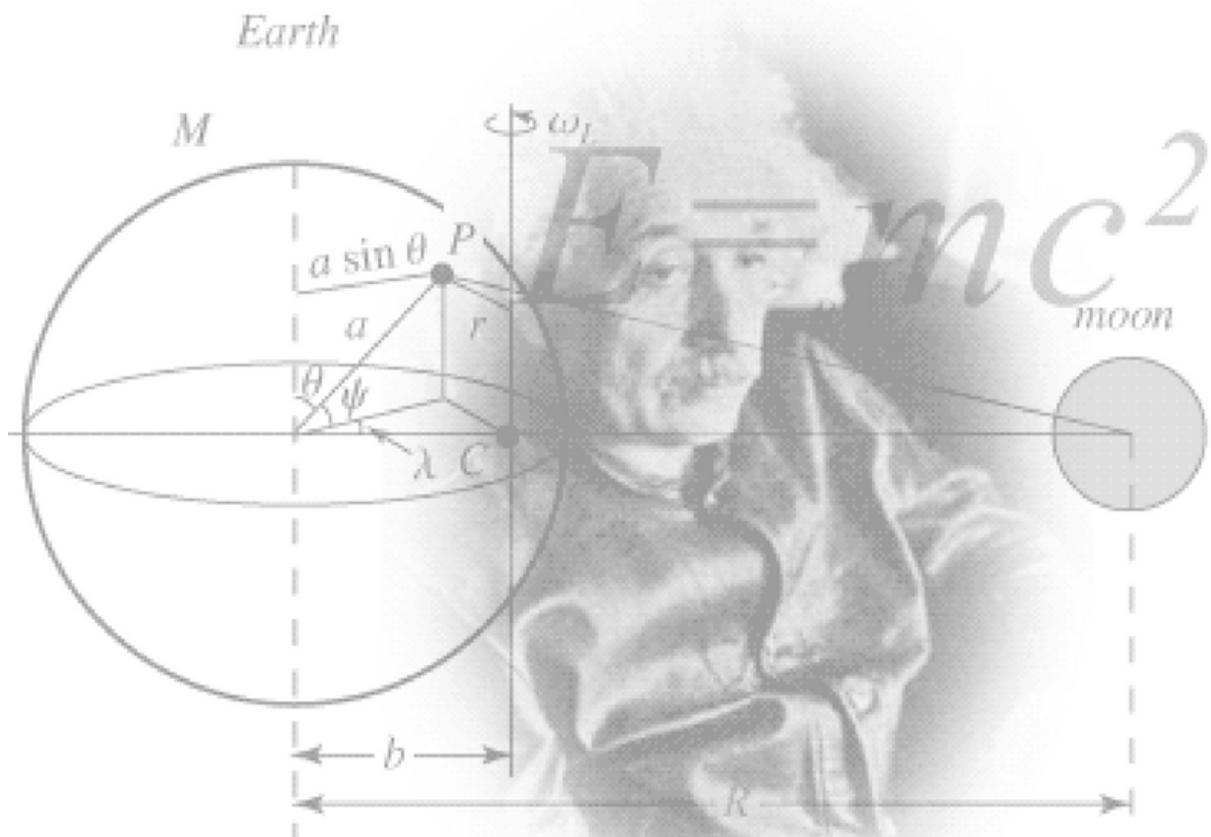


PHYSICS

MCQ



Physics MCQ:

1. Which of the following is the only natural magnet?

- A. Magnetite
- B. Ebonite
- C. Cobalt
- D. Nickel

Ans: a

2. If the cross-sectional area of a magnetic field increases, but the flux remains the same, the flux density

- A. increases
- B. remains the same
- C. doubles
- D. decreases

Ans: d

3. An electromagnetic field exists only when there is

- A. voltage
- B. an increasing current
- C. decreasing current
- D. current

Ans: d

4. Which of the following cannot be used to make a magnet?

- A. Cobalt
- B. Iron
- C. Ebonite
- D. Steel

Ans: c

5. The direction of a magnetic field within a magnet is

- A. from north to south
- B. from south to north
- C. back to front
- D. front to back

Ans: b

6. The ability of a material to remain magnetized after removal of the magnetizing force is known as

- A. hysteresis
- B. retentivity
- C. permeability
- D. reluctance

Ans: b

7. When the current through the coil of an electromagnet reverses, the

- A. direction of the magnetic field remains unchanged
- B. direction of the magnetic field reverses
- C. magnetic field expands
- D. magnetic field collapses

Ans: b

8. When a magnet is suspended freely it always aligns itself in which direction?

- A. North
- B. N-S
- C. N-W
- D. N-E

Ans: b

9. Which type of magnet is used in cranes to lift heavy containers from ships?

- A. Bar magnet
- B. Cylindrical magnet
- C. Electromagnet
- D. Horseshoe magnet

Ans: b

10. Electric bell is an example of which magnet?

- A. Bar magnet
- B. Cylindrical magnet
- C. Electromagnet
- D. Horseshoe magnet

Ans: c

11. A sound wave travels from east to west, in which direction do the particles of air move?

- (A) Up and down
- (B) North - south
- (C) East – west
- (D) None of these

Ans: c

12. In which medium sound travels faster ?

- (A) Gas
- (B) Liquid
- (C) Solid
- (D) None of these

Ans: c

13. What is the name of short duration wave?

- (A) Time period
- (B) Frequency
- (C) Pulse
- (D) Velocity

Ans: c

14. What is the velocity of sound in water at room temperature?

- (A) 1500 m/s
- (B) 330 m/s
- (C) 1500 km/s
- (D) 330 km/s

Ans: a

15. The unit of quantity on which pitch of the sound depends is:

- (A) Hertz
- (B) metre
- (C) metre/second
- (D) second

Ans: a

16. The unit of quantity on which loudness of sound depends is:

- (A) metre
- (B) Hertz
- (C) metre/second
- (D) second

Ans: a

17. Nature of sound wave is:

- (A) transverse
- (B) longitudinal
- (C) electromagnetic
- (D) seismic

Ans: b

18. Pitch of high frequency sound is:

- (A) high
- (B) low
- (C) zero
- (D) infinite

Ans: a

19. Voice of a friend is recognized by its:

- (A) Pitch
- (B) velocity
- (C) Intensity
- (D) quality

Ans: d

20. Sound waves in air are:

- (A) Radio waves
- (B) Longitudinal waves
- (C) Transverse waves

(D) Electromagnetic waves

Ans: b

21. Resistance is:

- A. the opposition to current flow accompanied by the dissipation of heat
- B. symbolized by R, measured in ohms metre, and directly proportional to conductance
- C. directly proportional to current and voltage
- D. represented by the flow of fluid in the fluid circuit

Ans: a

22. With Ohm's law, if voltage increases and resistance stays the same:

- A. current remains the same
- B. power decreases
- C. current increases
- D. resistance decreases

Ans: c

23. Ohm's law is not:

- A. $V = IR$
- B. $I = V/R$
- C. $R = IV$
- D. $R = V/I$

Ans: c

24. With Ohm's law:

- A. current is inversely proportional to resistance
- B. resistance is directly proportional to voltage
- C. voltage is indirectly proportional to power
- D. current is directly proportional to resistance

Ans: a

25. How do fixed resistors usually fail?

- A. slowly over time
- B. by increasing their value
- C. by becoming an open circuit
- D. by increasing their value and becoming an open circuit

Ans: c

26. What happens to current and resistance if the voltage doubles?

- A. Current doubles and resistance doubles.
- B. Current doubles and resistance is halved.
- C. Current remains the same and resistance doubles.
- D. Current doubles and resistance remains the same.

Ans: d

27. If a variable resistor's resistance varies in a non-uniform manner as the shaft is moved, it is considered to be:

- A. linear
- B. defective
- C. not wirewound
- D. tapered

Ans: d

28. How many connections does a rheostat have?

- A. 1
- B. 2
- C. 3
- D. 4

Ans: b

29. The resistivity of copper is:

- A. $9.9 \Omega\text{m}$
- B. $1.68 \Omega\text{m}$
- C. $16.7 \Omega\text{m}$
- D. $1.80 \Omega\text{m}$

Ans: b

30. What are the parts of a rheostat?

- A. center tape and wiper
- B. solenoid and armature
- C. contact and wire wound
- D. wiper and resistor track

Ans: d