**AP GENCO ASST ENGG TEST QUESTION PAPER & ANSWERS**

Q1 Which of the following has high electrical resistivity  
  
(a) Copper (b) Gold (c) Carbon (d) Silver  
  
Q2 The resistance of 200 m. long circular copper wire is 21Ω.If its thickness is 0.44mm,What is the resistivity(ohm-m) of the copper is  
  
(a) 1.597\*10-8 (b) 2.507\*10-8 (c) 5.597\*10-6 (d) None of these  
  
Q3 Metals have temperature coefficient of resistance  
  
(a) Positive (b) negative (c) May be positive or Negative (d) None of these  
  
Q4 The resistance of two wire is 25Ω when connected in series and 6Ω when connected in parallel.The resistance of each wire is  
  
(a) 12 &13Ω (b) 15&10Ω (c) 20& 5 Ω (d) 24&1Ω  
  
Q5 A current of 3A flows through 10Ω resistor. The energy dissipated in 5sec.is  
  
(a) 450J (b) 150J (c) 250J (d) None of these  
  
Q6 Ideal current source has its internal resistance equal to  
  
(a)1Ω. (b)2Ω. (c) 0Ω (d) InfiniteΩ  
  
Q7 If resistance of all three branches of star connected load is 1Ω each, then the resistance of each branch of equivalent delta load would be  
  
(a) 3Ω (b) 9Ω (c) 0.3Ω (d) 1/3Ω  
  
Q8 A p.d. of 300V is maintained across the terminals of the capacitor. The electric field strength(kV/m) between the plate gap of (0.3mm) is  
  
(a) 1000 (b) 2000 (c) 3000 (d) 4000  
  
Q9 An 8micro-farad capacitor is connected in series with 0.5MΩ resistor. The time constant of the RC circuit is  
  
(a) 16sec. (b) 6sec (c) 5sec (d) 4sec  
  
Q10 An 8micro-farad capacitor is charged from a 100V supply. The energy stored in the capacitor is  
  
(a) 0.004J (b) 0.0016J (c) 0.008 J (d) None of these  
  
Q11 A conductor carries a current of 100A at right angle to a magnetic field having density of 0.5 T. The force on per unit lengh of the conductor is  
  
(a) 50N (b) 500N (c) 150N (d) 5.0N  
  
Q12 A magnetic flux of 200μwb passing through a coil of 1200 turns is reversed in 0.2sec.The induced emf in the coil is  
  
(a) 12V (b) 2.4V (c) 2.2V (d) 1.2V  
  
Q13 The value of 1/√(μ0 ε0) is equal to  
  
(a) Speed of light (b) 1/ Speed of light (c) (Speed of light )2 (d) None of these  
  
  
(a) NΦ/I (b) NI/Φ (c) I /ΦN (d) None of these  
  
Q15 A coil of 200 turns is wound on a non-magnetic circular core of area 500mm2& the mean circumference of 400mm.The inductance of coil is  
  
(a) 628H (b) 6.28μH (c ) 62.8μH (d) None of these  
  
Q16 An alternating voltage is given by the equation v = 200Sin 314t the rms value of the voltage is  
  
(a) 141.42V (b) 282.82V (c) 14.142V (d) None of these  
  
Q17 In a transformer the induced emf in the winding is given by (notation used have their usual meaning)  
  
(a) E = 1.11 N f Φm (b) E = 2.22 N f Φm (c) E = 4.44 N f Φm (d) None of these  
  
Q18 A dc motor takes an armature current of 10A at 220V.The armature resistance of the machine is 0.2Ω, flux per pole is .01wb, the no of poles are 6,and the armature has wave wound 480 conductors. The torque developed in armature is  
  
(a) 100Nm (b) 25Nm (c) 44Nm (d) 22.91Nm  
  
Q19 A,3-phase, synchronous generator has 4 pairs of pole is running with the speed of 900 rpm.The frequency of the supply would be  
  
(a) 50Hz (b) 60Hz (c) 25Hz (d) 150Hz  
  
Q20 The advantage of permanent magnet moving coil(PMMC) instrument is  
  
(a)Low power consumption (b) No hysteresis loss  
(c) Efficient eddy current damping (d) All of the above  
  
Q21 The majority charge carrier in p-type semiconductor are  
  
(a) Electrons (b) Holes (c) Both Electrons and Holes (d) None of these  
  
Q22 An n-type semiconductor as a whole is  
  
(a) Electrically +ve (b) Electrically –ve (c) Electrically neutral (d) None of these  
  
Q23 The out put of the logic gate is one, only when all the inputs are one. Then logic gate is  
  
(a) AND (b) OR (c) NAND (d) NOR  
  
Q24 In a transistor which of the following region is very lightly doped  
  
(a) Emitter (b) Collector (c) Base (d) None of these  
  
Answers  
  
1 c  
2  
3 a  
4 b  
5 a  
6 d  
7 a  
8  
9 d  
10 d  
11 a  
12 d  
13 a  
14 a  
15  
16 a  
17 c  
18 d  
19 b  
20  
21 b  
22 c  
23 a  
24 c