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**5th Sem / Branch : Elect., Elect & Eltx. Engg.**  
**Sub.: Electrical Power-I/Power-I (G.T. & D.E.P.)**

Time : 3Hrs.                                      M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The PH value of water used for boilers is? (CO1)  
a) Unity                                      b) 7  
c) 10    d) Slightly more than 7
- Q.2 A Diesel power plant is best suited as (CO1)  
a) Base load plant  
b) Stand by plant  
c) General purpose plant  
d) Any of the above
- Q.3 Geothermal energy is obtained from (CO1)  
a) Sun    b) Oceans  
c) Earth                                        d) Tides
- Q.4 Static capacitors are rated in terms of (CO6)  
a) Kw    b) Kwh  
c) kVAR                                        d) None of the above
- Q.5 Sag is independent of (CO3)  
a) Length of span

- b) Line voltage  
c) Tension in the conductor  
d) None

- Q.6 Regulation of the line can be negative if power factor is (CO3)  
a) Decreased                                      b) Low  
c) Skin    d) Leading
- Q.7 In 11kV overhead line the insulator provided at the dead end is (CO3)  
a) Pin type    b) Shackle type  
c) Disc type                                        d) Egg type
- Q.8 An over excited synchronous motor operates at (CO6)  
a) Leading power factor  
b) Unity power factor  
c) Lagging power factor  
d) 0.5 pf leading
- Q.9 Method used for laying of underground cable (CO4)  
a) Direct laying                                      b) Solid system  
c) Draw in system                                      d) All of these
- Q.10 The insulator employed in HT (220kV) line are (CO3)  
a) Strain type    b) Pin type  
c) Suspension type                                      d) Shackle type

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## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Define Proximity effect. (CO3)  
Q.12 What is primary transmission? (CO5)  
Q.13 Define power factor. (CO6)  
Q.14 ACSR stands for \_\_\_\_\_. (CO3)  
Q.15 Define reactive power. (CO2)  
Q.16 Synchronous condensers are used to improve the power factor (T/F) (CO6)  
Q.17 Economiser raises boiler efficiency by \_\_\_\_\_. (CO1)  
Q.18 Define skin effect. (CO3)  
Q.19 A Kaplan turbine is a low head axial flow turbine (T/F) (CO1)  
Q.20 Define demand factor. (CO2)

## SECTION-C

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

- Q.21 What is the importance of non-conventional sources of energy in present scenario? (CO1)  
Q.22 What is the effect of Load factor on cost of generation. (CO2)  
Q.23 What are the factors affecting Site selection of Hydro Power Plant. (CO1)  
Q.24 Difference between feeders, distribution & service mains. (CO4)

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- Q.25 Explain the different types of faults in overhead & underground cables. (CO4)  
Q.26 What do you mean by transposition? Discuss with diagram. (CO4)  
Q.27 Define bundle conductors.  
Q.28 Explain the Murray loop test for fault finding in underground cables.  
Q.29 Write the components of a pole mounted substation and their function. (CO4)  
Q.30 What is sag? Explain the expression for it. (CO3)  
Q.31 Explain the significance of diversity factor.  
Q.32 Give the layout of 66/33 KV substation. (CO5)  
Q.33 Give classification of underground cables. (CO4)  
Q.34 Explain Radial distribution system? (CO4)  
Q.35 Discuss the most economical power factor? (CO6)

## SECTION-D

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

- Q.36 Describe Varley Loop Test for location of short circuit & ground fault in Underground cable. (CO4)  
Q.37 Explain the construction and working of thermal power plant with a diagram. (CO1)  
Q.38 Draw & Discuss the layout of Transmission and Distribution system. (CO3)

Note Course Outcome (CO) mentioned in the question paper is for official purpose only.

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