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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 (10x1=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. (10x1=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 Classify different types of Maintenance. (CO9)
- Q.24 Write the maintenance schedule of grid substation. (CO6)
- Q.25 What is substation? Explain different types 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)

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- 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)
- a) Railway Line
- b) Telecommunication line
- Q.31 Explain general procedure of overhauling of motors. (CO8)
- Q.32 Explain lightning 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 preventive maintenance and its types and advantages of preventive maintenance in detail. (CO9)
- Q.38 Write short note on:-
- a) Danger notice (CO1)
- b) Maintenance of HT/LT circuit breaker (CO6)
- (**Note:** Course outcome/CO is for office use only)

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