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# **5th Sem / Electrical**

## **Subject : Power System**

Time : 3 Hrs.

M.M. : 60

## **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 Which support for overhead transmission lines has the least life?

  - a) Wooden poles
  - b) Fabricated steel structure
  - c) R.C.C poles
  - d) Steel poles

Q.2 A Load curve is a plot of

  - a) Load v/s time
  - b) Load v/s current
  - c) Load v/s voltage
  - d) Total no of units generated v/s time

Q.3 Which distribution system is more reliable?

  - a) Radial
  - b) Tree system
  - c) Ring Main
  - d) All of these

**Q.4** The power factor of an inductive circuit is

- a) Leading power factor
  - b) Lagging power factor
  - c) Unity power factor
  - d) none of these

- Q.5 Annual operating cost of generating plant consists of

  - a) Fixed charges      b) Semi-fixed charges
  - c) Operating charges    d) All of these

- Q.6 Primary distribution lines are

  - a) Reactors
  - b) Feeders
  - c) Sun-transmission lines
  - d) None of these

## **SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 The maximum value of power factor is \_\_\_\_\_

Q.8 With the increase in voltage of transmission, the line support cost reduces. (True/False)

Q.9 A diesel power plant is best suited as stand by plant. (True/False)

Q.10 A.C.S.R stands for \_\_\_\_\_

Q.11 Demand factor is the ratio of \_\_\_\_\_ to connected load.

(1)

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(2)

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Q.12 The cost of indoor substation is \_\_\_\_\_ than the outdoor substation of same capacity.

### SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Name & Explain different types of insulators used for transmission lines.

Q.14 Define and explain String Efficiency.

Q.15 Define the following terms:

- a) Demand Factor
- b) Load Curve

Q.16 How can power factor be improved?

Q.17 What do you mean by underground distribution system?

Q.18 Mention merits of Ring Distribution over Radial distribution system.

Q.19 Write a short note on Outdoor Substation?

Q.20 Write any four advantages of H.V.A.C transmission system?

Q.21 Define Tariff and what are its objective?

Q.22 Discuss any four advantages and disadvantages of Steam Power Station.

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Write a short note on :-

- a) Merits & demerits of Diesel Power Plant.
- b) Gas insulated Substation

Q.24 Draw & discuss the layout of 3 phase transmission and distribution system.

Q.25 Compare Overhead Distribution System versus Underground Distribution System.