Roll No:.XXXXXXXXXXXXXXX.
Section: B1502, B1505 B1534, K1509 & K1510. **UNIT-3 PRACTICE MCQ**
Subject code: ECE131

Choose the correct answer for the following questions:

1. A transformer
   (A) changes ac to dc (B) changes dc to ac
   (C) steps up or down dc voltages (D) steps up or down ac voltages
2. The working principle of transformer depends upon
   (A) Ohm's law (B) Lenz's law
   (C) Fleming's left hand rule (D) Faraday's law of electromagnetic induction
3. Transformer rating will be in.....
   (A) k VA (B) k W (C) k VAR (D) None
4. When AC supply is given to the transformer, the flux will depend on
   (A) Current (B) Voltage (C) Frequency (D) Both b and c
5. In transformer, humming sound occurs due to
   (A) oil (B) load (C) magnetostriction (D) None
6. The primary and secondary winding of transformer are linked each other by
   (A) Conduction (B) Mutual induction (C) Both a and b (D) None
7. Which parameter does not change during transformation action in transformer?
   (A) Frequency (B) Voltage (C) Current (D) None
8. An ideal transformer is one which has
   (A) No winding resistance (B) No Leakage reactance (C) No losses (D) All the above
9. Secondary current of a step down transformer is
   (A) Lower than primary current (B) Higher than primary current
   (C) I can't say (D) I don't know
10. A transformer in which Primary voltage is greater than secondary voltage is known as.....transformer
    (A) Step up (B) step down (C) Isolation (D) None
11. A transformer in which Primary current is greater than secondary current is known as.....transformer
    (A) Step up (B) step down (C) Isolation (D) None
12. A transformer in which Primary turns are greater than secondary turns is known as.....transformer
    (A) Step up (B) step down (C) Isolation (D) None
13. A transformer which passes the ac signal without any change in input signal (i.e number of primary and secondary turns are equal) is.....transformer.
    (A) Step up (B) step down (C) Isolation (D) None
14. A transformer has 500 turns on the primary and 100 turns on the secondary. If 120 volts AC are applied across the primary, what is the voltage induced in the secondary?
    (A) 610 Volt (B) 210 Volt (C) 600 Volt (D) 24 Volt
15. A transformer has a 10:1 (Np:Ns)turns ratio. If the primary has a current of 100 milliamperes, how much current flows in the secondary?
    (A) 1 Ampere (B) 1000 Ampere (C) 10 milli ampere (D) None
16. Oil is provided in an oil filled transformer for....
    (A) cooling (B) Insulation (C) Both a and b (D) None
17. Lamination of transformer core is made of
    (A) cast iron (B) cast steel (C) silicon steel (D) None

18. Which of the following is not a basic element of a transformer?

(A) core (B) Primary winding (C) secondary winding (D) Mutual flux

19. Transformers have many applications. Among them are stepping up and stepping down voltage and current, impedance matching, phase shifting, isolation, blocking DC while passing AC, and producing several signals at various voltage levels.

20. If Dc voltage is applied to transformer, then.....

(A) coils will burn

(B) secondary voltage is zero

(C) it will block Dc

(D) All the above can happen based on intensity of applied Voltage

21. What kVA rating is required for a transformer that must handle a maximum load current of 8 A with a secondary voltage of 2 kV?

(A) 4kVA (B) 0.25kVA (C) 16kVA (D) 8kVA

22. The turns ratio required to match an 80 Ω source to a 320 Ω load is(Choose Np:Ns)

(A) 1:2 (B) 2:1 (C) 4:1 (D) 1:4

23. A transformer with a 110 V primary has a 15:1 (Np:Ns)turns ratio. The load resistance is 120Ω . What is the approximate voltage across the load?

24. In a certain loaded transformer, the secondary voltage is one-fourth the primary voltage. The secondary current is

(A) one-fourth the primary current (B) four times the primary current

(C) equal to primary current (D) none

25. The primary winding of a power transformer should always be

(A) open (B) fused (C) shorted (D) none

26. In a certain transformer, the input power to the primary is 120 W. If 8.5 W are lost to the winding resistance, what is the output power to the load, neglecting any other issues?

(A) 0 W (B) 14.1 W (C) 111.5 W (D) 1020 W

27. What is the coefficient of coupling for a transformer in which 4 percent of the total flux generated in the primary does not pass through the secondary?

(A) 0.4 (B) 4 (C) 9.6 (D) .96

28. The mutual inductance when k = 0.65, L1 = 2 H, and L2 = 5 H is

(A) 2.05 (B) 0.205 (C) I don't know sir (D) None

29. If 25 W of power are applied to the primary of an ideal transformer with a turns ratio of 10, the power delivered to the secondary load is

(A) 25 W (B) 2.5 W (C) 250 W (D) None

30. A dc motor is a device which converts.....energy into.....energy.

(A) Electrical, Mechanical (B) class, Mass (C) Mechanical, Electrical (D) Mass, class

31. A dc generator is a device which converts.....energy into.....energy.

(A) Electrical, Mechanical (B) class, Mass (C) Mechanical, Electrical (D) Mass, class

32. Dc motor uses.....rule.

(A) Fleming's Head (B) Fleming's Brain (C) Fleming's Left hand (D) Fleming's Right hand

33. Dc generator uses.....rule.

(A) Fleming's Head (B) Fleming's Brain (C) Fleming's Left hand (D) Fleming's Right hand

34. .....provides mechanical support for the poles and acts as a protecting cover for the whole DC machine.

(A) Yoke (B) Brushes (C) Magnets (D) commutator

35. .....converts the alternating current induced in the armature conductors into unidirectional current in the external load circuit.

(A) Yoke (B) Brushes (C) Magnets (D) commutator

36. .....function is to collect current from commutator

(A) Yoke (B) Brushes (C) Magnets (D) commutator

37. Brushes are made up of usually.....

(A) Carbon (B) Graphite (C) Either a or b (D) None

38. .....generators are those whose field magnets are energised from an independent external source of d.c. current.

(A) Self-excited generators (B) Separately-excited generators

(C) Either a or b (D) None

39. ..... are those whose field magnets are energised by the current produced by the generators themselves.

(A) Self-excited generators (B) Separately-excited generators

(C) Either a or b (D) None

40. Voltage equation of DC generator is.....

(A) $E_g = V + I_a R_a$ (B) $E_g = V - I_a R_a$ (C) $E_b = V + I_a R_a$ (D) $E_b = V - I_a R_a$

41. Voltage equation of DC motor is.....

(A) $E_g = V + I_a R_a$ (B) $E_g = V - I_a R_a$ (C) $E_b = V + I_a R_a$ (D) $E_b = V - I_a R_a$

42. DC shunt motor is .....speed motor.

(A) Constant (B) Variable (C) Either a or b (D) None

43. DC series motor is.....speed motor.

(A) Constant (B) Variable (C) Either a or b (D) None

44. Shunt motors are used in Lathes, drills, boring mills, shapers, spinning and weaving machines etc.

45. series motors used in where starting torque is large and used in Electric traction, cranes, elevators, air compressors, vacuum cleaners, hair drier, sewing machines etc.

46. Differential-compound motors are rarely used because of their poor torque characteristics. However, cumulative-compound motors are used where a fairly constant speed is required with irregular loads or suddenly applied heavy loads.

47. Which Dc motor is preferred for elevators?

(A) Shunt (B) series (C) compound (D) None

ALL THE BEST FOR MTE BY GOVIND