

SAMPLE QUESTION PAPER 2

(Practical Skills)

Time : 1½ Hours

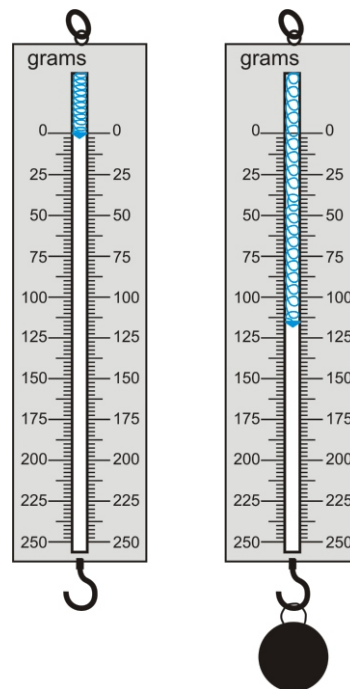
Maximum Marks : 20

INSTRUCTIONS :

Same as in Sample Question Paper 1.

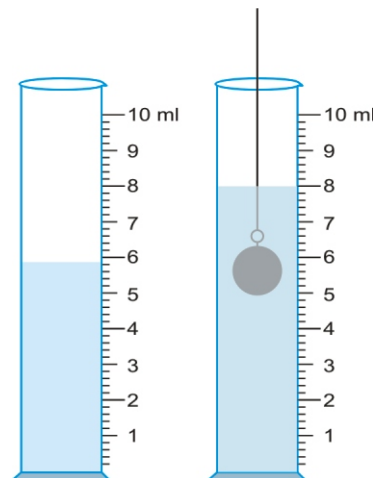
SECTION A

1. A student was asked to mix the white of an egg with water and stir well. The student observed that
- | | | | |
|--|--------------------------|---|--------------------------|
| (a) a transparent solution is formed | <input type="checkbox"/> | (b) a translucent mixture is formed | <input type="checkbox"/> |
| (c) egg white settles down at the bottom | <input type="checkbox"/> | (d) egg white floats on the surface of the water. | <input type="checkbox"/> |
2. We want to carry out a reaction of zinc granules with sulphuric acid. One bottle contains concentrated sulphuric acid and another bottle contains dilute sulphuric acid. The correct way of carrying out the reaction is to
- | | |
|---|--------------------------|
| (a) use concentrated sulphuric acid | <input type="checkbox"/> |
| (b) add water to concentrated sulphuric acid before using it | <input type="checkbox"/> |
| (c) use dilute sulphuric acid | <input type="checkbox"/> |
| (d) mix concentrated and dilute sulphuric acid and add water to it. | <input type="checkbox"/> |
3. To prepare iron sulphide, by heating a mixture of iron filings and sulphur powder, we should use a
- | | | | |
|-----------------|--------------------------|-----------------|--------------------------|
| (a) copper dish | <input type="checkbox"/> | (b) watch glass | <input type="checkbox"/> |
| (c) china dish | <input type="checkbox"/> | (d) petri dish. | <input type="checkbox"/> |
4. We will observe a precipitation to occur in the solution used when
- | | |
|--|--------------------------|
| (a) barium chloride is added to sodium sulphate | <input type="checkbox"/> |
| (b) barium chloride is added to sodium chloride | <input type="checkbox"/> |
| (c) sodium sulphate is added to sodium chloride | <input type="checkbox"/> |
| (d) hydrochloric acid is added to barium chloride. | <input type="checkbox"/> |
5. A student by mistake mixed iron filings and sulphur powder. He wanted to separate them from each other. The method you would advise him to use is to dissolve the mixture in
- | | |
|-----------------------|--------------------------|
| (a) boiling water | <input type="checkbox"/> |
| (b) cold water | <input type="checkbox"/> |
| (c) carbon disulphide | <input type="checkbox"/> |
| (d) kerosene. | <input type="checkbox"/> |
6. The spring balance shown here is used to measure the mass of a given solid. The mass of the solid is
- | | | | |
|------------|--------------------------|--|--|
| (a) 115 g | <input type="checkbox"/> | | |
| (b) 118 g | <input type="checkbox"/> | | |
| (c) 120 g | <input type="checkbox"/> | | |
| (d) 125 g. | <input type="checkbox"/> | | |



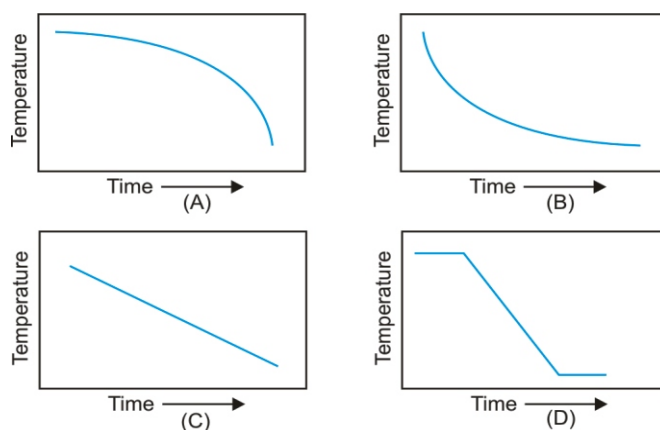
7. The water level in a measuring cylinder, before and after immersing a solid in it, is shown in the figure. The volume of the given solid in cc, is

- (a) 1.8
- (b) 2.0
- (c) 2.2
- (d) 2.4



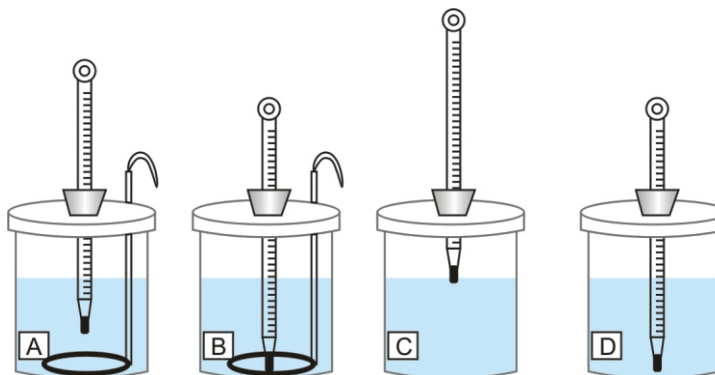
8. The temperature-time graph obtained when a hot liquid is allowed to cool, is likely to resemble graph

- (a) A
- (b) B
- (c) C
- (d) D



9. Of the four experimental set-ups shown here to study temperature-time graph, the best one is

- (a) A
- (b) B
- (c) C
- (d) D



10. You are provided with a mixture of finely crushed sand, ferrous sulphate and common salt. The components of mixture which are visible to the unaided eye are :

- (a) only sand (b) only sand and ferrous sulphate
- (c) only ferrous sulphate and salt (d) all the components.

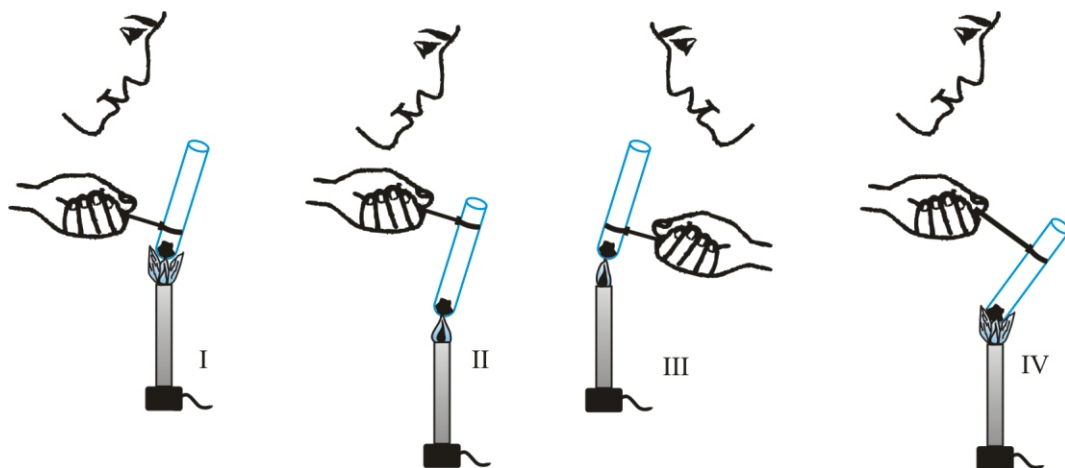
11. A mixture of marble powder, common salt and ammonium chloride is dissolved in water and then filtered. The substance left on the filter paper is called :

- (a) filtrate (b) sublimate
- (c) residue (d) distillate.

SECTION B

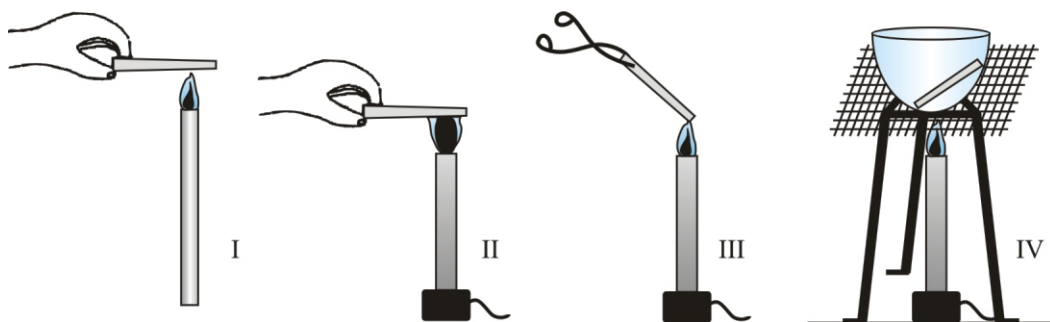
21. Four students were asked to observe the effect of heat on lead nitrate crystals. The teacher provided them with test tube holders, test tubes and solid lead nitrate. The students then started heating lead nitrate as shown below. The teacher stopped three of them for using a wrong procedure. The correct way of heating is shown in set-up.

- (a) I
- (b) II
- (c) III
- (d) IV



22. Four students used different ways of burning magnesium ribbon during an experiment as shown below. The correct way has been followed by student.

- (a) I
- (b) II
- (c) III
- (d) IV

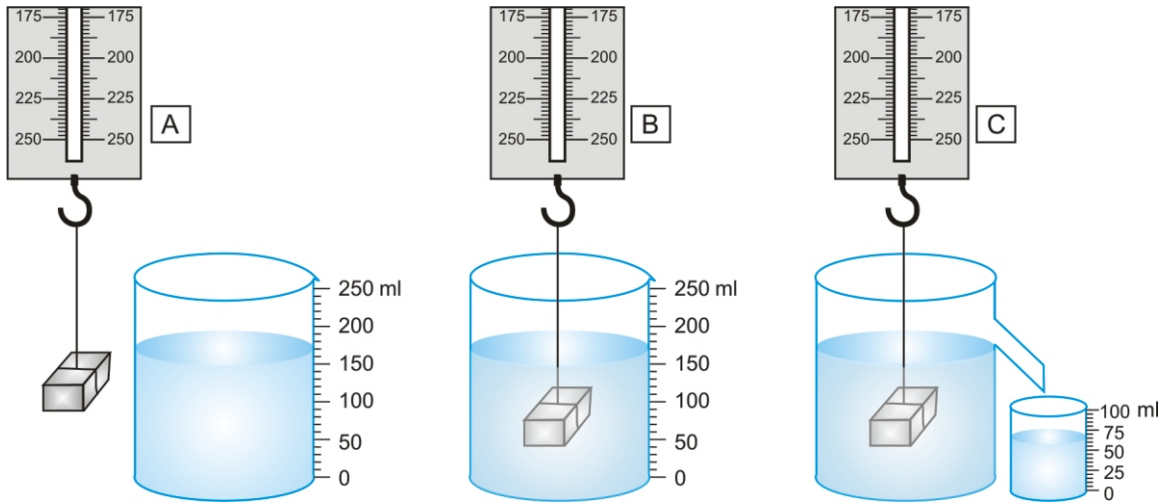


23. You are given solid cubes of aluminium and iron, each of side 4 cm, and two spring balances. Balance A has a range of 0 to 250 g and a least count of 2.5 g, while balance B has a range of 0 to 1000 g and a least count of 10 g. The preferred option for mass measurement would be to use.

- (a) balance A for both the cubes
- (b) balance B for both the cubes
- (c) balance A for the aluminium cube and balance B for iron cube
- (d) balance A for the iron cube and balance B for aluminium cube.

24. The readings of the spring balance will be

- (a) equal to each other in all cases A, B and C
- (b) equal to each other in cases A and C only
- (c) equal to each other in cases B and C only
- (d) different in every case.



25. The best surface to find the velocity of pulse is :
- | | | | |
|---------------------|--------------------------|-------------------------------------|--------------------------|
| (a) A grass surface | <input type="checkbox"/> | (b) Brick floor | <input type="checkbox"/> |
| (c) Marble floor | <input type="checkbox"/> | (d) Plastic sheet spread on ground. | <input type="checkbox"/> |
26. Given below are four operations for preparing a temporary mount of human cheek cells :
- taking scraping from inner side of the cheek and spreading it on a clean slide
 - putting a drop of glycerine on the material
 - adding two or three drops of methylene blue
 - rinsing the mouth with fresh water and disinfectant solution.
- The correct sequence of these operations is
- | | | | |
|-----------------------|--------------------------|-----------------------|--------------------------|
| (a) i - ii - iii - iv | <input type="checkbox"/> | (b) iv - i - iii - ii | <input type="checkbox"/> |
| (c) iv - i - ii - iii | <input type="checkbox"/> | (d) i - iii - ii - iv | <input type="checkbox"/> |
27. You are viewing a prepared slide of striped muscle fibres from cockroach leg. When you focus the microscope, the striations appear pale and indistinct. To make the striations clearly visible, you would
- | | |
|--|--------------------------|
| (a) slowly close the diaphragm to reduce the light | <input type="checkbox"/> |
| (b) remove the mirror to cut out light | <input type="checkbox"/> |
| (c) change the eye piece to increase magnification | <input type="checkbox"/> |
| (d) replace the objective to decrease magnification. | <input type="checkbox"/> |
28. A figure depicting parts of a neuron is given below. The correct identification of the labels 1, 2, 3, 4 respectively is
- | | |
|---|--------------------------|
| (a) dendrite, cytoplasm, nissl granules, nerve fibre | <input type="checkbox"/> |
| (b) cilia, endoplasmic reticulum, nucleoli, nerve fibre | <input type="checkbox"/> |
| (c) dendrons, cell body, nissl granuale, axon | <input type="checkbox"/> |
| (d) dendrites, cyton, nucleus, axon. | <input type="checkbox"/> |
-
29. A student pours some water in a pressure cooker and inserts a Celsius thermometer in its lid by removing safety valve. When the steam comes out freely, the temperature recorded by Celsius thermometer is :
- | | | | |
|----------------------|--------------------------|------------------------------|--------------------------|
| (a) 100°C | <input type="checkbox"/> | (b) between 102 °C to 105 °C | <input type="checkbox"/> |
| (c) More than 105 °C | <input type="checkbox"/> | (d) less than 100 °C. | <input type="checkbox"/> |
30. The root present in *Dryopteris* is
- | | | | |
|------------------|--------------------------|-----------------------|--------------------------|
| (a) tap root | <input type="checkbox"/> | (b) adventitious root | <input type="checkbox"/> |
| (c) fibrous root | <input type="checkbox"/> | (d) respiratory root. | <input type="checkbox"/> |

SCORING KEY AND QUESTIONWISE ANALYSIS FOR SAMPLE PAPER 2

<i>Q. No.</i>	<i>Key</i>	<i>Skill Tested</i>	<i>Explanation</i>
1.	(b)	O	Egg white forms colloids.
2.	(c)	P, M	Adding water to conc. H ₂ SO ₄ is not advisable
3.	(c)	M	To avoid side reaction and breakage at high temperature.
4.	(a)	O, R	Barium sulphate precipitate is white.
5.	(c)	P	Sulphur is soluble in carbon disulphide.
6.	(a)	O, R	There is no zero error in the spring balance.
7.	(c)	O, D	The correct reading of the lower meniscus has to be taken in both the cases
8.	(b)	O, D	The liquid cools faster first and slowly later on
9.	(a)	M	We need a stirrer and a thermometer correctly positioned without touching the sides of the calorimeter.
10.	(d)	O	All components are of a different colours and hence can be seen.
11.	(c)	R	Only the insoluble substances are left on filter paper and are called residue.
12.	(a)	R	Speed of pulse = $2 \times 12 \text{ m} \div 4\text{s} = 6 \text{ ms}^{-1}$.
13.	(c)	O	Safranin stains cellulose.
14.	(c)	D	Pits, non-nucleated cells, thick cell walls characteristics.
15.	(b)	O, R	Sago contains starch.
16.	(b)	O, R	Metanil yellow (aq) + HCl = Pink
17.	(b)	O, R	Test for starch.
18.	(b)	O, R	Ammonium chloride is the only substance amongst the mixtures which sublimes.
19.	(d)	P	Multiple reflections take place in the hard plastic tubes.
20.	(c)	D	Correct location of spiracles.
21.	(b)	M	Tip of the flame hottest. Holder should hold test tube at the top and face should be away.
22.	(c)	M, D	Pair of tongs necessary.
23.	(c)	P	While preferring a smaller least count, we should estimate the range needed for a given measurement and select accordingly.
24.	(c)	O	The loss in weight of a fully immersed solid does not depend on the shape of the vessel or the volume of water in it.
25.	(c)	P	The marble floor offers minimum resistance.
26.	(b)	P	Mouth to be disinfected first and glycerine to be added last.
27.	(a)	M	Reduction of light gives a better contrast.
28.	(d)	D, R	Correct labelling.
29.	(c)	O, R	The steam comes out pressure cooker at a pressure of about twice the atmospheric pressure. This raises the boiling point of water above 110°C.
30.	(b)	O, D	Root of <i>Dryopteris</i> or fern is adventitious root.

P : Procedural skills; **M** : Manipulative skills; **O** : Observational skills; **D** : Drawing skills;
R : Reporting and interpretative skills.