

NATIONAL UNIVERSITY OF MEDICAL SCIENCES,
RAWALPINDI

ENTRANCE TEST - 2016

Time Allowed: 3 hours

Total MCQs: 180

Instructions:

- Read All the instructions given on the MCQ response form carefully
- Choose the single best answer for each question i.e. A, B, C, D and E.
- Candidates are strictly prohibited to give any identification marks except Roll No. and signature in the specified columns only.

COMPULSORY QUESTION FOR IDENTIFICATION

Q-ID. What is the color of your Question Paper?

- A) WHITE
B) BLUE
C) PINK
D) GREEN

	A	B	C	D
-ID	●	○	○	○
- 1	○	○	○	○
- 2	○	○	○	○
- 3	○	○	○	○
- 4	○	○	○	○

Ans: Color of your question Paper is white. Fill the Circle corresponding to letter 'A' Against 'ID' in your MCQ response form.

PHYSICS

- All statements are correct about third law of motion except
(A) Forces have equal magnitude (B) Both of them have opposite direction.
(C) Both are applied on different bodies (D) Both are applied on same body maintaining equilibrium.
- A mass has constant acceleration, what is true about force applied on it?
(A) Constantly increasing (B) Constant but not zero
(C) Is directly proportional to square of displacement
(D) Is directly proportional to velocity
- If temperature is increased from 200K to 800K, then what would be the change in pressure at constant volume?
(A) Increases by factor 4 (B) Decreases by factor 4
(C) Increases by factor 2 (D) Decreases by factor 2
- If each particle of fluid is passing through same point, what would be the flow?
(A) Linear (B) Streamline (C) Tubular (D) Both A and B
- Density of blood is:
(A) More than water (B) less than that of water
(C) Nearly equal to water (D) 3 times greater than water
- A body moving on a fluid will experience:
(A) Drag force (B) Centripetal force (C) Centrifugal force (D) Tabular fore
- If a substance can undergo plastic deformation, untill it breaks, it is:
(A) Ductile substance (B) Brittle substance
(C) Crystalline substance (D) Polymeric substance
- If stress is applied on a body then ratio of change in volume to original volume will be:
(A) Polymeric strain (B) Volumetric strain (C) Parallel strain (D) Tensile strain
- If a wave can be polarized, it means, it is:
(A) Longitudinal wave (B) Stationary wave
(C) Superimposed wave (D) Transverse wave
- The electron current is chiefly due to:
(A) Cathode (B) Grid (C) Anode getter (D) Screen
- If wire having current 10A has 3t magnetic field, what will be the magnetic field at double of the distance?
(A) Reduces by factor 2 (B) Reduces by factor 4
(C) Becomes double (D) Becomes tripple
- What is true regarding magnetic force and magnetic intensity?
(A) If electron's movement is parallel to magnetic field, it will rotate clockwise.
(B) If electron's movement is parallel to magnetic field, it will rotate anticlock wise.
(C) If electron enters perpendicular to field force would be parallel to plane.
(D) If electron enters perpendicular to field force will be maximum.
- A real image formed by convex lense is always.
(A) Erect (B) Inverted (C) Magnified (D) Diminished
- What is true about electric field and electric force?
(A) Electric field lines are towards negative and electron flow in same direction.
(B) Electric field lines are towards positive and electron flow in opposite direction.
(C) Electric field lines are towards negative and electrons flow in opposite direction.
(D) Electric field lines are towards positive and electrons flow in same direction.
- If electron passes through axis of solenoid the movement will be:
(A) Towards the outward (B) Towards the inward
(C) Parallel to its motion (D) No force acts on it
- Ejection of electrons from metal surface due to heating effect is:
(A) Thermonic emission (B) Photoelectric effect
(C) Population inversion (D) Cathode expulsions
- Newtons rings are result of:
(A) Polarization (B) Diffraction (C) Reflection (D) Refraction
- If amplitude is 200, intensity is 300. When amplitude is increased to 800 then what will be intensity?
(A) 1200 (B) 1400 (C) 1600 (D) 1800
- Electric conduction is high in:
(A) Solid nuclel (B) Sugar solution (C) Solid graphite (D) None
- If speed of waves is 10m/sec and its frequency is 5Hz. Find its wavelength.
(A) 1 (B) 2 (C) 4 (D) 6
- Units of gravitational constant G are:
(A) $m \text{ sec}^{-1}$ (B) $m \text{ sec}^1$ (C) $m \text{ sec}^{-2}$ (D) $m \text{ sec}^{-2}$
- If power is 100 watt and voltage is 220. Find its resistance.
(A) 2.5 (B) 3.5 (C) 4.5 (D) 5.5
- Third law of Newton is also called:
(A) Law of inertia (B) Equilibrium (C) Both a and b (D) None
- The fractional change in resistance per kelvin is known as:
(A) Temperature coefficient of resistance (B) Thermal coefficient
(C) Linear coefficient of expansion (D) Volumetric coefficient of expansion
- To convert the Si crystal into P-type semi-conductor, which group element be doped?
(A) Trivalent element (B) Second group element
(C) Four group element (D) Pentovalent element
- The current measuring part of the Avometer consists of number of low resistances connected.
(A) At an angle of 180° with the galvanometer
(B) Parallel with galvanometer
(C) At an angle of 45° with the galvanometer
(D) Perpendicular with the galvanometer
- The energy supplied by the cell to the charge carriers is derived from the conversion of:
(A) Heat energy into chemical energy (B) Chemical energy into electrical energy
(C) Solar energy into electrical energy (D) Mechanical energy into electrical energy
- The deviation of I-V graph from straight line is due to:
(A) Decrease in temperature and decrease in resistance
(B) Increase in temperature and increase in resistance
(C) Decrease in temperature and increase in resistance
(D) Increase in temperature and decrease in resistance
- The information received at the other end of a fibre can be inaccurate due to of the light signal.
(A) Longer wavelengths (B) Frequency
(C) Intensity (D) Dispersion or spreading
- The pressure on the other sides and energy where inside the vessel will be same according to the:
(A) Pascal's law (B) Hook's law (C) Boyle's law (D) Charlie's law
- The value of universal constant "R" is:
(A) $8.314 \text{ J mole}^{-3} \text{ K}^{-3}$ (B) $1.38 \text{ J mole}^{-1} \text{ K}^{-3}$
(C) $1.38 \text{ J mole}^{-1} \text{ K}^{-1}$ (D) $8.314 \text{ J mole}^{-1} \text{ K}^{-1}$
- For a diabatic process, the first law of thermodynamics is:
(A) $w = \Delta U + Q$ (B) $Q = -w$ (C) $Q = w$ (D) $w = -\Delta U$
- The entropy of the universe always:
(A) Decreases (B) Increases (C) Remains the same (D) Both A and B
- If the body is rotating with uniform angular velocity, then its torque is:
(A) Zero (B) 90° (C) 1 (D) 1
- The direction of the magnetic lines of force depends upon.
(A) Nature of the material of the conducting wire
(B) Area of the conducting wire
(C) Amount of the current (D) Direction of the current
- Uniform magnetic field is represented by a set of lines of force which are:
(A) Parallel (B) Divergent (C) Convergent (D) None of these
- Weber ampere per meter is equal to:
(A) Joule (B) Watt (C) Newton (D) Henry
- The difference between soft and hard X-rays is of:
(A) Velocity (B) Intensity (C) Frequency (D) Polarization
- Which of the following is an instrument for monitoring radiations:
(A) GM tube (B) Geiger counter
(C) Wilson cloud chamber (D) All of the above
- Which of the following is the pair of isobars?
(A) ${}^1_1\text{H}$ and ${}^2_1\text{H}$ (B) ${}^{12}_6\text{C}$ and ${}^{13}_6\text{C}$ (C) ${}^2_1\text{H}$ and ${}^3_1\text{H}$ (D) ${}^{30}_{15}\text{H}$ and ${}^{30}_{14}\text{Si}$
- Half life of radioactive element depends upon:
(A) Amount of element present (B) Pressure
(C) Temperature (D) None
- Which of the following is the percentage of the original quantity of a radioactive material left after five half - lives approximately.
(A) 3% (B) 10% (C) 10% (D) 20%
- When nucleus de-excite, it emits.
(A) α -rays (B) γ -rays (C) β -rays (D) All of these
- The direction of the magnetic lines of force depends upon:
(A) Nature of the material of the conducting wire
(B) Area of the conducting wire
(C) Direction of the current (D) Direction of the current
- When a charged particle is projected perpendicularly in a magnetic field its trajectory is:
(A) Hyperbola (B) Helix (C) Parabola (D) Circular