

- Q.26 Differentiate between feeder, distributor and service main. (CO4)
- Q.27 State the advantages and disadvantages of outdoor substations over indoor substations. (CO4)
- Q.28 Write down the properties of insulating materials. (CO5)
- Q.29 Write short note on laying of underground cables. (CO5)
- Q.30 Explain Ferranti effect in transmission lines. (CO5)
- Q.31 What are the advantages and disadvantages of corona. (CO2)
- Q.32 Write a short note on FACTS devices. (CO3)
- Q.33 What are the important functions which can be performed at the substation? (CO4)
- Q.34 What is the criteria of maintenance of substation equipment. (CO3)
- Q.35 How does AC distribution differ from DC distribution? (CO4)

#### **SECTION-D**

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 What is distribution system. Distinguish between Radial, Ring Mains and inter-connected distribution system. (CO4)
- Q.37 Deduce an expression for voltage regulation and efficiency of a 1-phase short transmission line. (CO2)
- Q.38 Compare overhead and underground distribution systems. (CO5)

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202433

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202433

### **3rd Sem / Mechatronics**

#### **Subject:- Electric Power Transmission and Distribution**

Time : 3Hrs. M.M. : 100

#### **SECTION-A**

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

- Q.1 With the increase in transmission voltage, the voltage regulation of the line \_\_\_\_\_. (CO2)
- a) Decrease
  - b) Increase
  - c) Improves
  - d) Smaller
- Q.2 In India electrical power is distributed by (CO4)
- a) 2-wire dc system
  - b) 3-wire dc system
  - c) 3-phase 4-wire system
  - d) 3-phase 3-wire system
- Q.3 HVDC stands for \_\_\_\_\_. (CO3)
- a) Vectorially
  - b) corona loss
  - c) Suspension
  - d) High voltage Direct current
- Q.4 The highest transmission voltage in India is (CO4)
- a) 220KV
  - b) 765KV
  - c) 132KV
  - d) 400KV

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202433

- Q.5 Name the cable which connects the distributor to the consumer terminals. (CO4)  
 a) Distributors      b) Service mains  
 c) Feeders      d) All of these
- Q.6 The most reliable distribution system is (CO4)  
 a) Radial system  
 b) Ring main system  
 c) Interconnected system  
 d) None of these
- Q.7 What is maximum value of power factor? (CO2)  
 a) 0.5      b) 1  
 c) 1.5      d) 0.95
- Q.8 A non-hygroscopic materials which \_\_\_\_\_ (CO5)  
 a) Does not catch fire  
 b) Avoids corrosion  
 c) Catches fire quickly  
 d) Avoids absorption of moisture
- Q.9 The pole mounted distribution transformer is generally. (CO5)  
 a) Star-delta      b) Delta-star  
 c) Star-star      d) Delta-delta
- Q.10 The power loss in an overhead transmission line is mainly due to \_\_\_\_\_ (CO1)  
 a) Resistance      b) Inductance  
 c) Capacitance      d) ACSR

## SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 The skin effect is independent of supply frequency. True/False (CO2)
- Q.12 What is corona ? (CO3)
- Q.13 What is proximity effect (CO2)
- Q.14 \_\_\_\_\_ system is less reliable than underground system. (CO4)
- Q.15 The value of earth resistance should be \_\_\_\_\_ (CO1)
- Q.16 What is primary distribution? (CO4)
- Q.17 FACTS stands for \_\_\_\_\_. (CO3)
- Q.18 Define power factor. (CO2)
- Q.19 \_\_\_\_\_ is extremely used material for overhead line insulators. (CO5)
- Q.20 Overhead line system can be used up to \_\_\_\_\_ voltage. (CO1)

## SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Describe the various parameters (Constants) of an overhead transmission lines. (CO2)
- Q.22 Draw the key diagram of power system starting from generating station. (CO1)
- Q.23 Compare HVDC and EHV AC transmission system.
- Q.24 Explain "Skin effect" in details. (CO3)
- Q.25 What are bundled conductors and mention their advantages? (CO2)