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**4th Sem / Branch : Elect.**

**Subject:- Installation and Maintenance of Electrical Equipments**

Time : 3Hrs.

M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory  $(10 \times 1 = 10)$

Q.1 Pin type insulators are used (CO2)

- a) upto 33 KV
- b) Above 33 KV
- c) upto 11 KV
- d) All of above

Q.2 Earth tester is used to measure (CO7)

- a) Current
- b) Earth resistance
- c) Voltage
- d) None

Q.3 The system of laying underground cables in thickly populated area (CO3)

- a) Draw-in-system
- b) Solid system
- c) Direct system
- d) All of above

Q.4 Buchholz relay is used in (CO6)

- a) Generator protection
- b) Line protection
- c) Transformer protection
- d) All of above

Q.5 In India, for distribution of electric power, we usually use (CO2)

- a) Wooden poles
- b) Steel poles
- c) RCC poles
- d) Both b and c

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Q.6 The main requirements in layout of indoor substation are (CO6)

- a) Building construction
- b) Earthing
- c) Cable trenches
- d) All of above

Q.7 Which IE rule is applicable for earthing? (CO1)

- a) Rule No.88
- b) Rule No.90
- c) Rule No. 55
- d) None of the above

Q.8 Storage of transformer should be (CO6)

- a) In open area
- b) In clean and dry place
- c) In one side of factory
- d) All of above

Q.9 Insulation resistance is measured by (CO7)

- a) ohm-meter
- b) Ammeter
- c) Meggar
- d) Voltmeter

Q.10 The underground system cannot be operated above (CO4)

- a) 220 KV
- b) 66 KV
- c) 33 KV
- d) 11 KV

**SECTION-B**

**Note:** Objective type questions. All questions are compulsory.  $(10 \times 1 = 10)$

Q.11 Define Bird guard. (CO2)

Q.12 Write the name of two types of spanner. (CO1)

Q.13 Name any two workmen's safety devices. (CO1)

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- Q.14 Buchholz relay used in \_\_\_\_\_. (CO6)  
Q.15 Define maintenance. (CO7)  
Q.16 Define substation. (CO3)  
Q.17 Why telecommunication lines must be placed below the power lines? (CO2)  
Q.18 The underground cable cannot be operated above \_\_\_\_\_. (CO4)  
Q.19 Explain Bus Bar. (CO6)  
Q.20 The electric power can be transmitted by \_\_\_\_\_. (CO2)

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Write and explain the methods of erection of steel structures for installing a transmission line. (CO2)  
Q.22 Explain Rule 88 for guarding. (CO1)  
Q.23 Classified different types of Maintenance. (CO9)  
Q.24 Write the maintenance schedule of grid substation. (CO6)  
Q.25 What is substation? Explain different type of substations. (CO6)  
Q.26 What are the various tests done on transformer? Explain any one. (CO8)  
Q.27 Why substations are installed near the load centers? (CO6)  
Q.28 Explain patrolling and visual inspection of lines. (CO8)

- Q.29 With the help of diagram explain how Jumpers are connected on pole? (CO2)  
Q.30 Write the clearance required for overhead conductors while crossing over (CO1)
  - Railway Line
  - Telecommunication line

Q.31 Explain general procedure of overhauling of motors. (CO8)  
Q.32 Explain lighting arrestor and its types. (CO2)  
Q.33 Distinguish between special and night inspection. (CO8)  
Q.34 Explain briefly the laying of service lines. (CO2)  
Q.35 Explain the testing of insulation resistance of earth. (CO7)

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 With the help of suitable diagrams explain the pole mounted and foundation mounted substations. (CO6)  
Q.37 Explain preventing maintenance and its types and advantages of preventive maintenance in detail. (CO9)  
Q.38 Write short note on:-
  - Danger notice (CO1)
  - Maintenance of HT/LT circuit breaker (CO6)

**(Note:** Course outcome/CO is for office use only)