GREENLAWNS HIGH SCHOOL
FINAL EXAMINATION 2022

STD: 9 **MARKS: 20**

SUBJECT: PHYSICS PRACTICALS **TIME: 30 MIN**

Experiment – 1: Verification of Archimedes' Principle

1) State Archimedes' principle.

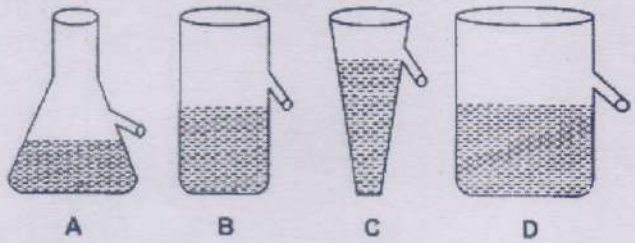
2) Name the two forces which act on a body when it is immersed in a liquid.

3) Why does the pointer of a spring balance move up when the stone suspended from it is immersed in water?

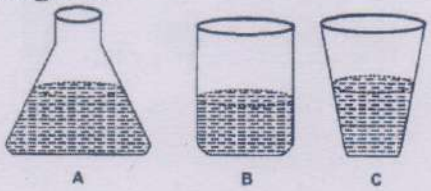
4) If the volume of the water displaced by the stone is 10 ml. How much is the upthrust acting on the stone? (Write your answer in gf)

5) A given solid is weighed in air using a spring balance. It is then weighed separately by immersing it fully first in a vessel containing tap water and then in a vessel containing salt solution. The reading of the spring balance would be
(a) least in air
(b) least in water
(c) least in salt solution
(d) equal in all the three cases.

6) Four students A, B, C and D while performing an experiment on establishing the relation between the loss of weight of small solid when fully immersed in tap water, and the weight of water displaced by it, used four different shapes of overflow cans containing water as shown. The arrangement that would give correct results is that of student

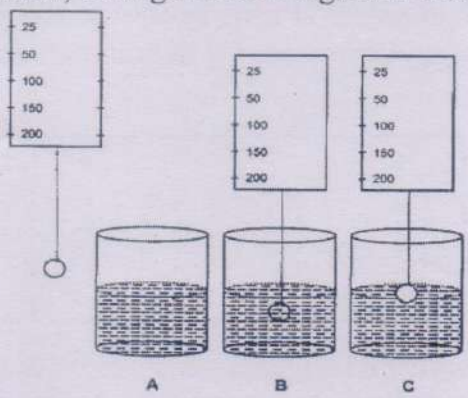


7) Three students used three different containers (A), (B) and (C) of different shapes, for finding the loss in weight of solids when dipped in water.
On dipping a solid sphere in these containers they would observe that the loss in weight is



(a) Maximum in A
(b) Minimum in A
(c) Maximum in B
(d) Same in all

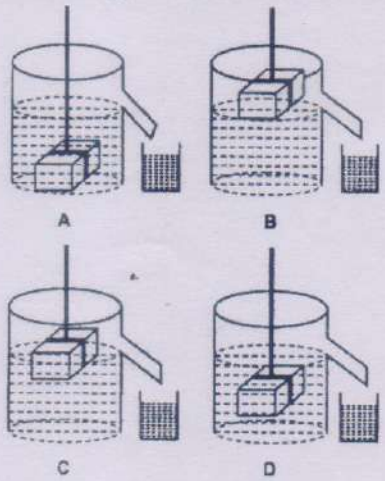
8) If W_A, W_B and W_C represent the weights of the solid in the figure shown below, arrange these weights in descending order.



9) While establishing the relation between the loss in weight of an immersed solid with the weight of salty water displaced, a student carried out the following procedure:
(i) noted the salty -water level in the measuring cylinder without solid body.
(ii) immersed the solid body completely in salty water.
(iii) noted the rise in salty water level in the measuring cylinder with solid body.
(iv) weight of the displaced salt solution collected in the beaker was not recorded in the observation table.

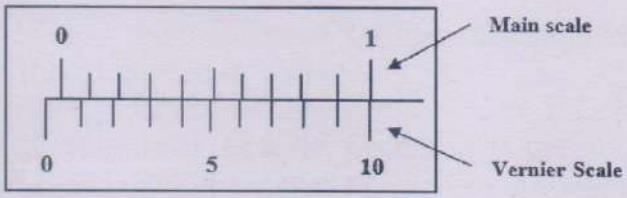
Which of the above steps is incorrect?

10) Out of the following the best set-up for the experiment for measuring the loss of weight immersed in a liquid, is the set-up labelled as



Experiment – 2 Vernier Callipers

1) How to determine the least count of vernier calipers?
2) Will the accuracy of a vernier will increase or decrease if 20 divisions are made in the same length?
3) 1 division on V.S. = ____ mm
4) What are the functions of (a) Sliding strip (b) Upper jaws
5) Which type of error is shown in the following figure? How is it taken into consideration to get the correct measurement?



6) What is the advantage of a vernier callipers over an ordinary scale?
7) A student used a vernier caliper to measure the length of his pen. He found that the main scale showed a reading of 7.4 and vernier scale coincides with 7th position to the main scale.
What is the correct measurement of the length of the pen?
8) Which part of the vernier callipers will be used to measure the diameter of a sphere?