

D.G.Khan Board 2017 (First Group)

Roll No.(in Figures): (in Words):

Maximum Marks: 48

(SUBJECTIVE TYPE)

Time Allowed :1.45 Hours

PART - I

Q2. Write short answers to any FIVE (5) questions: (5×2=10)

- (i) Define the term light.
- (ii) What is meant by significant figures of a measurement?
- (iii) Differentiate between rest and motion.
- (iv) What is meant by circular motion?
- (v) Define gravitational acceleration.
- (vi) What is meant by centrifugal force?
- (vii) What is meant by momentum?
- (viii) What is meant by vernier constant?

Q3. Write short answers to any FIVE (5) questions: (5×2=10)

- (i) Define centre of mass.
- (ii) What is meant by resultant of forces?
- (iii) Define rigid body.
- (iv) What do you know about G? Also write its value.
- (v) Why we cannot feel gravitational force around us?
- (vi) What is global positioning system?
- (vii) What is the unit of work? Define it.
- (viii) Define potential energy and write its equation.

Q4. Write short answers to any FIVE (5) questions: (5×2=10)

- (i) Write two differences between solid and gas.
- (ii) What is meant by upthrust forces?
- (iii) Write one difference and one similarity between ships and submarines?
- (iv) How many factors affect thermal conductivity, Also write their names.
- (v) Change 300 K on Kelvin scale into celsius scale of temperature.
- (vi) Why is heat called as the energy in transit?
- (vii) Define radiation.
- (viii) What is leslie cube? Write the names of its surfaces.

PART - II

Note: Attempt any TWO questions. (9×2=18)

- Q5. (a) What is the relation between force and momentum? Also derive its equation. 4
- (b) Find the retardation produced when a car moving at a velocity of 30 ms^{-1} slows down uniformly to 15 ms^{-1} in 5 s 5
- Q6. (a) Define torque. On what factors does it depend? Explain it 4
- (b) A car weighing 12 kN has speed of 20 ms^{-1} . Find its kinetic energy. 5
- Q7. (a) State Pascal's law and explain the working of hydraulic press. 4
- (b) How much heat is required to change 100 g water at 100°C into steam? 5

(Latent heat of vaporization of water is $2.26 \times 10^6 \text{ J kg}^{-1}$)