

6. Basic Electricity

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Question Paper

Duration: 30 Mins

Total Marks: 34

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Student Name: _____ Roll No: _____

1. What is the formula for induced emf?

- A) $BL \sin \theta$ volts
B) $B^2 L \sin \theta$ volts
C) $BLV \sin \theta$ volts
D) $B^2 V \sin \theta$ volts

2. How many hours will take for a 100 watts bulb to consume 1 kWh energy? $W = 1 \text{ Kwh}$ $P = 100 \text{ Watts}$ $t = \text{_____ Hours}$

- A) 12 hours
B) 24 hours
C) 18 hours
D) 10 hours

3. What is the current flow in the bulb? $P = 550 \text{ watts}$ $R = 22 \text{ Ohms}$ $I = \text{_____ Amps}$

- A) 4 Amps
B) 3 Amps
C) 2 Amps
D) 5 Amps

4. What is the voltage? $R = 250 \text{ Ohms}$ $I = 0.44 \text{ Amps}$ $V = \text{_____ Volts}$

- A) 110 Volts
B) 108 Volts
C) 105 Volts
D) 100 Volts

5. What is the flow of electrons in any conductor?

- A) Voltage
B) Resistance
C) Current
D) Power

6. Which is the unit electrical power?

- A) Ohms
B) Ampere
C) Volts
D) Watts

7. Which machine converts mechanical energy into electrical energy?

- A) Generator
B) Battery
C) Heater
D) Iron box

8. Which law states that at constant temperature the current passing through a closed circuit is directly proportional to the potential difference and inversely proportional to the resistance?

- A) Hooke's law
B) Ohm's law
C) Lenz's law
D) Newton's law

9. What is the resistance? $I = 11.5 \text{ Amps}$ $V = 380 \text{ Volts}$ $R = \text{_____ Ohms}$

- A) 43 ohms
B) 13 ohms
C) 23 ohms
D) 33 ohms

10. How much watt second in 1 watt hour?

- A) 2000 watt sec
B) 3600 watt sec
C) 4000 watt sec
D) 1000 watt sec

11. Which is the example for statically induced emf?

- A) Generator
B) Transformer
C) Motor
D) Refrigerator

12. What is the filament resistance if a 6 volt bulb draws a current of 0.5 Amps?

- A) 12 W
B) 1.2 W
C) 3 W
D) 10 W

13. Which property of a substance is opposing the flow of electric current?

- A) Voltage
B) Resistance
C) Current
D) EMF

14. How much power does it consume if an electric heater draws a current of 10 amps at 200 volts?

- A) 2010 watts
B) 2000 watts
C) 2030 watts
D) 2020 watts

15. What is the voltage of the immersion heater? $P = 500 \text{ watts}$ $I = 2.27 \text{ Amps}$ $V = \text{_____ Volts}$

- A) 220.3 volts
B) 230.3 volts
C) 210.3 volts
D) 200.3 volts

16. What is the resistance of an electric iron if the rating of electric iron is 220 V and 500 watts?

- A) 95.8 ohms
B) 97.8 ohms
C) 94.8 ohms
D) 96.8 ohms

17. How much voltage will be required to illuminate a 40 watts fluorescent lamp draws a current of 0.10 amperes?

- A) 400 volts
B) 395 volts

C) 390 volts

D) 405 volts

18. Which law states about electromagnetic induction?

A) Lenz's law

B) Ohm's law

C) Hooke's law

D) Faraday's law

19. Which statement is correct according to ohm's law?

A) $I = V/R$

B) $I = R/V$

C) $I = 1/V$

D) $I = R$

20. Which is very good conductor?

A) Copper

B) Steel

C) Wrought iron

D) Cast iron

21. Which is mineral insulator

A) Porcelain

B) Quartz

C) Glass

D) Mica

22. Which is same in series connection of resistors in a circuit?

A) Resistance

B) Power

C) Voltage

D) Current

23. What is the power required? $I = 0.455$ Amps $R = 484$ Ohms $P = \underline{\hspace{1cm}}$ Watts

A) 101.2 watts

B) 98.2 watts

C) 99.2 watts

D) 100.2 watts

24. What is the power if an emf of one volt causes a current flow of 1ampere?

A) 1 Kilowatt hour

B) 1 watt

C) 1 kilowatt

D) 1 HP

25. What is the current? $R = 50$ Ohms $V = 220$ Volts $I = \underline{\hspace{1cm}}$ Amps

A) 4.4 Amps

B) 4.1 Amps

C) 4.2 Amps

D) 4.3 Amps

26. What is the total resistance if three resistances of 3 ohms, 9 ohms and 5 ohms are connected in series?

A) 7 ohm

B) 17 ohms

C) $1/17$ ohms

D) 11 ohms

27. Which is the unit of current?

A) Ohm

B) Watt

C) Ampere

D) Volt

28. What does EMF stands for?

A) Electro Motive Force

B) Electronic Magnetic Force

C) Electro Magnetic Force

D) Electromated Force

29. What is the total resistance if two resistances of 4 ohms and 6 ohms are connected in parallel?

A) 5

B) 4

C) 10

D) 2.4

30. What is the rated power if an adjustable resistor bears the following label 1.5 k ohms/ 0.08A?

A) 9.2 watts

B) 9.8 watts

C) 9.6 watts

D) 9.4 watts

31. Which is the unit of resistance?

A) Ampere

B) Watt

C) Ohm

D) Volt

32. Which is the example for dynamically induced Emf?

A) Car

B) Generator

C) Motor bike

D) Motor

33. Which is equal to electric power?

A) $I^2 R$ watts

B) RI

C) IR^2

D) $R^2 I$ watts

34. What is the unit of intensity of magnetic field?

A) m/wb

B) Coloumb

C) Hertz

D) wb/m