GREENLAWNS SCHOOL, WORLI

TERMINAL EXAMINATION

PHYSICS

STD: VIII

Date: 20/09/2019

Marks: 80

Time: 2hrs.

Question 1

a. Show interconversion of states of matter in the form of flow charts. [2]

b. Explain the process of sublimation in terms of kinetic theory. [2]

c. Why there is no change in temperature during the melting of a solid. [2]

d. Aman was getting late in the morning so his mother poured the milk in a soccer Aman found out that it was easy to sip the hot milk from the Saucer than the glass what could be the reason behind it. [2]

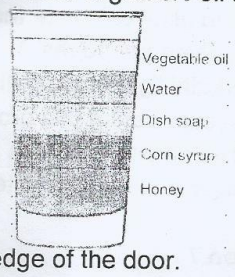
e. How are the intermolecular distances and inter molecular forces of attraction related to each other. [2]

Question 2

a. How will you relate relative density and density? [2]

b. The mass of an iron ball is 800 g. What should be the volume of the ball in SI system, if the density is 4.80 gcm^{-3}. [2]

c. Carefully observe the image, and name the liquid that are denser than vegetable oil and lighter than honey [2]



d. Name the special bottle used for determining the R.D of liquid. [1]

e. Why it is easiest to open a closed door by applying force at the edge of the door. [2]

f. List any one effects of force. [1]

Question 3

a. What is atmospheric pressure? Why do we not feel its effect? [2]

b. Deep sea divers wear specially designed suit before diving into the sea. [2]

c. How does the pressure exerted on the object change when the force applied is doubled and area on which force is applied reduce to half. [2]

d. Differentiate between the pressure exerted by solids and liquid. (any two points) [2]

e. The base of a wooden box measure 15cm x 20cm. if the weight of the box is 60N what is the pressure exerted by the box on the bed. [2]

Question 4

a. Shiv opens a nut with the help of a spanner of length 30 cm by applying a force of 120 N. Calculate the amount of moment of force is required to open the nut. [2]

b. Piya and her daughter went to buy school bags. While the daughter was choosing fancy bags for herself. Piya was mainly looking at the straps of the bags. What do you think Poonam is trying to look in the straps of the bag? Explain the reason behind doing so. [2]

c. Find the work done by student who applies a force of 10N to displace a table in classroom through the distance of 40cm in the direction of force. [2]

d. A Car has a kinetic energy 2000 J. What will be its K.E if its speed is doubled [2]

e. A Machine does 240 J of work in 40 see calculate the power of the machine [2]

Question 5

a. Show the types of mechanical energy, units, and example in the form of flow chart [3]

b. why a car and a man running with same speed have different kinetic energy [2]

c. Give reason why a boy with heavy bag waiting at the bus stop does no work. [2]

d. State and define S.I unit of energy and give its relation with c.g.s unit. [3]

Question 6

a. What do you mean by term energy transformation? [2]

b. Axe is raised to some heights and then struck to cut a log of wood. Give reason? [2]

c. How much work is done by an electric motor to pump 150 kg of water to a height of 30 m? and also calculate the power of the motor if it completes this work in 0.5 min. (Given g = 10 ms^{-1}) [3]

d. Riddhi lights up a bulb using a battery She wonders which type of energy change could accure during this process. Help her in finding the right answer. [1]

e. The satellite of mass 200 kg revolvers around the earth in a circular motion. Calculate the work done by the satellite. [2]

Question 7

a. Give reason, why concave mirrors are used as vigilance mirror in shopping malls. [2]

b. What is the reason behind dispersion of light by prism? [2]

c. State the three convenient rays required to draw a ray diagram for formation of images in spherical mirrors [3]

d. With help of a ray diagram, show the refraction of monochromatic light through prism with proper labeling. [3]

Question 8

a. With the help of ray diagram, show the reflected ray when ray is incident on the pole of a spherical mirror at an angle of 45^0. [2]

b. What do you mean by virtual image? How can it be obtained using concave mirror and a convex mirror? Explain with the help of a suitable ray diagram. [5]

c. Define the following terms

i) Focal point.

ii) Later displacement

iii) Refraction.

[3]