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**5th Sem / Elect, Elect & Eltx Engg.
Subject:- 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 volume of copper required for an a.c. transmission line is inversely proportional to
a) current b) voltage
c) Power factor d) Both (b) and (c)

Q.2 Demand factor is defined as the ratio of
a) average load to max.load
b) max. demand to connected load
c) connected to max.demand
d) max.demand to average load.

Q.3 A load curve is a plot of
a) load v/s time b) load v/s current
c) load v/s voltage d) load v/s power

Q.4 The main criterion for selection of the size of a distributor for radial distribution system is
a) Voltage drop b) Corona Loss
c) temperature rise d) Capital Cost

Q.5 The power factor of an inductive circuit is called as
a) Leading power factor

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- b) Lagging Power factor
c) unity Power factor
d) None of these

Q.6 Primary distribution lines are known as
a) reactors
b) feeders
c) sub-transmission lines
d) None of these

Q.7 The effect of corona is
a) increased energy loss
b) increases reactance
c) increased inductance
d) All of these

Q.8 The transmission line which feed different sub-stations represent
a) primary transmission
b) secondary transmission
c) primary distribution
d) secondary distribution

Q.9 Step-up sub-stations are installed near
a) generating stations
b) distribution sub-stations
c) transmitting stations
d) Consumer's Premises.

Q.10 Which of the following plants will have the highest capital cost?
a) Nuclear Power plant b) Diesel Power plant
c) Thermal Power plant d) None of these

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SECTION-B

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

- Q.11 Define Secondary Transmission.
Q.12 Define Load Factor.
Q.13 The main reason for using high voltage for long distance power transmission is _____
Q.14 The variable load which occurs over and above the base load is called _____
Q.15 Diversity factor in a power system is always _____ that unity.
Q.16 Corona loss is minimized, if the size of the conductor is _____
Q.17 If the sag in the overhead line increases, tension in the line _____
Q.18 The service mains connects the feeder and distributor. (T/F)
Q.19 Blavier's test is used to find ground fault in multi-core cable. (T/F)
Q.20 Overhead system is more safer than underground system. (T/F)

SECTION-C

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

- Q.21 What is Sub-station? Name the factors which will be kept in mind while designing and erecting a sub-station.
Q.22 What do you mean by Ferranti effect? How can you reduce it?
Q.23 How does the proximity effects affects the resistance of the conductor?

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- Q.24 Explain briefly the skin effect in a transmission line. On what factors does it depend?
Q.25 Discuss briefly the design considerations in distribution system.
Q.26 What are various components of an overhead 400/230 V distribution line.
Q.27 What is steam power station? Discuss its advantages and disadvantages .
Q.28 Describe the various methods for reducing corona effect in an overhead line.
Q.29 Discuss the various types of Sub-stations.
Q.30 Explain how the electrical breakdown can occur in an insulator.
Q.31 What are the desirable characteristics of Tariff.
Q.32 What are the advantages of improved power factor?
Q.33 What are the various methods for improving string efficiency? Explain.
Q.34 What are the cause of low power factor?
Q.35 What do you understand by power factor? Explain the necessity of improving power factor.

SECTION-D

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

- Q.36 Explain the concept of Bundle Conductors and Transposition of conductors.
Q.37 Discuss the comparison of the generating stations in detail.
Q.38 Explain the working of a Nuclear power plant with its schematic diagram.

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