Half Yearly Examination 2018-2019

Physics

Class : VI

Time : **Full Marks : 80**

SECTION A

Q1. Fill in the blanks : **[15]**

(a) Living and non-living things are made up of_____.

(b) On heating solid, liquid and gas, only_____shows no change in state.

(c) _____is the distance from the elbow to the tip of the middle finger.

(d) The SI unit of electric current is_____and time is_____.

(e) A unit to measure the size of electrons, protons, atoms and molecules is_____.

(f) Two instruments to measure small lengths are _____ and _____.

(g) 1 ft^2 = _____ m^2.

(h) A beam balance is said to be true if its_____ remains horizontal and its_____vertical when its pans are empty, or, equal weights are placed on them.

(i) The Kelvin scale is a theoretical scale and its value can be obtained by adding_____to the Celsius scale.

(j) Two examples of contact forces are_____ and _____ .

{Turn Over}

(k) _____ was the French scientist who discovered electricity. The unit of charge was named in his honour.

Q2. Answer the following questions [18]

(a) State four effects of force. [4]

(b) State differences between solid, liquid and gas on the basis of — [6]

(i) Volume

(ii) Flow

(c) State two differences between Laboratory thermometer and clinical thermometer. [4]

(d) Define : Friction. State two properties of frictional force. [2+2]

Q3. Match the following. [Write the answers in pairs]. [7]

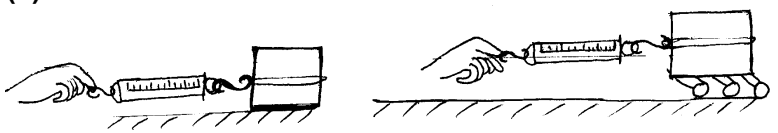
(a)	Water to Ice	(i)	gas
(b)	Circle	(ii)	Units
(c)	Fish and birds	(iii)	repel
(d)	Like poles	(iv)	π x radius x radius
(e)	Smoke	(v)	Cooling
(f)	Static Friction	(vi)	Streamlined bodies
(g)	Newton, Kelvin, Joule	(vii)	Limiting Friction

SECTION B

Choose any 4 questions out of 6 questions. Each question carries 10 marks.

Q4. (a) Give reason why liquids and gases can flow freely.[2]

Q8. (a)



(i) What can you conclude from the above experiment? (2)

(ii) Out of the four types of force of friction, name the friction which is the **greatest** and which is the **least**? [2]

(b) What is 'mean solar day' ? (2)

(c) If the base of a triangle is 10 cm and its height is 12 cm, What is the area of the triangle ? (2)

(d) Express :- 2 hours as seconds (2)

Q9. (a) What is the function of —

(i) "KINK" in a clinical thermometer. (2)

(ii) Stopwatch (2)

(b) Draw and label the arrangement of molecules of the three states of matter. [3]

(c) Arnav is sailing a boat with a force of 800N, while running water exerts a force of 480N Calculate the resulting force acting on the boat if it is going —

(i) upstream (1½)

(ii) downstream (1½)

(b) Solve numerically :

On sports day, class 6G and Class 6H participated in a game of tug of war. Class 6G stood towards east and class 6H stood towards west. Class 6H pulled the rope with a force of 16N and Class 6G pulled the rope with a force of 22N. In which direction did the rope get finally pulled ? Which class won and what was the net resultant force ? [1+1+2]

(c) Convert (i) 10,000 cm into m [2]

(ii) 10 Km^2 to m^2

(d) What is matter ? [2]

Q5. (a) Fill in the blanks —

(i) $\frac{C}{100} = \frac{F - 32}{?}$ [1]

(ii) 10 milligram = ? microgram [1]

(iii) The three states of matter can be interchanged by changing the_____and_____. [2]

(b) Give reason why the tyres of a car are made rough.[2]

(c) What are the units of —

(i) temperature

(ii) Amount of substance [2]

(d) State two methods to increase friction. [2]

Q6. (a) Name two factors on which the 'gravitational force between two objects' depend on. [2]

(b) Give reason why sand and gravel is spread on slippery ground during the rainy season. [2]

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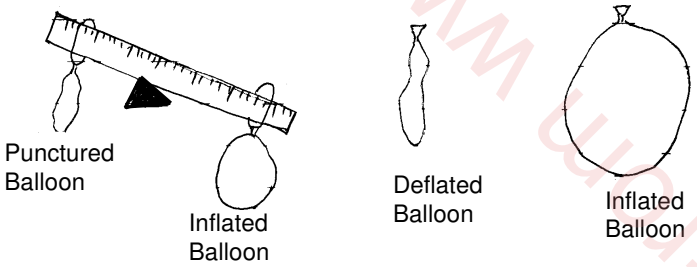
(c) Convert — (i) 2000 kg to ton [2]

(ii) 800 cm to decimetre [2]

(d) Define : A molecule [2]

Q7. (a) Experiment 1 Experiment 2



(i) What can you conclude from Experiment 1 ? (1)

(ii) What can you conclude from Experiment 2 ? (1)

(iii) Does Experiment 1 and Experiment 2 show that "Air is matter" ? Why ? [2]

(b) Arun pushes a desk with a force of 80 N. Himanshu pushes the desk from the opposite direction with a force of 200 N.

(i) What is the resultant force ? [2]

(ii) Does the desk move towards Arun or towards Himanshu ? [1]

(c) Give two reasons why a physical balance is kept in a glass case ? (2)

(d) Name the force exerted by water to rotate a turbine to produce hydroelectricity. (1)

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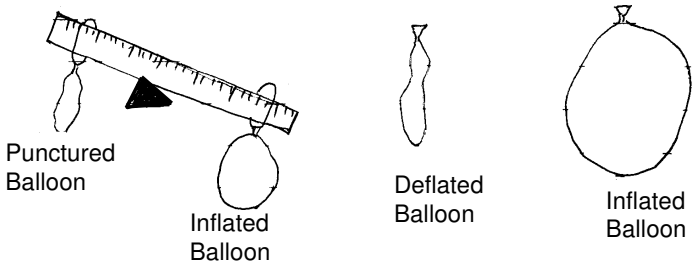

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