

- Q.26 Give classification of underground cables. (CO4)
 Q.27 Write a short note on bundling of conductors. (CO3)
 Q.28 Explain the phenomenon of corona. (CO3)
 Q.29 Define Earthing. Explain different methods of earthing. (CO4)
 Q.30 Write a short note on skin effect. (CO2)
 Q.31 What is sag? Explain the expression for it. (CO3)
 Q.32 Write the limitations of EHV AC with respect to the distribution system. (CO3)
 Q.33 Difference between feeders, distribution & service mains. (CO4)
 Q.34 Write a short note on the ring distributor. (CO4)
 Q.35 What are the main components of overhead lines? (CO3)

SECTION-D

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

- Q.36 Draw single line diagram of layout of 33/11 KV substations. Explain its component functions.(CO4)
 Q.37 Explain various types of insulators used in transmission lines. Give their field of applications. (CO3)
 Q.38 Explain performance of the short line, its efficiency and voltage regulation. (CO2)

(Note: Course outcome/CO is for office use only)

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Mechtronics

Subject:- Electric Power Transmission & Distribution

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Two power factor of an inductive circuit is called as (CO6)
 a) Leading power factor b) lagging power factor
 c) Unity power factor d) none of these
 Q.2 The presence of ozone due to corona is harmful because it (CO3)
 a) Corrodes the material
 b) Transfer energy to the ground
 c) Gives odour
 d) Any of the above
 Q.3 The underground system cannot be operated above (CO4)
 a) 220 KV b) 66 KV
 c) 22 KV d) 11 KV
 Q.4 Static capacitors are rated in terms of (CO6)
 a) Kw b) Kwh
 c) kVAR d) none of the above

- Q.5 Distribution transformers are usually connected in (CO3)
 a) delta/star b) star/delta
 c) delta/star d) star/star
- Q.6 Earth wire are usually made of (CO4)
 a) Aluminium b) brass
 c) GI d) ACSR
- Q.7 In 11kV overhead line the insulator provided at the dead end is (CO5)
 a) Pin type b) Shackle type
 c) disc type d) egg type
- Q.8 Sag is independent of (CO3)
 a) Length of span
 b) line voltage
 c) Tension in the conductor
 d) All of these
- Q.9 A 3-phase 4 wire system is commonly used on (CO1)
 a) Primary transmission
 b) Secondary transmission
 c) Primary distribution
 d) Secondary distribution
- Q.10 The use of strain type insulators is made where the conductors are (CO5)
 a) Dead End
 b) Road Crossing
 c) Intermediate anchor towers
 d) All of the above

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 What is service mains? (CO4)
- Q.12 Define sag. (CO3)
- Q.13 Write types of distribution systems. (CO3)
- Q.14 What is corona? (CO3)
- Q.15 Define ferranti effect. (CO3)
- Q.16 Max value of power factor is _____ (CO6)
- Q.17 In short transmission lines, the effect of _____ is negligible. (Co2)
- Q.18 SVC stands for _____ (CO6)
- Q.19 Wooden poles are used as line supports for voltage upto _____. (CO5)
- Q.20 What is an ACSR conductor? (CO2)

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Write a short note on FACTS devices. (CO3)
- Q.22 What do you mean by transposition of conductors? (CO3)
- Q.23 What is string efficiency? Derive an expression for string efficiency. (CO3)
- Q.24 Differentiate between high voltage AC and DC systems. (CO3)
- Q.25 Compare overhead and underground cable. (CO5)