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**Dahiwadi College Dahiwadi**  
Department of Physics  
**Physics Paper IV:- Magnetism II**  
Class:- B.Sc I

**Multiple Choice Questions**  
**Unit :- Magnetism**

1. According to biot-savart's law, magnetic field at a point due to a small element of current carrying conductor is.....
  - A. directly proportional to the current flowing through it**
  - B. inversely proportional to the current flowing through it
  - C. inversely proportional to the length of the conductor
  - D. directly proportional to the  $r^2$
  
2. According to biot-savart's law, magnetic field at a point due to a small element of current carrying conductor is.....
  - A. inversely proportional to the current flowing through it
  - B. inversely proportional to the  $r^2$**
  - C. inversely proportional to the length of the conductor
  - D. directly proportional to the  $r^2$
  
3. Magnetic field due to straight current carrying conductor of infinite length at a point at distance R is  $B=.....$ 
  - A.  $\mu_0 i R / 2\pi$
  - B.  $\mu_0 i / 2\pi R$**
  - C.  $\mu_0 i R$
  - D.  $\mu_0 R / 2\pi i$
  
4. The magnetic field at the centre of current carrying circular coil of radius R is  $B=.....$ 
  - A.  $\mu_0 i / 2R$**
  - B.  $\mu_0 i / 3R$

- C.  $\mu_0 i R$
- D.  $\mu_0 R i / 2$

5. The magnetic field at a point on the axis of solenoid of infinite length is  
B=.....
- A.  $\mu_0 n i / 2$
  - B.  $\mu_0 n i$**
  - C.  $\mu_0 n i / 3$
  - D. None of these
6. The line integral of magnetic field around any close the path in free space is equal to the absolute permeability times net steady current enclosed by the path. This is.....
- A. Biot-Savart's law
  - B. Ampere's circuital law**
  - C. Gauss
  - D. Stokes
7. Magnetic moment developed per unit volume is called as .....
- A. Magnetic induction
  - B. Susceptibility
  - C. Permeability
  - D. Intensity of magnetization**
8. SI unit of intensity of magnetization is.....
- A. A-m
  - B. A/m**
  - C. m/A
  - D. Wb/m<sup>2</sup>
9. SI unit of magnetic induction is.....
- A. A-m
  - B. A/m
  - C. m/A
  - D. Wb/m<sup>2</sup>**
10. SI unit of intensity of permeability is.....
- A. Wb/A.m**
  - B. WbA/m
  - C. m/A
  - D. Wb/m<sup>2</sup>

11. Permeability,  $\mu = \dots\dots\dots$

- A. **B/H**
- B. H/B
- C. M/H
- D. BH

12. Magnetic Susceptibility,  $X = \dots\dots\dots$

- A. B/H
- B. H/M
- C. MH
- D. **M/H**

13. Susceptibility of paramagnetic material is  $\dots\dots\dots$

- A. **Positive**
- B. Zero
- C. Infinite
- D. Negative

14. Susceptibility of ferromagnetic material is  $\dots\dots\dots$

- A. **Positive but large**
- B. Zero
- C. Infinite
- D. Negative but small

15. Susceptibility of diamagnetic material is  $\dots\dots\dots$

- A. **Positive but small**
- B. Zero
- C. Positive but large
- D. Negative

16. Susceptibility of  $\dots\dots\dots$  is independent of temperature.

- A. **Diamagnetic**
- B. Paramagnetic
- C. Ferromagnetic
- D. Antiferromagnetic

17. Basic source of magnetism  $\dots\dots\dots$ .

- A. **Movement of charged particles**
- B. Magnetic dipoles
- C. Magnetic domains
- D. Charged particles alone

18. Units for magnetic flux density

- A. **Wb / m<sup>2</sup>**
  - B. Wb / A.m
  - C. A / m
  - D. Tesla / m
19. Magnetic permeability has units as
- A. Tesla
  - B. Henry
  - C. Tesla / m
  - D. **Henry / m**
20. Example for dia-magnetic materials
- A. **super conductors**
  - B. alkali metals
  - C. transition metals
  - D. Ferrites
21. Example for para-magnetic materials
- A. super conductors
  - B. **alkali metals**
  - C. transition metals
  - D. Ferrites
22. Example for ferro-magnetic materials
- A. super conductors
  - B. alkali metals
  - C. **transition metals**
  - D. Ferrites
23. Example for anti-ferro-magnetic materials
- A. **salts of transition elements**
  - B. rare earth elements
  - C. transition metals
  - D. Ferrites
24. Example for ferri-magnetic materials
- A. salts of transition elements
  - B. rare earth elements
  - C. transition metals
  - D. **Ferrites**
25. Permanent Magnets are made up of.....
- A. Soft magnetic materials
  - B. **Hard magnetic materials**

- C. Superconductors  
D. Semiconductors
26. Ferrites are a sub-group of..... materials.  
A. Diamagnetic  
**B. Ferrimagnetic**  
C. Paramagnetic  
D. Antiferromagnetic
27. Which of the following is a ferromagnetic material ?  
A. Tungsten  
B. Aluminium  
C. Copper  
**D. Nickel**
28. Substance which have permeability less than permeability of free space are known as.....  
**A. Diamagnetic**  
B. Paramagnetic  
C. Ferromagnetic  
D. Antiferromagnetic
29. Paramagnetic materials have relative permeability .....  
A. slightly less than unity  
B. equal to unity  
**C. slightly more than unity**  
D. Equal to ferromagnetic materials
30. Indicate Which of the magnetic material does not retain magnetism permanently ?  
A. Stainless steel  
B. Hardened steel  
**C. Soft iron**  
D. All of these
31. The use of permanent magnets not made in.....  
A. magnetoes  
B. energy meters  
**C. transformers**  
D. loud-speakers
32. The unit of relative permeability is.....  
A. Henry/m  
B. Henry  
C. Henry/ m<sup>2</sup>  
**D. It is dimensionless.**

33. The ratio of intensity of magnetization to the magnetization force is known as.....

- A. Flux density
- B. Susceptibility**
- C. Permeability
- D. Relative permeability

34. Tesla is unit of.....

- A. Flux density**
- B. Susceptibility
- C. Inductance
- D. Field strength

35. A material which is slightly repelled by a magnetic field is known as.....

- A. Diamagnetic**
- B. Ferrimagnetic
- C. Paramagnetic
- D. Antiferromagnetic

\*\*\*\*\*ALL D BEST\*\*\*\*\*