

Physics ICS Part 2 Chapter 14 Online MCQ's Test

| Sr | Questions | Answers Choice |
|----|--|---|
| 1 | The name of the scientist who noted that a compass needle was deflected when placed near the current carrying conductor | A. Henry B. Faraday C. Coloumb D. Oersted |
| 2 | Weber is the unit of | A. Magnetic flux B. Permeability C. magnetic force D. None of above |
| 3 | The dimensions of magnetic flux are | A. $M^{1/2}L^{1/2}T^{-1}A^{1/2}$ B. $MLT^{-2}A^{-1}$ C. $ML^2T^{-2}A^{-1}$ D. $ML^2T^{-2}A^{-1}$ |
| 4 | The unit of magnetic induction B is | A. Coulomb B. Ampere C. Coulomb/ampere D. Weber/ m^2 |
| 5 | The magnetic field is uniform and stronger | A. Outside the solenoid B. Inside the solenoid C. At the central part of the solenoid D. None of these |
| 6 | The permeability of free space is measured in | A. wb A/m B. Am/wb C. wb/Am D. m/wbA |
| 7 | If an electron is projected in a magnetic field with velocity V, it will experience a force | |
| 8 | Lorentz force means the force acting on a particle, which is | A. Magnetic force only B. Electric force only C. Sum of electric and magnetic force D. None of these |
| 9 | Question Image | D. None of the above |
| 10 | CRO works by deflecting the beam of electron as they pass through | A. Uniform magnetic field B. Uniform electric field between two sets of parallel plates C. Non-uniform magnetic field D. None of these |
| 11 | In CRO, the output waveform of time base generator is | A. Circular B. Square C. Sinusoidal D. Saw-toothed |
| 12 | For accurate measurement of current through a circuit, the resistance of ammeter should be | A. Very small B. Very high C. Neither small nor high D. None of the above |
| 13 | To convert a galvanometer into an ammeter, we connect with it a | A. Shunt resistance B. Low value parallel C. Low value by pass resistor D. All of above |
| 14 | The acceleration of an electron of mass m and charge e, moving with uniform speed v at right angles to a magnetic field of flux density B, is given by | D. Be/vm |
| 15 | The unit of magnetic induction is: | A. Tesla B. Weber C. Weber metre D. NA^{-1} |
| 16 | 1 tesla = | A. $1MA^{-1}$ B. $1NA^{-1}m$ C. $1NA^{-1}m^{-1}$ |

| | | |
|----|--|---|
| | | D. None of above |
| 17 | The conductor experience force, placed in magnetic above: | <p>A. Move towards weaker part of field</p> <p>B. Move towards stronger part of field</p> <p>C. Remains at rest</p> <p>D. Move upwards in space</p> |
| 18 | The unit of Magnetic flux is called. | <p>A. weber</p> <p>B. weber/m^2</p> <p>C. $\text{NM}^{-1}\text{A}^{-1}$</p> <p>D. None of above</p> |
| 19 | μ_0 (Ampere's constant) has value. | <p>A. $4\pi \times 10^{-7} \text{ WbA}^{-1}\text{m}^{-1}$</p> <p>B. $4\pi \times 10^{-17}$</p> <p>C. $4\pi \times 10^7 \text{ WbA}^{-1}\text{m}^{-1}$</p> <p>D. $4\pi \times 10^{-27} \text{ Wb/m}^2$</p> |
| 20 | The field is strong and uniform. | <p>A. Inside the solenoid</p> <p>B. Surrounding of solenoid externally</p> <p>C. Perpendicular to solenoid</p> <p>D. All of above</p> |
| 21 | The magnetic field inside solenoid is given: | <p>A. $\mu_0 n l$</p> <p>B. $\mu_0 n l$</p> <p>C. $\mu_0 n / l$</p> <p>D. $\mu_0 / l n$</p> |
| 22 | The vector sum of electric force and magnetic force is called: | <p>A. Deflecting force</p> <p>B. Lorentz force</p> <p>C. Newton force</p> <p>D. Faraday's force</p> |
| 23 | $e/m =$ | <p>A. v/Br</p> <p>B. Br/V</p> <p>C. VB/r</p> <p>D. Vr/B</p> |
| 24 | The anodes in cathode ray oscilloscope. | <p>A. Control number of waves</p> <p>B. Control brightness of sept formed</p> <p>C. Accelerate as well as focus beam</p> <p>D. Negative potential w.r.t to cathode</p> |
| 25 | The sensitivity of Galvanometer can be increased by: | <p>A. Increasing C/BAN factor</p> <p>B. Decreasing C/BAN factor</p> <p>C. Increasing angle θ</p> <p>D. All of above</p> |
| 26 | An ammeter is an electrical instrument which is used to measure. | <p>A. Voltage</p> <p>B. Current</p> <p>C. Resistance</p> <p>D. None</p> |
| 27 | The Grid 'G' in cathode ray oscilloscope. | <p>A. Accelerate as well as focus electron beam</p> <p>B. Control no. of electrons beam</p> <p>C. Is at - Ve potential with respect to cathode.</p> <p>D. Both d and b</p> |
| 28 | Torque on a current carrying coil | <p>A. $\tau = IBA \cos \alpha$</p> <p>B. $\tau = ILB \sin \alpha$</p> <p>C. $\tau = IBA \sin \alpha$</p> <p>D. $\tau = ILB \cos \alpha$</p> |
| 29 | A galvanometer is an electrical instrument used to | <p>A. Measure resistance</p> <p>B. Measure voltage</p> <p>C. Detect passage of current</p> <p>D. None of these</p> |
| 30 | A soft iron cylinder is placed inside coil galvanometer to: | <p>A. Make field circular and strong</p> <p>B. Make field radial and weak</p> <p>C. Make field radial and strong</p> <p>D. All of above</p> |
| 31 | $NIBA =$ | <p>A. $c\theta$</p> <p>B. θ/c</p> <p>C. c^2</p> <p>D. c^2/θ</p> |
| 32 | A moving charge is surrounded by: | <p>A. 2 Fields</p> <p>B. 3 Fields</p> <p>C. 4 Fields</p> <p>D. None of these</p> |

| | | |
|----|---|--|
| 33 | A photon while passing through a magnetic field are deflected towards: | A. North pole B. South pole C. Are ionized D. None of these |
| 34 | Magnetism is related to: | A. Stationary charges B. Moving charges C. Stationary & Moving charges D. Law of motion |
| 35 | When charge particle enters perpendicular to magnetic field, the path followed by it is: | A. A helix B. A circle C. Straight line D. Ellipse |
| 36 | The torque in the coil can be increased by increasing: | A. No. of turns B. Current and magnetic field C. Area of coil D. All of the above |
| 37 | The magnetic flux will be max, For an angle of: | A. 0° B. 60° C. 90° D. 180° |
| 38 | The Weber is unit of measure of: | A. Conductance B. Electric current C. Magnetic flux D. Electric flux |
| 39 | One weber is equal to: | A. $\text{N}\cdot\text{A}^{-2}$ B. $\text{N}\cdot\text{m}^{-2}$ C. $\text{N}\cdot\text{A}/\text{m}$ D. $\text{N}\cdot\text{m}/\text{A}$ |
| 40 | An electron moves at 2×10^2 m/sec perpendicular to magnetic field of 2T what is the magnitude of magnetic force: | A. 1×10^{-6} N B. 6.4×10^{-17} N C. 3.6×10^{-24} N D. 4×10^{-6} N |
| 41 | The force on a charge particle moving parallel to magnetic field is: | A. Maximum B. Minimum C. Zero D. None of these |
| 42 | Ampere's law is applicable to: | A. Circular path B. Rectangular path C. To any closed path D. None of these |
| 43 | The unit of permeability of free space is: | A. $\text{T}\cdot\text{m}/\text{A}$ B. $\text{T}\cdot\text{m}^{-2}$ C. $\text{T}\cdot\text{m}/\text{A}^{-2}$ D. None of these |
| 44 | A Current flowing towards the reader is denoted by. | A. Cross B. a bracket C. A dot D. Positive sign |
| 45 | The SI unit of E is $\text{N}\cdot\text{C}^{-1}$ and that of B is $\text{N}\cdot\text{A}^{-1}\cdot\text{m}^{-1}$ then the unit of E/B is. | A. $\text{m}\cdot\text{s}^{-2}$ B. ms C. $\text{m}\cdot\text{s}^{-1}$ D. $\text{m}^{-1}\cdot\text{s}^{-1}$ |
| 46 | Write the SI unit of magnetic flux. | A. Tesla B. Weber C. Weber m^{-2} D. Tesla m^2 |
| 47 | Two parallel wires carrying currents in the opposite direction. | A. Repel each other B. Attract each other C. Have no effect upon each other D. They cancel out their individual magnetic fields. |
| 48 | A dot represents the direction of magnetic field. | A. Out of page B. Into the page C. Tangent to page D. Parallel to page |

| | | |
|----|---|--|
| 49 | ____ is correct relation. | A. $\mu = \frac{1}{\mu_0} \frac{B}{H}$ B. $\mu = \frac{1}{\mu_0} \frac{B}{H}$ C. $\mu = \frac{1}{\mu_0} \frac{B}{H}$ D. $\mu = \frac{1}{\mu_0} \frac{B}{H}$ |
| 50 | The SI Unit of magnetic induction is. | A. Weber B. Tesla C. Gauss D. Newton |
| 51 | The magnetic force is simply a | A. Reflecting force B. Deflecting force C. Restoring force D. Gravitational force |
| 52 | A charged particle enters in a strong magnetic field its K.E. | A. Remain constant B. Increases C. Decreases D. Increases then decreases |
| 53 | Magnetic lines of force are. | A. Imaginary B. Real C. Perpendicular D. In phase with electric lines of force |
| 54 | A current carrying conductor experience maximum magnetic force in a uniform magnetic field when it is placed. | A. Perpendicular to field B. Parallel to field C. At an angle of 60° to the field D. None of these |
| 55 | A positive charge is moving towards an observer, The direction of magnetic induction will be. | A. Toward right B. Anti clockwise C. Clockwise D. Toward left |
| 56 | The SI unit of magnetic induction 'B' Tesla is equal to. | A. $\text{NA}^{-1}\text{m}^{-1}$ B. Nm^{-1} C. $\text{NA}^{-1} \text{ m}$ D. Na^2m^{-1} |
| 57 | The SI unit of magnetic permeability is. | A. $\text{WbA}^{-1}\text{m}^{-1}$ B. Wbm^{-2} C. WbmA^{-1} D. WbAm^{-1} |
| 58 | Magnetic flux density is measured in | A. Weber B. Weber/m ² C. Tesla -m D. Gauss |
| 59 | The SI unit of magnetic induction Tesla is equal to | A. $\text{N}^{-1} \text{ Am}$ B. NA m^2 C. NA^{-1}n^2 D. $\text{NA}^{-1}\text{m}^{-1}$ |
| 60 | Magnetic induction can be measured in units of. | A. Tesla B. Gauss C. Weber/m ² D. All of the above |
| 61 | The SI unit of flux density is. | A. $\text{NA}^{-1} \text{ m}^2$ B. $\text{NA}^{-1} \text{ m}^{-1}$ C. NA m^{-1} D. $\text{NA}^{-1} \text{ m}$ |
| 62 | If the length and number of turns of a solenoid are doubled strength of magnetic field with. | A. Be doubled B. Become half C. Not change D. Be four time |
| 63 | If the number of turns become double but length remain same, then magnetic field in the solenoid become. | A. Half B. Double C. Remain same D. Zero |
| 64 | Energy stored per unit volume inside a solenoid is called as | A. energy density B. Electric flux C. Work D. Volume charge density |
| 65 | Magnetic flux density at a point due to current carrying coil is determined by | A. Ampere's law B. Faraday's law C. Lenz's law D. Gauss's law |
| 66 | In current carrying long solenoid the magnetic field produced does not depend upon. | A. The radius of solenoid B. Number of turns per unit length C. Current flowing through solenoid D. Length of solenoid |

| | | |
|----|--|---|
| | | C. Current flowing through solenoid D. All of the above |
| 67 | If the length of solenoid is doubled but N same, B inside the solenoid becomes. | A. Half B. Doubled C. One fourth D. Four times |
| 68 | For a current carrying solenoid the term 'n' has unit as. | A. No unit B. m^{-1} C. m^{-2} D. m^{-3} |
| 69 | If current flowing through a solenoid becomes four times, then magnetic field inside becomes. | A. two times B. three times C. four times D. Half |
| 70 | Force on a charged particle is zero when projected at angle with magnetic field. | A. 0° B. 90° C. 180° D. 270° |
| 71 | In current carrying long solenoid the magnetic field produced does not depend upon | A. The radius of solenoid B. Number of turns per unit length C. Current flowing through solenoid D. All of above |
| 72 | If a charge is at rest in a magnetic field then force on charge is | A. Zero B. Double C. One fourth D. Four times |
| 73 | A charged particle having charge 'q' is moving at right angle to magnetic field. The quantity which varies is. | A. Speed B. Kinetic energy C. Path of motion D. angular velocity |
| 74 | The sum of electric and magnetic force is called. | A. Maxwell force B. Lorentz force C. Newton's force D. Centripetal force |
| 75 | When a charge is projected perpendicular to a uniform magnetic field, its path is | A. Spiral B. Helix C. Ellipse D. Circular |
| 76 | The e/m of a neutron is | A. Less than electron B. The same as electron C. Zero D. Greater than electron |
| 77 | An electron enters the magnetic field at right angle from left, B is into paper. The electron will be deflected. | A. upward B. To ward right C. Down ward D. Toward left |
| 78 | The value of e/m is smallest for | A. Proton B. Electron C. Beta particle D. Positron |
| 79 | Grid in cathode ray oscilloscope controls. | A. Number of electron B. Temperature of filament C. Frequency of electron D. Energy of electrons |
| 80 | Brightness of screen of CRO controlled by | A. Grid B. Filament C. Anode D. Cathode |
| 81 | The brightness of the spot of CRO screen is controlled by. | A. Anode B. Cathode C. Grid D. Deflecting plates |
| 82 | Cathode ray oscilloscope works by deflecting a beams | A. Neutrons B. Protons C. Electrons D. Positron |
| 83 | The function of three anodes a C.R.O is | A. To accelerate electrons only B. To focus the electrons only C. To control the brightness of spot on screen D. To accelerate and focus the electrons |

| | | |
|-----|---|---|
| 84 | Torque is produced in a current carrying coil when it is placed in a | A. Magnetic field B. Electric field C. Gravitational field D. Nuclear field |
| 85 | Sensitivity of a galvanometer can be increased by | A. Decreasing the value of torsional couple B. Decreasing number of turns C. Decreasing area of plane of coil D. Decreasing magnetic field |
| 86 | The sensitivity of galvanometer directly depends upon | A. Magnetic field B. Area of coil C. Both a and b D. None of a, b, c |
| 87 | In order to increase sensitivity of galvanometer the value of C may be | A. Increase B. Decrease C. Neither increase nor decrease D. Remain same |
| 88 | The effective way to increase the sensitivity of moving coil galvanometer is. | A. Increase the area of coil B. Increase the number of turn C. Increase the magnetic field D. Increase the value of constant C |
| 89 | The sensitivity of galvanometer is given by | A. CAN/B B. C/BAN C. BAN/C D. BN/CA |
| 90 | In order to measure potential difference voltmeter is always connected in. | A. Series B. Parallel C. Both a and b D. Neither in series nor in parallel |
| 91 | When Ohm meter gives full scale deflection it indicates. | A. Zero resistance B. Infinite resistance C. Small resistance D. Very High resistance |
| 92 | Galvanometer is sensitive when C/BAN is | A. zero B. Large C. small D. Negative |
| 93 | A sensitive galvanometer is | A. Unstable B. Stable C. Moderate D. Both B and C |
| 94 | A battery is used in | A. ohmmeter B. Ammeter C. Galvanometer D. Voltmeter |
| 95 | Current passing through the coil of galvanometer | A. CO/BAN B. CoN/BA C. NAB/CO D. AN/BCO |
| 96 | A device used for detection of current is called. | A. Inductor B. Voltmeter C. Capacitor D. Galvanometer |
| 97 | The galvanometer can be made sensitive by making the factor BAN/C | A. Large B. Small C. Constant D. Zero |
| 98 | If a low resistance is connected parallel to a galvanometer then galvanometer is converted. | A. Ammeter B. Voltammeter C. Ohmmeter D. Multimeter |
| 99 | To convert a galvanometer into a volt meter a high resistance is connected. | A. In series B. In parallel C. In perpendicular D. Along tangent |
| 100 | A voltmeter is always connected in | A. Parallel B. Series C. Perpendicular D. Straight line |
| 101 | Which one of the following resistance is used to convert a Galvanometer into an | A. High resistance B. Low resistance in series with galvanometer |

| | | |
|-----|--|---|
| 101 | ammeter. | C. Shunt D. High resistance in series with galvanometer |
| 102 | Shunt resistance is | A. Low resistance B. Zero resistance C. High resistance D. Impedance |
| 103 | Which one has the least resistance. | A. Galvanometer B. Ammeter C. Ohm meter D. Volta meter |
| 104 | Useful device to measure resistance, current and voltage is an electronic instrument called. | A. Volt meter B. Ammeter C. Ohmmeter D. Digital Multimeter |
| 105 | An AVO meter can also be called as. | A. Digital multimeter B. Digital voltmeter C. Digital ammeter D. Digital ohm meter |