Half Yearly Examination 2025-26
Class – VIII
Subject – Physics

Time : 2.30 hrs. M.M.- 80

Instructions : All questions are compulsory.

- Read the question paper carefully. You will not be allowed to write during first 15 minutes. This time is to be spent in reading the question paper.
- This paper is divided in to 2 sections.
- Section A is compulsory. Attempt any four questions from Section B.

Section – 'A' [40 Marks]

Q. 1. Multiple Choice Questions : [10]

(i) Force does not change :
(a) Direction (b) Mass (c) weight (d) none

(ii) S.I. unit of work is :
(a) Nm (b) Joule (c) both (a) & (b) (d) newton

(iii) 1 atm is :
(a) 1.014×10^5 p.a. (b) 1.013×10^4 p.a. (c) 1.013×10^5 p.a. (d) None

(iv) During the change of state the temperature :
(a) increases (b) decreases (c) remains constant (d) First increases and then decreases

(v) Stretched string of a bow contains :
(a) Kinetic energy (b) Potential energy (c) both (a) and (b) (d) none

(vi) The space between the particles of matter is called :
(a) bold (b) voide (c) void (d) none of these

(vii) ..... is diatomic molecule :
(a) water (b) oxygen (c) neon (d) carbon dioxide

(viii) The relative density of a liquid can be determined by using a special bottle called :
(a) round bottle (b) R D bottle (c) gravity bottle (d) specific bottle

(ix) 1 kgf =
(a) 1000gf (b) 10000gf (c) 100gf (d) 10gf

(x) No work is said to be done if the angle between direction of force and distance moved is :
(a) Between 0° and 90° (b) 0° (c) 90° (d) 180°

Assertion – Reason type questions. [3]

In the questions given below, there are two statements marked as Assertion [A] and Reason [R]. Read the statements and choose the correct option.

(a) If both Assertion [A] and Reason [R] are correct and Reason [R] is the correct explanation of Assertion [A].

(b) If both Assertion [A] and Reason [R] are correct but Reason [R] is not the correct explanation of Assertion [A]

(c) If Assertion [A] is true but Reason [R] is false.

(d) If Assertion [A] is false but Reason [R] is true.

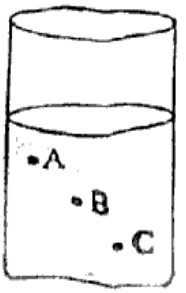
(xi) Assertion [A] : A spring has potential energy in both cases, when it is compressed and stretched.
Reason [B] : In compressing or stretching work is done on the spring against the restoring force.

(xii) Assertion [A] : a person can swim more easily in sea water than in freshwater.
Reason [B] Sea water has a lower density than freshwater.

(xiii) Assertion [A] : A lactometer is used to measure the purity of milk.
Reason [B] : It is based on the principle of flotation.

Diagram based question. [2]

(xiv) In the given figure a container is filled with water. At which point pressure is maximum
(a) A.
(b) B
(c) C
(d) Can't be determined.



(xv) Identify the given apparatus:
(a) Eureka Kane
(b) Eureka can
(c) Milk can
(d) Beaker

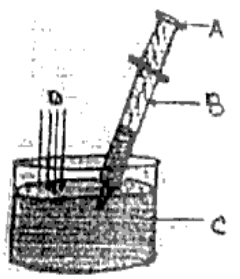
Q. 2. Give answer in one word. [5]
(a) Solid exert pressure due to their _____
(b) The temperature at which the density of water is maximum.
(c) Which animal is known as the ship of desert.
(d) Ability of doing work
(e) Sum of kinetic energy and potential energy.

Q. 3. Statements given below are incorrect. Write correct statements. [5]
(a) Water evaporates at its boiling point.
(b) Density of an irregular solid can be measured by its mass only.
(c) Perfumes and talc give hot sensation on our body.
(d) School bags are provided with wide straps to increase the pressure on the shoulders.
(e) When the magnitude of force applied increases, turning effect on an object decreases.

Q. 4. Match the column. [5]

Column A	Column B
(a) Solid to liquid	(i) Deposition
(b) Density of water in S.I.Unit	(ii) 1000 Kg/m^3
(c) Gas to solid	(iii) watt
(d) S.I. Unit of energy	(iv) Joule
(e) Unit of power	(v) Melting
	(vi) Nm
	(vii) N/m
	(viii) $1000g/cm^3$

Q. 5. Diagram – Based Question [5]
Look at the picture carefully and answer the questions that follows :
I – Name the diagram.
II – Label the part A, B, C and D



Q. 6. Project. [5]

Section – B [Do any four questions]

Q.7(a) Case study. [1+1+1+2]
Read the given information and answer the question that follow :
"Rahul, a scuba diver, descends in to a deep lake. At a certain depth, the pressure increases, making it difficult for him to equalize the pressure in his ears. If the atmospheric pressure at the surface is 100,000 pa, and the pressure increases by 10,000 pa for every meter of depth :
(i) Why does the pressure increases with depth ?
(a) Because the weight of the water increases (b) because the temperature of the water increases

(c) because the volume of water increases (d) none of these

(ii) What happened to the pressure when you go deeper in the lake.
(a) It remains the same (b) It increases (c) It decreases (d) it fluctuates

(iii) Why is it important for Rahul to equalize the pressure in his ears while diving ?
(a) To avoid getting wet (b) to avoid getting cold
(c) to avoid damaging his ear drum (d) to avoid getting tired

(iv) What measures can be taken to prevent damage from high pressure under water ?

(b) Give Reason. [3]

(i) Why is the process of evaporation occur only at the surface ?

(ii) The pillars of the bridge have a broader base than the top.

(c) Write the mathematical expression used to measure for the following. [2]

(i) Kinetic energy (ii) Pressure

Q.8(a) Activity based question. [1+1+1+2]

Take two beakers One of them with a liquid 1 [density $1g/cm^3$] and another with liquid 2 (glycerin). Place one wooden block on the surface of liquid 1 and another on the surface of glycerin.

The block in beaker (1) floats with less portion outside the liquid surface. The block in another beaker (2) with its more portion outside the surface of liquid.

Now answer the following questions :

i. Name the liquid 1 taken in beaker.
ii. Name the liquid which is more denser.
iii. What happens when liquid in beaker (2) is replaced by kerosene oil.
iv. State the law of floation.

(b) Write three differences between work and power. [3]

(c) Name two processes in which heat is absorbed and released during the change of state of matter. [2]

Q.9(a) **Define [any two]-** (i) moment of force (ii) Humidity (iii) Thrust [4]

(b) Draw a diagram of a hydrometer. [3]

(c) A scooter weights 1800N. The pressure exerted by one of its tyre is 120Pa. Find the area of tyre in contact with the road.

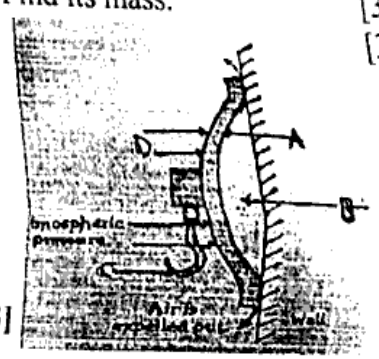
Q.10(a)(i)It is easier to turn a wheel by its rim than at its centre why ? [3]

(ii) 1 horse power = _____W., 1gf cm = _____ dyne cm. [2]

(b) The relative density of a substance is 2.5 and its volume is 20 cm^3. Find its mass. [2]

(c) List two situations where no work is done. [3]

Q.11(a) Look at the diagram carefully and answer the question based on it. [1+2+2]



(i) Identify the diagram.

(ii) Label the parts A to D

(iii) List any two characteristics of liquid pressure ?

(b) Write the type of energy involved in the following situations. [3]

(p) a moving car (q) water stored in a dam

(r) a compressed spring.

(c) An object of mass 50kg is moving with a velocity of 3m/s. What is the kinetic energy of the object? [2]

Q.12(a) Write the factors on which pressure on an object depends. [4]

(b) Write the order in which the density decreases in three States of matter. [3]

(c) Porters wear turban on their heads while carrying heavy loads. why ? [3]