No. of Printed Pages : 4
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180952/170952/120952/
030952/106552

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

Time : 3 Hrs. **M.M. : 100**

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 Power plant that is favorable for peak hours of load (CO1)

a) Nuclear power plant b) Hydro power plant
c) Diesel power plant d) Both B & C

Q.2 Load factor is (CO2)

a) Average load / Maximum demand
b) Maximum demand / Average load
c) Maximum demand / Connected load
d) None of these

Q.3 Sag is the Line is given by : (CO3)

a) $WL^2/8T$ b) $W^2L/8T$
c) $WT^2/8L$ d) LT/8L

Q.4 Economizer is used in : (CO1)

a) Solar Power plant
b) Thermal power plant
c) Hydroelectric power plant
d) None of these

Q.5 _____ is a renewable Energy Source. (CO1)

a) Diesel Oil b) Coal
c) Sun d) Both A & B

Q.6 Chances of occurrence of corona are maximum during: (CO3)

a) Humid weather b) Dry weather
c) Winter d) Hot summer

Q.7 The insulator used in EHT lines are : (CO3)

a) Suspension type b) Pin type
c) Egg type d) Reel insulator

Q.8 The Distributors in residential areas are : (CO5)

a) Single phase two wire
b) Two phase four wire
c) Three phase three wire
d) Three phase four wire

Q.9 Varley loop test works on the principle of (CO4)

a) Faraday's b) Wheatstone bridge
c) Skin effect d) None of these

Q.10 The String efficiency can be improved by : (CO3)

a) Using longer cross arms
b) Using a guard ring
c) Grading of the insulator
d) All of these

Section-B

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

Q.11 Expand ACSR. (CO3)

Q.12 IT is desirable the voltage regulation of the transmission line should be high . (True/False) (CO3)

Q.13 Define Base Load Plant. (CO2)

Q.14 Penstock is used in Thermal power plant. (CO1)

Q.15 Define catchment area. (CO1)

Q.16 Maximum value of power factor is _____. (CO1)

Q.17 Interconnections of Power Plants is knows as ___(CO1)

Q.18 Define substation. (CO6)

Q.19 String efficiency decrease by using graded insulators. (T/F) (CO3)

Q.20 A line which connects distributor to the substation is called_____. (CO4)

Section-C

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

Q.21 Enlist any Five Points related to site of selection of Hydroelectric power plant. (CO1)

Q.22 Give the significance of load curve. (CO2)

Q.23 Describe the present scenario of energy in India. (CO1)

Q.24 Explain the transposition of conductors. (CO1)

Q25 Explain the factors affecting the corona losses. (CO3)

Q.26 Explain the importance of power factor. (CO7)

Q.27 Explain the faults occurs in underground systems. (CO5)

Q.28 Give the five comparisons of outdoor and indoor substations. (CO6)

Q.29 Explain Direct laying method of underground cables. (CO5)

Q.30 Name the different line supports used for overhead lines. Explain steel tower. (CO3)

Q.31 Explain the bundled conductor. (CO3)

Q.32 Explain ring main system. (CO4)

Q.33 Draw a cross-section with label of a three core cable used in underground system. (CO5)

Q.34 Explain the concept of regional and national grid. (CO2)

Q.35 Explain the classification of distribution system. (CO4)

Section-D

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

Q.36 Explain the working of coal based steam power plant with help of a labeled block diagram. (CO1)

Q.37 Define Sag and deduce the expression of Sag in overhead transmission line. Explain the factors effecting the Sag. (CO3)

Q.38 Explain the Blavier test for fault finding in Underground cables. (CO4)