) Demand Side Management Wing
30. Assert the Statement given below that Personal Ledger contains, A) Account for each Contractor on running account vide Para 609. B) count for each supplier of material on credit vide Para 630.
 (a) None of these (b) A is true, but B is false (c) Both A & B false
 (d) A & B Statement are true
31. The adequacy of security deposit may be reviewed and refixed once in every in case of LT consumers taking into account the interest due for credit.

(a) two years (b) three years (c) six months (d) one year

32. What is the Expansion of SVC?

(a) Straight Voltage Control (b) Standard Voltage Control
(c) Static Voltage Controller (d) Static Var Compensators

33. Which type of extinguisher is best suitable for fire involving combustible materials of organic nature such as wood, paper, rubber etc only?

(a) Carbon-dioxide (b) Dry Powder (c) Chemical Foam (d) Soda Acid

34. What does "construction" mean in the context of The TamilNadu Transparency in Tenders Act 1998?

(a) Repair or renovation of a building/ structure (b) All of the above
(c) Construction and reconstruction of a building/ structure (d) Demolition of a building/ structure

35. What is the value of price preference provided in evaluation and comparison of tenders for public sector undertakings in respect of goods manufactured by them?

(a) Not exceeding 5% (b) 0% (c) Not exceeding 15%
(d) Not exceeding 10%

36. What should be the value of the resistance of the earth system of major substations?

(a) Shall not exceed 5 Ohms (b) Shall not exceed 1 Ohm (c) Shall not exceed 15 Ohms (d) Shall not exceed 10 Ohms

37. In which cases approval of competent authority is not necessary for rejection of tenders?

(a) Non payment of EMD (b) Not properly signed by the tenderer
(c) Quoting of low validity period (d) Poor vendor rating

38. From whom the licensee has to get directions for maintaining the load generation balance and security of the network?

(a) State Load Dispatch Centre (b) Regional Load Dispatch Centre
(c) National Load Dispatch Centre (d) System Operation

39. What are the two parameters to be taken to ensure the quality of service?

(a) None of the above (b) Voltage and Power Factor (c) Voltage and Current (d) Voltage and Frequency

40. While working on Generator Windings the valves controlling the supply to the prime mover shall be in

(a) All of the above (b) Locked and closed position (c) Open Position (d) Half open half closed

41. The total responsibility for regulating the demand of the beneficiaries / Distribution licensee in the state lies with

(a) generating stations (b) State entity (c) SLDC (d) RLDC

42. In substation battery, water should never be poured in concentrated acid as this will lead to
 (a) Chain reaction (b) No reaction (c) Explosion (d) Chemical Explosion
43. What is the time limit to shift the meter / service after getting the expenses as specified in the Distribution Code / Supply Code?
 (a) 30 days (b) 15 days (c) 10 days (d) 25 days
44. What are the categories of procurement as per The TamilNadu Transparency in Tenders Rules 2000?
 (a) Supply of goods (b) Supply of service (c) Construction
 (d) All of the above
45. Surge Arresters are generally classified accordingly
 (a) With respect to the kind of circuit to be protected such as power or communication circuit (b) All of the above (c) With respect to weather protection - indoor or outdoor (d) With respect to location - whether it is used on distribution, sub-transmission or transmission sub-stations
46. Circuit breaker is a ----- device.
 (a) Switching (b) None (c) Control (d) Isolator
47. Both fatal and non-fatal electrical accidents shall be reported to appropriate commission & Electricity Inspector under Section of Electricity Act
- (a) Section 150 of Act 2010 (b) Section 161 of Act 2003 (c) None of the above (d) Section 161 of Act 2001
48. is the Central Transmission Utility as notified by Government of India
 (a) Power Grid Corporation of India Limited (b) Central Electricity Authority (c) None of these (d) Rural Electrification Corporation
49. Surge Arrester is an ----- protective device.
 (a) Under voltage (b) Over current (c) Under current (d) Over voltage
50. For payment of rental charges for building the CE has the power to sanction Rs. Per annum.
 (a) 4 Lakh (b) 1 Lakh (c) 2 Lakh (d) 3 Lakh
51. The consumer who obtains supply from the Licensee at Low or Medium Voltage is termed as
- (a) "Low Tension (LT) consumer" (b) Low voltage consumer (c) Medium voltage consumer (d) None of these
52. The demand specified in the agreement between the consumer and the Licensee engaged in the business of supplying electricity to him is termed as
- (a) Sanctioned load (b) "Contracted Demand" (c) Connected load

(d) "Contracted Load

53. With respect to the grid operation, the roles of SLDC and STU shall be in accordance with the provisions of which Act?

- (a) Electricity Act 2007 (b) Electricity Act 2003 (c) Electricity Act 2005 (d) Electricity Act 2001

54. What is the liability of the defaulting contractor to pay actual difference in price where board orders delayed quantity of supply/work by other agencies at a higher rate

- (a) Limited to 10% (b) No liability (c) Included with in levy of liquidated damages (d) In addition to levy of liquidated damages

55. In general the frequency of sampling of Transformer Oil for testing for DGA depends upon -----.

- (a) All of the above (b) Nature of the repairs carried out (c) Operational Requirements (d) Age of the Transformer

56. When work is to be carried out on a transformer both the primary and secondary voltage switches and isolators should be in

- (a) Closed Position (b) Half Close, Half Open (c) None of the above (d) Open Position

57. All the end users, distribution licensees, transmission licensees and STU are expected to

- (a) None of these. (b) both the above. (c) provide local VAR compensation. (d) draw VARs from the HV Grid

58. Electrification works for residential building the has the power to accord the sanction of Rs. 5 Lakhs

- (a) EE (b) SE (c) Chairman (d) CE

59. What is the expansion of TNEGC?

- (a) Tamilnadu Electricity Grid Code (b) Tamilnadu Electrical General Code (c) Tamilnadu Engineering General Council (d) Tamilnadu Establishment General Council

60. The State Transmission Utility engage in the business of trading of electricity.

- (a) none of the three (b) is permitted to (c) shall not (d) can on its own

61. Wherever an International Standard or IEC Standard is followed, necessary corrections shall be made for differences in,,, humidity and other conditions prevailing in India before actual adoption of the Standard

- (a) None of the above (b) Frequency, Voltage, Temperature (c) Weight of Conductor, Distance between poles, voltage rating (d) Current, Conductor, cable

62. While in service the secondary circuits of Current Transformers should never be

- (a) Both A and B (b) Short Circuited (c) Open Circuited (d) None of the above

63. In which case the EMD is not forfeited?
 (a) Withdraw his tender before validity period (b) Sample not furnished within the stipulated time (c) Quotes lower validity period (d) Withdraw his tender after acceptance
64. Which Paragraph in TNEB Manual does explain about special attention in compilation of monthly account?
 (a) Para 710 (b) Para 702 (c) Para 713 (d) Para 709
65. What does "Procurement" mean in the context of The TamilNadu Transparency in Tenders Act 1998?
 (a) Purchase of goods (b) Purchase of construction (c) Purchase of goods or services (d) All of the above
66. What is the switching scheme of 400 KV substation?
 (a) Main and Transfer scheme (b) None of the above (c) One and half breaker scheme (d) Double main and transfer scheme
67. The transmission charges and surcharge thereon for using the transmission system of State Transmission Utility will be specified by -----.
 (a) Central Commission (b) Central Electricity Authority (c) National Load Dispatch Centre (d) State Commission
68. In Electricity Act 2003 "Member" means
 (a) Member of the Appellate Tribunal (b) Member of Authority or Joint Commission (c) All of the above (d) Member of the Appropriate Commission
69. Who is the state bulletin officer?
 (a) Director of industries and Commerce (b) Director of information and public relation (c) Direction Transmission projects (d) Director of Agriculture
70. What is the time schedule to extend Temporary supply to the consumer after receipt of application involving Extension and Improvement without transformer?
 (a) 20 days (b) 45 days (c) 60 days (d) 120 days
71. For each individual work to be carried out after obtaininga detailed estimate must be prepared for the technical sanction of the authority competent
 (a) Approval from CE (b) Administrative approval (c) Approval from SE (d) Section office approval
72. Where the invitation and acceptance of tenders shall be published if the procurement covers more than one district?
 (a) State bulletin only (b) Any one of the district bulletin (c) Both state bulletin and district bulletin of such districts (d) District bulletin of such districts only.
73. What is meant by Line Clear?
 (a) Line clears are permits issued for working on lines or equipment which

are not in service but connected from mains or supply for the purpose of the work (b) Line clears are permits issued for working on lines or equipment which are in service but disconnected from mains or supply for the purpose of the work (c) Line clears are permits issued for working on lines or equipment which are to be erected (d) Line clears are permits issued for working on lines or equipment which are in service but connected from mains or supply for the purpose of the work

74. What should be the minimum distance that have to be maintained between the boom and all power lines or feeders during the travelling operation of a Mobile Crane?

- (a) 2 feet (b) 6 feet (c) 3 feet (d) 5 feet

75. What should be the best angle for a ladder with the horizontal?

- (a) 75° (b) 50° (c) 55° (d) 65°

76. What is the expansion for LCP?

- (a) Load Centre Point (b) Load Control Process (c) Low voltage Consumers Point (d) Line Clear permit

77. For establishment of new substation and new lines, the chairman has the power to accord the administrative approval for

- (a) Rs. 150 Lakhs (b) Rs. 100 Lakhs (c) Rs. 250 Lakhs (d) Rs. 50 Lakhs

78. Mention the ratio of mixing acid with distilled water in substation battery.

- (a) 1:5 (b) 3:1 (c) 1:3 (d) 5:1

79. What is the value of investment in plant and machinery in an industrial unit to qualify as "Domestic small scale industrial unit"?

- (a) Not exceeding 10 Lakhs (b) Not exceeding 100 Lakhs (c) Not exceeding 5 Lakhs (d) Not exceeding 50 Lakhs

80. Which of the factors govern the maintenance of the Circuit Breaker?

- (a) Switching Frequency and service conditions (b) Number of Short Circuit interruptions (c) All of the Above (d) Number of years of service

81. The generating stations shall generate / absorb reactive power as per instructions of, within the capability limits of the respective generating units.

- (a) RLDC (b) SLDC (c) None of these (d) STU

82. Employees working in a road or street shall

- (a) Make a person to be stationed so as to warn the public that work is going on (b) Erect barrier guards before engaging in such work (c) Display danger signs or red lamps so as to be conspicuous to the approaching traffic (d) All of the above

83. What are the information available in the Notice inviting Tender?

- (a) All of the above (b) Name of the scheme, project or programme (c) EMD payable (d) Last date and time for receipt of tenders and time of opening of tenders

84. Every generating station connected to the Grid at 230 kV or above, 230 kV sub-stations with transformation capacity more than 200 MVA, all substations of voltage 400 kV and above shall be provided with disturbance recorders and event loggers and shall be synchronized with a common time reference of

- (a) Main Server (b) State Level Dispatch (c) Global Network
- (d) Global Position Satellite (GPS) System

85. If two or more Power Transformers are to operate in parallel they should have -----.

- (a) All of the above (b) Same Voltage Ratio (c) Same per Unit Impedance
- (d) Same Polarity

86. Which tender does not require EMD?

- (a) Limited Tender (b) All of the above (c) Single Tender
- (d) Open Tender

87. Who has the full power to accord the technical sanction for DCW Estimates.

- (a) Chairman (b) BLTC (c) SE (d) CE

88. New LT service connections with a connected load of motors of and above or for using welding transformers shall be effected only with installation of capacitors of adequate ratings with ISI marking.

- (a) 5 HP (b) 2 HP (c) 4 HP (d) 3 HP

89. Who has the power to enhance the capacity in power transformer and provision of additional power transformer?

- (a) CE (b) Chairman (c) SE (d) EE

90. Maximum Demand in a month for HT service means

- (a) All of the above (b) Average value of the Highest Kilovolt-amperes delivered at the point of supply of the consumer during any consecutive thirty / fifteen minutes in a month depending on the nature of the load
- (c) Highest value of the average Kilovolt-amperes delivered at the point of supply of the consumer during any consecutive thirty / fifteen minutes in a month depending on the nature of the load
- (d) Highest value of the Peak Kilovolt-amperes delivered at the point of supply of the consumer during any consecutive thirty / fifteen minutes in a month depending on the nature of the load

91. For a term of how many years the Member of the Appellate Tribunal shall hold office from the date on which the Member enters upon his office?

- (a) For a term of five years (b) For a term of four years
- (c) For a term of Two years (d) For a term of three years

92. When a notice inviting tender and decisions on tender shall be published in District tender Bulletin?

- (a) Where the value of procurement exceeds 10 Lakhs (b) Where the value of procurement exceeds 10 Lakhs or below 50 lakhs
- (c) Where the value of procurement exceeds 25 Lakhs (d) Where the value of procurement exceeds 5 Lakhs or below 25 lakhs

93. Which type of extinguisher is best suitable for fire involving flammable liquids and flammable gases under pressure?
 (a) Carbon-dioxide (b) Chemical Foam (c) Soda Acid (d) Dry Powder
94. For availing supply under three-phase 3 wire, at 11,000 volts or 22 Kv, the minimum demand should be
 (a) 75 kVA (b) 63 kVA (c) 50 kVA (d) 112 kVA
95. For Repair & Maintenance in construction of Inspection Bungalow, the CE has the power to accord sanction of Rs.....
 (a) 1 Lakh (b) None of these (c) 2 Lakh (d) 3 Lakh
96. In a Transformer, DY 11 means -----.
 (a) High Voltage Winding is connected in Star and Low Voltage Winding is connected in Delta (b) High Voltage Winding is connected in Delta and Low Voltage Winding is connected in Delta (c) High Voltage Winding is connected in Star and Low Voltage Winding is connected in Star (d) High Voltage Winding is connected in Delta and Low Voltage Winding is connected in Star
97. Why the insulation resistance values of the windings of the Power Transformer deteriorate?
 (a) All of the above (b) Due to very low resistivity value of the Transformer oil (c) Due to ingress of moisture into the insulating materials in the transformer like oil, press boards (d) Due to ingress of moisture into the windings
98. To accord initial sanction of all post for various offices of the board the Chairman has the power to accord Rs.....
 (a) 25 Lakh (b) 75 Lakh (c) 50 Lakh (d) 12 Lakh
99. To form new RCC/PSC casting yards in the circle, the CE hasto sanction the estimates.
 (a) >100 Lakhs (b) Full Power (c) 150 Lakhs (d) No Power
100. What is initial period of validity of tender required by Transparency in Tender Rules 2000?
 (a) Not less than 30 days (b) Not less than 120 days (c) Not less than 90 days (d) Not less than 60 days