BOARD OF INTERMEDIATE & SECONDARY EDUCATION, HYDERABAD

Excellence – Equity – Empathy

Time: 2 Hours　　　　**PHYSICS　MODEL PAPER (CLASS X)**　　　　Total Marks: 85

SECTION A

MULTIPLE CHOICE QUESTIONS (MCQs)

Marks 41

Q.No: 1　(1)　Attempt all questions. Each question carries 1 mark.
Write answer in full on the first specified page of answer copy with choose (ABC & D)

(i) _____ deals with the motion of objects with or without reference of force.

(a) Electricity　　(b) Mechanics　　(c) Bio- Physics　　(d) Atomic Physics

(ii) Science is the common _____ of all mankind.

(a) Heritage　　(b) Energy　　(c) Physics　　(d) Law

(iii) The only Noble Prize holder from Pakistan is _____.

(a) Dr. Abdul Qadeer Khan　　(b) Dr. Abdus Salam

(c) Dr. Samar Abbas　　(d) Dr. Saleem uz Zaman.

(iv) In a scientific work the most important thing is _____.

(a) Theory　　(b) Law　　(c) Observation　　(d) Hypothesis

(v) The fundamental unit of length in S.I system is _____.

(a) Kilometer　　(b) Meter　　(c) Yard　　(d) Foot

(vi) One meter is equal to _____.

(a) 10^4 mm　　(b) 10^3 mm　　(c) 10^2 mm　　(d) 10^6 mm

(vii) Rate of change of velocity of a body is known as_____.

(a) Speed　　(b) Time　　(c) Acceleration　　(d) Density

(viii) The shortest distance between the initial and final positions of body is called_____.

(a) Position　　(b) Displacement　　(c) Distance　　(d) Speed

(ix) First equation of motion is _____.

(a) $t = Vf - Vi$　　(b) $Vf = Vi + at$　　(c) $a = Vf - Vi$　　(d) $Vf - Vi = at$

(x) The unit of coefficient of friction is _____.

(a) Newton　　(b) Kilogram　　(c) Metre　　(d) None

(xi) The S.I unit of force is _____.

(a) Metre　　(b) m /sec　　(c) Kg　　(d) Newton

(xii) The product of mass and velocity is called its _____.

(a) Momentum　　(b) Weight　　(c) Speed　　(d) Velocity

(xiii) The quantity of matter in a body is called its _____.

(a) Speed　　(b) Mass　　(c) Weight　　(d) Force

(xiv) _____ is a scalar quantity.

(a) Torque　　(b) Distance　　(c) Momentum　　(d) Acceleration

(xv) _____ is a vector quantity.

(a) Work　　(b) Density　　(c) Velocity　　(d) Temperature

(xvi) Torque is a _____.

(a) Scalar Quantity　　(b) Vector Quantity　　(c) Negative Quantity　　(d) None of these

(xvii) The unit of torque in S.I Units is _____.

(a) Newton   (b) Meter   (c) Newton Metre   (d) Pound

(xviii) The turning effect of a force about an axis is

(b) Force   (b) Rotation   (c) Torque   (d) Momentum

(xix) "G" is called_____.

(a) Gravity   (b) Gravitational Force

(c) Gravitational Acceleration   (d) Gravitational Constant

(xx) The work will be positive? If the angle between force and displacement is _____.

(a) 90^0 (b) 45^0 (c) 180^0 (d) 0^0

(xxi) The energy possessed by a body due to its position is called_____.

(a) Kinetic Energy   (b) Heat Energy (c) Potential Energy   (d) Sound Energy

(xxii) Rate of doing work with respect to time is called _____.

(a) Work   (b) Distance   (c) Power   (d) Energy

(xxiii) Ability of a body to do work is called _____.

(a) Power   (b) Energy   (c) Velocity   (d) Heat

(xxiv) Power is the product of _____ and velocity.

(a) Force   (b) Power   (c) Energy   (d) Work

(xxv) Energy is a_____ quantity

(a) Vector   (b) Scalar   (c) Positive   (d) Negative

(xxvi) A pair of scissors is an example of a_____.

(a) Pulley   (b) Lever   (c) Wheel and axle   (d) Inclined Plan

(xxvii) _____ is a wheel type disc

(a) Pulley   (b) Lever   (c) Wheel   (d) In Put

(xxviii) The Product of Load and Load Arm is called _____

(a) Moment of Effort   (b) Fulcrum   (c) Lever   (d) Moment of load

(xxix) Elasticity of a substance depends on its.

(a) Temperature   (b) Heat   (c) Nature   (d) Size

(xxx) Archimedes principle is applied to determine _____

(a) Specific Heat   (b) Specific Gravity   (c) Specific Resistance   (d) Temperature

(xxxi) Random motion of molecules in a fluid was first discovered by _____.

(a) Robert Boyle   (b) Robert Brown   (c) Newton   (d) Robert Hooke

(xxxii) An object appears lighter in water because of one of the properties of water _____.

(a) Buoyancy   (b) Surface Tension   (c) Viscosity   (d) Nature

(xxxiii) _____ is the form of Energy.

(a) Heat   (b) Temperature   (c) Power   (d) Weight

(xxxiv) Light travels in a ____ line.

(a) Straight   (b) Vertical   (c) Positive   (d) Negative

(xxxv) Light is the form of _____.

(a) Power   (b) Energy   (c) Real   (d) Mirror

(xxxvi) If q = 4 cm and p = 2 cm, then the magnification of the mirror is _____.

(a) 2   (b) 0.5   (c) 6   (d) 4

(xxxvii) The speed of light is _____ m /sec

    (a) 3×10^6 (b) 3×10^8 (c) 1.86×10^6 (d) 3×10^{10}

(xxxviii) Which one of the equivalent to "Joule per Coulomb"

    (a) Ampere   (b) Ohm   (c) Volt   (d) Watt

(xxxix) One mega ohm resistance is equal to _____ ohm.

    (a) 10^6 (b) 10^{-6} (c) 10^8 (d) 10^2

(xl) _____ revolve around the nucleus in their respective orbits.

    (a) Neutrons   (b) Protons   (c) Electron   (d) Deuteron

(xli) $100^0 c =$ _____ k.

    (a) 373   (b) 273   (c) 150   (d) 270

SECTION B
SHORT ANSWERS
24 Marks

NOTE: Attempt any four of the following question. Each carries 06 marks.

Q.No:2   Explain the word Physics and define what is Physics?

Q.No:3   What is Law of Gravitation?

Q.No:4   Drive the Equation $2aS = vf^2 - vi^2$

Q.No:5   Define the branches of Physics? Any Four .

Q.No:6   What is a Lever? Determine its mechanical advantage.

Q.No:7   Determine the acceleration of a car of mass 900kg, when a net force of 2700N acts on it.

Q.No:8   Differentiate between mass and weight?

SECTION "C"
(LONG ANSWER)

NOTE: Answer any TWO of the following questions. Each carries 10 marks.   (20 Marks)

Q.No:09   How can we determine the mass of the earth by applying law of Gravitation?

Q.No:10   Explain series and parallel combination for resistance.

Q.No:11   What type of work is done by a movable pulley?

Q.No:14   Write notes on any Two of the following:

    (i)   Newton's Second Law of Motion

    (ii)   Resolution of Vector

    (iii) Centripetal Force