

Level : B.E./B.Sc./B.Tech.
Year : I

Course : ENGG 112
Semester: II

Exam Roll No.: _____ Time: 30 mins.

F.M. : 20

Registration No.: _____

Date DEC 28 2018

SECTION "A"

[20 Q. × 1 = 20 marks]

Choose the most appropriate answer.

1. Ideal voltage source has _____.
[a] Zero internal resistance [b] Large value of current
[c] Infinite internal resistance [d] Low value of voltage
2. The color coding of a four band resistor with range of value of resistance from 2.25Ω to 2.75Ω is _____.
[a] Red-Violet-Green-Gold [b] Red-Red-Green-Gold
[c] Red-Green-Silver-Gold [d] Red-Green-Gold-Silver
3. If the resistance of a nickel wire at 30° is 20Ω , the approximate resistance at 74° is _____ given that the inferred absolute temperature of gold is -147° .
[a] 25Ω [b] 29Ω [c] 39.7Ω [d] 38Ω
4. You have to connect 1500Ω resistor in a circuit but you have some 1000Ω resistors only. How would you connect 1000Ω resistors to obtain 1500Ω ?
[a] 2 in parallel [b] 2 in parallel and 1 in series
[c] 2 in series [d] 2 in series and 1 in parallel
5. The equivalent resistor of the network in Figure 1 is _____.
[a] 36Ω [b] 12Ω [c] 4Ω [d] 6Ω

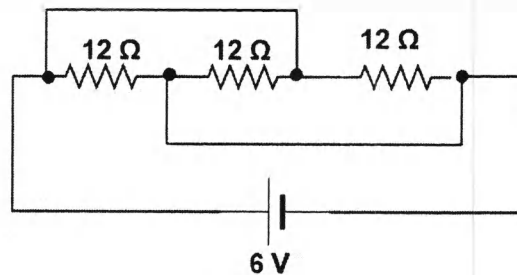


Figure 1

6. The maximum power handling capacity of a resistor depends upon _____.
[a] total surface area [b] resistance value
[c] thermal capacity of resistor [d] Resistivity of the material used in resistor

14. In a series RL circuit, if the apparent power is 300 kVA and the reactive power is 180 kVAR, the reactive power is _____.
[a] 80 kW [b] 240 kW [c] 233 kW [d] 90 kW
15. A 220V, 3 phase supply is applied to a balanced star connected load with impedance of $(8+j6)$ ohms per phase. The power consumed by the load per phase is _____.
[a] 1291 W [b] 3872 VAR [c] 1291 VA [d] 4840 W
16. For a dc voltage an inductor _____,
[a] is virtually a short circuit [b] is an open circuit
[c] depends on polarity [d] depends on voltage value
17. The magnetic field produced in a straight conducting wire on passing current through it is _____.
[a] in the direction of current [b] in the direction opposite to the current
[c] circular around the wire [d] in the direction parallel to the wire
18. In DC machines, number of commutator segments is equal to _____.
[a] number of armature coils [b] number of armature coil sides
[c] number of armature turns [d] number of armature conductors
19. What is the rate of change of flux in secondary coil having 100 turns and primary coil having 150 turns and rate of change of current 0.4 Ampere/second, the mutual inductance between the two coils is 1×10^5 ?
[a] 400 wb/sec [b] 266.67 wb/sec [c] 100 wb/sec [d] 366.67 wb/sec
20. The phase difference between current and voltage wave through a circuit element is 30° . Which one of the following must be true?
[a] both waves have same frequency
[b] both waves have same peak values
[c] both waves have opposite phase angles
[d] both waves have different peak values

