

GROUP-I

TIME ALLOWED 15 Minutes

MAXIMUM MARKS 12

MCQs مختصر سوالات

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question. No credit will be awarded in case BUBBLES are not filled. Do not solve questions on this sheet of OBJECTIVE PAPER.

Q.No.1

(1) In gases heat is mainly transferred by:

(A) Molecular collision (B) Conduction

(2) The number of base units in S.I. are:

(A) 3

(B) 6

(C) 7

(D) 9

(3) A student claimed the diameter

of a wire as 1.032cm using Vernier Callipers. Upto what extent do you agree with?

(C) 1.03 cm

(B) 1.0 cm

(C) 1 cm

(D) 1.032 cm

(A) Speed

(B) Velocity

(C) Displacement

(D) Distance

(5) Which of the following is the unit of momentum?

(A) Nm

(B) Ns

(C) Kgms^{-2}

(D) Ns^{-1}

(6) The number of forces that can be added by head to tail rule are:

(A) 2

(B) 3

(C) 4

(D)

(7) The number of perpendicular components of a force are:

(A) 1

(B) 2

(C) 3

(D) 4

(8) The orbital speed of a low orbit satellite is:

(A) Zero

(B) 8ms^{-1}

(C) 800ms^{-1}

(D) 8000ms^{-1}

(9) The K.E of a body of mass 2K is 25J. Its speed is

(A) 5ms^{-1}

(B) 12.5ms^{-1}

(C) 25ms^{-1}

(D) 50ms^{-1}

(10) Which of the substance is the lightest one?

(A) Copper

(B) Mercury

(C) Aluminum

(D) Lead

(11) According to Hooke's law:

(A) Stress \times Strain = Constant

(10) کوئی دو (جہات) سب سے بھل ہے

(B) Stress = Constant \times Strain

(11) کوئی دو (جہات) سب سے بھل ہے

(C) $\frac{\text{Strain}}{\text{Stress}} = \text{Constant}$

(D) Stress = Strain \times Constant

کوئی دو (جہات) سب سے بھل ہے

(12) Water freezes at:

(A) 0°F

(B) 32°F

(C) -273K

(D) 0K

PHYSICS GROUP-I

TIME ALLOWED 145 MINS

MAXIMUM MARKS 40

NOTE: Write same question number and same part number on answer book, as given in the question paper.

MTN

SECTION-I

1. Attempt any five parts.

10 = 2 x 5

(i) What is meant by significant figures of a measurement?

Write two examples.

(ii) Define positive and negative zero error of a scale.

(iii) What is the difference between base quantity and derived quantity?

(iv) Define independent variable and dependent variable with respect to graph.

(v) Define Speed and Velocity.

(vi) Define Weight and Mass.

(vii) What would be happened if all friction suddenly disappears?

(viii) What is meant by Newton's law?

2. Attempt any five parts.

10 = 2 x 5

(i) Define equilibrium and give an example.

(ii) How can a force be resolved into its perpendicular components?

(iii) Define couple with the help of an example.

(iv) Write two types of artificial satellite.

(v) On what factors does depend the orbital period of a satellite?

(vi) State the Law of Gravitation.

(vii) What do you know about solar cells and solar panel?

(viii) Why do we need energy?

3. Attempt any five parts.

10 = 2 x 5

(i) Define Pressure and write its SI unit.

(ii) Define Density and write its SI unit.

(iii) State Pascal's law.

(iv) Convert 300K on Kelvin Scale into Celsius scale of temperature.

(v) Define Heat Capacity.

(vi) Define Conduction.

(vii) Differentiate between Land and Sea breeze.

(viii) What is meant by Convection Current?

SECTION-II

NOTE: Attempt any two questions.

10 = 9 + 2

5 (A) Derive the second equation of motion with the help of speed-time-graph.

(B) A body has weight 20N. How much force is required to move it vertically upwards with an acceleration of 2 m/s^2 ?

6 (A) Define Kinetic Energy. Define its relation to potential energy.

(B) The steering of a car has a radius of 6.0m. Find the torque produced by a couple of 6.0N at a radius 1.0m.

7 (A) Express pressure in N/m² and convert to torr. $P = 0.8 \text{ N/m}^2$

(B) A balloon contains 1.5 m^3 air at 15°C . Find its volume at 45°C .

Thermal coefficient of volume expansion of air is $2.57 \times 10^{-3} \text{ K}^{-1}$.