

Electrical Engineering

1. What is causal system?
2. Shunt reactor is used in EHV transmission line for
3. 20w, 40W, & 200w lamps are connected to three phases if neutral wire breaks then which lamp will fuse first? 1) 20 2)40 3)200 three lamps will fuse together.
4. Synchronous machine can be operated at both lagging and leading power factor
- 5 What does synchronous speed mean?
6. Frequency of emf generated per rotation of rotor is equal to.
7. DC machine having wave winding is wounded as lap winding what will be the effect on emf generated
- 8 Which is remain unchanged in transformer action?
9. In transformer windings are connected. ?
10. In general how transformer is rated?
11. What is given on the name plate of motor? 1) KW 2) KVA 3) output shaft power
12. Short circuit test of transformer gives what?
13. Transformer core are laminated for what purpose?
14. What is supply voltage for heavy industry . 1) 33KV 2) 11KV 3) 132 KV 4) 66KV
15. Basic structure SCR as a two transistor i.e. how they are connected?
16. What is Triac?
17. System admittance is  $(G+jB)$  what is reactive power absorbed if the voltage is  $V$  KV? (1)  $V^2 \cdot B$  (2)  $V^2 \cdot G$  .
18. In series R-L circuit what is phase difference between the voltage drop across R and L?
19. Power factor is cosine ( $\delta$ )  $\delta$  is the angle between 1) phase voltage phase current 2) Line voltage line current 3) phase voltage line current 4) line voltage phase current.
20. Laplace of  $\exp(-at)$ ?
21. For series R-L-C circuit the load will be capacitive if the frequency is 1) greater than the resonant frequency 2) less than the resonant frequency 3).
22. In Wiens bridge which circuit elements determine the frequency range?
23. What is the output if two booster having duty cycle  $K$  and  $(K-1)$  are connected in series?
24. If a DC shunt motor is loaded from unloaded condition what will be effect of on terminal voltage?

25. A second wire system having one pole one right half of the s-plane. When the system will be stable?
26. A system having repetitive pole what will be effect on the gain at the cross over frequency?
27. Hollow conductor is used to reduce corona loss how does it reduce the loss?
28. In DC machine how voltage is related to flux?
29. Nature of current and voltage in the armature and at the terminal in DC machine.
30. Motor acts on the principle of ..rule
31. Which instrument measure both ac and dc?
32. How the rotation of induction motor is reversed?
33. If 3-phase of a 3- phase balance load are reversed what will be the effect on the line current?
34. If the rating of VAR absorber is 50MVAR at 400KV. What will the VAR absorbed by the absorber at 300KV?
35. In regenerative braking of DC series motor what is done?
36. Definitions of Fourier transform?
37. Laplace of  $f(t)$  is  $F(S)$  what is Laplace of  $f(t+T)$  .
38. Z-transform of sampled function  $x(n)$  for  $n>0$ .
39. Laplace transform of impulse function.
40. Z-transform of unity.
41. How many slip rings are there in 3phase synchronous motor?
42. How the speed of synchronous motor is controlled?
43. Speed control of induction motor?
44. When power supply is supplied to heater coil it glows while simple wire does not glow. Why?
45. A synchronous generator having inertia constant 4 and having rating of 100MVA. What will be energy stored by the machine?
46. A transformer having ratio 20:1. The secondary load is 0.6 ohm and the voltage across it is 6 V what will be the primary current?
47. A RC circuit having  $r=0.8\text{ohm}$ ,  $c=2.5\text{microfarad}$  what will be the time constant?
48. Find load impedance if  $c=0.1\text{micro farad}$ ?
49. Two capacitors connected in series the equivalent capacitance is 0.03uf and when connected in parallel the equivalent capacitance is 0.16uf find out the ratio of the two capacitance?
50. An L-c circuit having frequency  $1/\text{sqrt}(LC)$  what will the equivalent impedance?
51. An inverting op-am having input with resistance in series and a capacitance in feedback operates as a. ?

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52. A current having fundamental and third harmonics what will be the rms value of the current?
53. Peak to peak value of voltage if rms voltage is 100V.
54. Rms voltage.
55. What is the approx efficiency of nuclear power plant?
56. What is the average current of a single phase full wave rectifier firing at angle  $\alpha$ ?
57. What is the function of freewheeling diode?
58. When SCR stops conduction? (holding current)
59. For measuring current why shunt resistance is used?
60. For economic operation of plant what is the condition?(taking into account the penalty factor)
61. Incremental fuel cost of two plants is given and a load is given. Find out the load sharing for economic operation of the plant?
62. A two port network is represented by ABCD parameters. What will be condition for the two port network to be symmetrical?
63. Size of the conductor is determined by .
64. Which Surface is suitable for grounding?