

ANSWER SHEETS.Marks.

1 (a) What are the basic characteristics of surge arresters.

Ans: Code of Technical Instruction.

Chapter - 5.05.01 (i) to (iv)

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(b) What are the preventive measures to be taken while using SF₆ gas?

Ans: Code of Technical Instruction

Chapter: 4.09.06 (a, b & c)

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(c) What are the procedures to be followed for opening of two part tender?

Ans: Tender Regulation 1991.

Clause 19 (i), 19 (b) (7) &
20 A (1) to 20 A (7)

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(d) How to prepare electrolyte for initial charging and write short notes on initial charging.

Ans: Code of Technical Instruction

Chapter 2.03.10 &

2.04.01

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2 (a) Which authority is responsible for analyzing the outages ^{based on demand} and list out its role regarding proposed outages.

Ans: Tamil Nadu Grid Code.

Chapter - 7-5 (e) (i) to (vii)

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(b) Write short notes on STU and its function.

Ans: The electricity Act 2003

Clause 39 (1), 39 (2) ~~at~~
(a) to (d)

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2 (c) What are the procedures to be followed for effecting temporary supply in the name of contractor to construct an over bridge to a long of 0.75km across a river. 5

Ans:- Since this kind of supply, requesting for construction of over bridge in the name of contractor, never be converted to permanent supply, it may be treated as purely for temporary purpose, the following procedure shall be followed

TNERC

Notification No. TNERC /DC/8-17 dated. 6.9.13

Clause 39 (2) - (i) to (iv)

d) What are the safety measures to be taken before and after opening of single throw switch and double throw air break switch? 5

Ans: Safety Manual.
The Madras state Electricity Board.
Chapter. 14 (1) to (9)

3 (a) In what circumstances an administrator would be appointed and how long he could be continued in service? 4

Ans: The Electricity Act 2003.
Suspension of distribution licence and sale of utility.

Clause 24 (1)

b) Whether a disconnected service could be reconnected after expiry of TA notice period, To say Yes/No the reasons may be explained. 4

Ans. Tamil Nadu Elec. Supply Code.
22. Restoration of supply of electricity.
22 (3)

C. How to resolve if a Consumer has been overcharged and how to handle the complaints of error in billing? 6

Ans: Notification No. TNERC/SC/7-8
dt 6.6.2008.

(Where it is found that the Consumer has been overcharged, the excess amount paid by such Consumer shall be refunded along with the interest at the rate applicable for security Deposit. The interest shall be computed from the date from the date on which the excess amount was paid. Such excess amount with interest may be paid by cheque in the month subsequent to the detection of excess recovery or may be adjusted in the future current consumption bills upto two assessments at the option of Consumer. The sum^{which} remains to be received after two assessments may be paid by cheque. Interest shall be upto the date of last payment.

d) Calculate the Capacitor Compensation Charges to an Industrial Service Connection which was inspected on 12.5.2015, which sanctioned demand is 20 HP, connected with 20 HP single electric motor in service with 3 kVAR capacitor. C C Charges for the preceding months are tabulated below.

6/2014	- Rs 8800 -
8/2014	- Rs 9670 -
10/2014	- Rs 10120 -
12/2014	- Rs 9800 -
2/2015	- Rs 11730 -
4/2015	- Rs 10210 -

Ans:

Capacitor required to be
 Connected for 20 HP motor is 8 KVAR
 Capacitor in service 3 KVAR

Capacitor Compensation -

$$\begin{aligned}
 &= \frac{3}{8} \times (10210 + 11730) \times \frac{10}{100} \\
 &= \frac{3}{8} \times 21940 \times 0.1 \\
 &= Rs\ 822.75 \\
 &\approx \underline{Rs\ 825} =
 \end{aligned}$$

A(a) What are the general conditions specified for extending service connections under low tension category? 5

Ans: TNERC Distribution Code.
 Clause 29 (i) to (2) & 15, 15A & 16.

b) Explain the constitution of Central Commission and qualification for appointment of members. 5

Ans: The Electricity Act 2003.
 Functions - Clause 76 (1) to (6)
 Qualification - clause 77 (1) to (4)

c) In what circumstances if the licensee failed to maintain the time schedule as per standards of performance, exempted from levying compensation. 5

Ans: Tamil Nadu Electricity DSOP -
 Notification No: TNERC/SPR/9/1-4
 dated 25.7.2006.

Clause 2 (i) to (iii)

d) Explain the procedures to be followed while handling of complaints received from consumers.

Ans: Tamil Electricity DSOP.
Clause 20 (i) to (vi)

5 (a) Describe the actions to be taken if an intending LT consumer has not come forward to avail supply even after completion of all extension works.

Ans: Distribution Code.
Clause: 31 (2) to (5)

(b) Write short notes of any three safety appliances.

Safety Manual.

Chapter 5

- 1. @ 15% 2. 2 (1) to (6)
- 3. 3 (1) to 12
- 4. 4 (1) to (5)

(c) Describe the types of fires and its relevant fire extinguishers to be recommended.

Ans: Safety Manual.

Chapter - 7
7 (i) to (3) to (5)
7 (2) to (3) to (5)

5 (d) Explain the following artificial respiration method.

(i) Hip lift Back pressure method.

(ii) Schaffer method or prone.

Ans: Safety Manual pressure method

6. shock treatment & first Aid.

- (i) chapter (6) to A
- (ii) chapter 6 to 7

b (a) What are the reasons other than non payment of e/c charges for disconnection of live service.

4

Ans: Supply Code.

Chapter - 3 -- Disconnection & Restoration of electric supply.

Clause 21 (2) of IInd Para.

This provision of act not in derogation of any other law for the time being in force. According to the licensee shall be entitled to disconnect the supply of electricity subject to the provision of water (Prevention & Control of Pollution) Act 1974, Air (Prevention and Control of Pollution) Act 1981 and environment (Protection) Act 1986 etc

(b) Explain the procedures to be followed if a consumer has challenged the assessed rating of an ~~inst~~ installed electric motor in an agricultural service connection.

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Ans: Supply Code.

Clause 3 (e & d)

(c) Calculate the required/refund security deposit amount for the review year of 2014-15 to an LTCT, IIB category consumer, having sanctioned demand of 110 kW.

The SC effected on 30.9.2014

e/c amount collected Rs 600/- kw and

e/c charged collected from 30.9.2014 to 31.3.2015

is Rs 268400/-

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Section 43 of the Act is however not applicable in the case of agriculture & hort services which shall be governed by the directives issued by the Commission from time to time on the basis of the guidelines on this matter by the national electricity policy as stipulated in section 86(4) of the act and policy directs in public interest by the state gov^t

b) What are the powers delegated to the officers by the state government who dealt the cases of theft of energy.

Ans: Tamil Nadu Electricity Supply Code.

Chapter-4: Tampering, Distress or Damage to electrical plant, meters etc.

Clause 23 (A) - (2) a to c.

c) Calculate the extra levy on account of unauthorised use of electricity under section 135 (i) (2).

(i) From TF IA, Supply extended to Commercial purpose.

Total connected load - 2300W.

Misused load at the time of inspection - (250 watts).

One year recorded consumption 3800 units

(ii) From Agriculture service Connection supply extended to Industrial purpose.

Sanctioned demand 5HP.

Connected load 3HP

(7c) (i) Ans:

Misused load at the time of Inspection } - 1250 watts.

Total Connected load - do - - - 2300 watts.

No of days - 365 days.

Recorded Consumption for the period (1 yr) } - 3800 units.

$$\text{Quantum of Misused Energy} = \frac{1250}{2300} \times 3800 = 2065 \text{ units.}$$

Extra levy charges on account of unauthorised use of Energy } $2065 \times 2 \times 8.10 = \text{Rs } 33453.$

$$\text{E. Tax } 5\% = \text{Rs } 1672.50$$

$$\text{TOTAL} = \text{Rs } 34289 - \\ \approx \text{Rs } 34290 -$$

(ii)

Sand. load - 5 HP.

Connected load - 3 HP $\approx 2.238 \text{ kW}$

Load factor - 80%.

DF - 1.0.

No of shifts - 1

No of working days - 365 days.

Computed Consumption for the back period of $\frac{12}{\text{months}}$

$$\frac{2.238 \times 0.8 \times 8 \times 365}{1.0} = 5228 \text{ units}$$

Extra levy at Rs 6.35 x 2 } $= 5228 \times 6.35 \times 2 = \text{Rs } 66395$

$$\text{E. Tax } 5\% \text{ } \left(\frac{66395}{2} \right) = \frac{1660}{\text{Rs } 68055}$$

7(d) Who are fully and partially exempted from Payment of EMD while participating in Tender?

Ans: Tender Regulation 1991 -

Full exemption - Clause 13 (1), 13 (4)

Partial exemption - Clause 13 (2)

8(a) What is the action of tender accepting authority if 2 or more tenders quoted the same price? (5)

Ans: Tender Transparency in Tender Act 1998 -
Clause 10 (5).

(b) What is the Conditions specified for accepting belated supply of prices are in downward trend? (5)

Ans: TN&R Tender Regulation 1991 -
Clause 26.5 (c).

(c) Who are Competent Authority to approve hiring of vehicle proposal after principle of hiring has been approved by BLTC. (5)

Ans: TN&R Tender Regulation 1991
Annexure -

d) What is the procedure to be followed in case of disposal of scrap tender, when the highest tenderer back out and failed to pay the sale amount? (5)

Ans: TN&R Tender Regulation 1991 -
Clause - 29.6.