

# SAMPLE QUESTION PAPER 4

## (Practical Skills)

Time : 1½ Hours

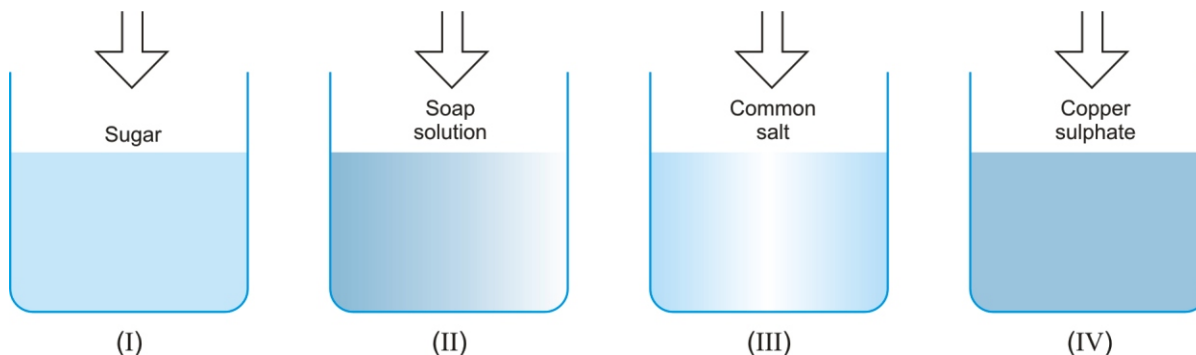
Maximum Marks : 20

INSTRUCTIONS :

Same as in Sample Question Paper 1.

### SECTION A

1. The following substances are added into water in a beaker as shown below. The mixture is stirred well. A colloidal solution is formed in the beaker :



- (a) I  (b) II   
(c) III  (d) IV
2. A small amount of a finely powdered mixture of iron and sulphur is spread evenly on a white sheet of paper. It is then observed through a magnifying glass. The appearance of the particles of mixture is :
- (a) grey and yellow particles of the mixture are distinctly visible and are spread uniformly   
(b) grey and yellow particles in the mixture are distinctly visible, but are not spread uniformly   
(c) grey particles of the mixture are not distinctly visible   
(d) yellow particles of the mixture are not distinctly visible.
3. A 10 cm long magnesium ribbon is held in flame for some time, till it catches fire. The colour of the flame of burning magnesium ribbon is :
- (a) golden yellow  (b) brick red   
(c) dazzling white  (d) light blue.
4. When a small piece of zinc metal is added to dilute sulphuric acid contained in a beaker, it is observed :
- (a) the reaction mixture becomes very cold   
(b) the reaction mixture turns blue   
(c) the zinc slowly dissolves with the evolution of a colourless gas   
(d) a white precipitate is formed.
5. When barium chloride solution is mixed with sodium sulphate solution, it is observed that :
- (a) no visible reaction takes place   
(b) a fine white suspension is formed after sometime   
(c) a white precipitate is formed after sometime   
(d) a white precipitate is formed instantaneously.

6. By studying the figures (I) and (II) carefully a student finds the weight of the body attached to the hook of spring balance is :

- (a) 40 gf
- (b) 30 gf
- (c) 40 g
- (d) 50 gf

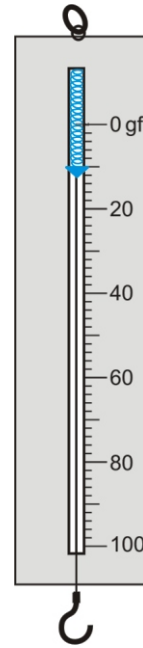


Fig. (I)

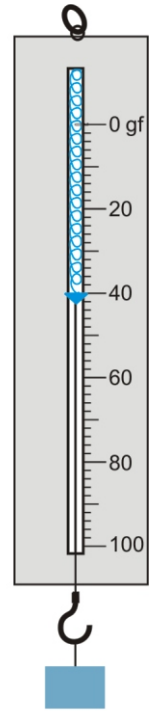
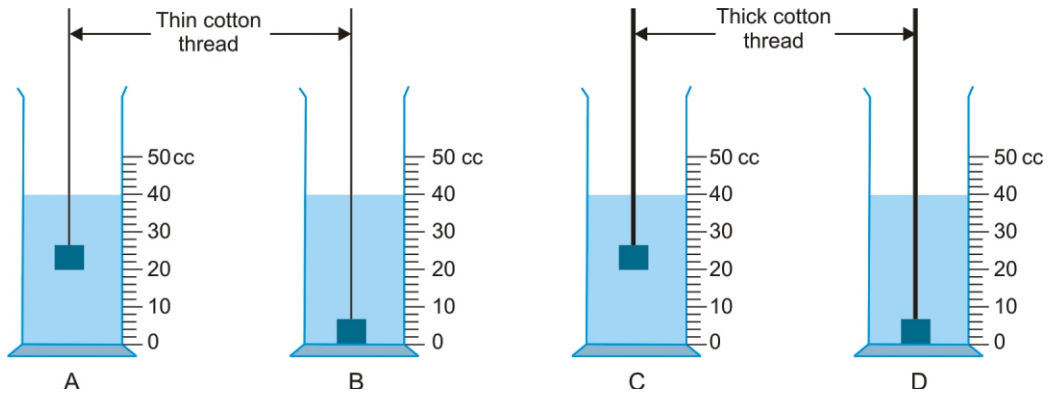


Fig. (II)

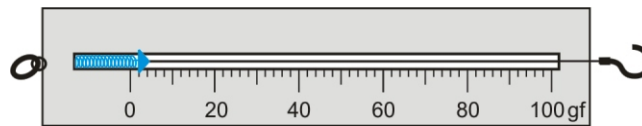
7.



The correct experimental set up to find the volume of the solid is

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

8.



The figure above shows a spring balance. The least count of the spring balance is :

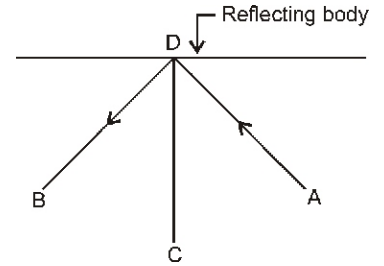
- (a) 1 gf
- (b) 2 gf
- (c) 20 gf
- (d) 100 gf

9. A light spring is suspended from a hook in the roof to which is attached a 200 g weight at its lower end. The weight is pulled down and then released. The disturbance produced in the spring is :

- (a) pulse
- (b) longitudinal wave
- (c) transverse wave
- (d) none of these.

10. A slinky is stretched by 7.5 m. A pulse passes through it with a velocity of  $2.5 \text{ ms}^{-1}$ . The time in which impulse reaches from one end of the slinky to the other end in :

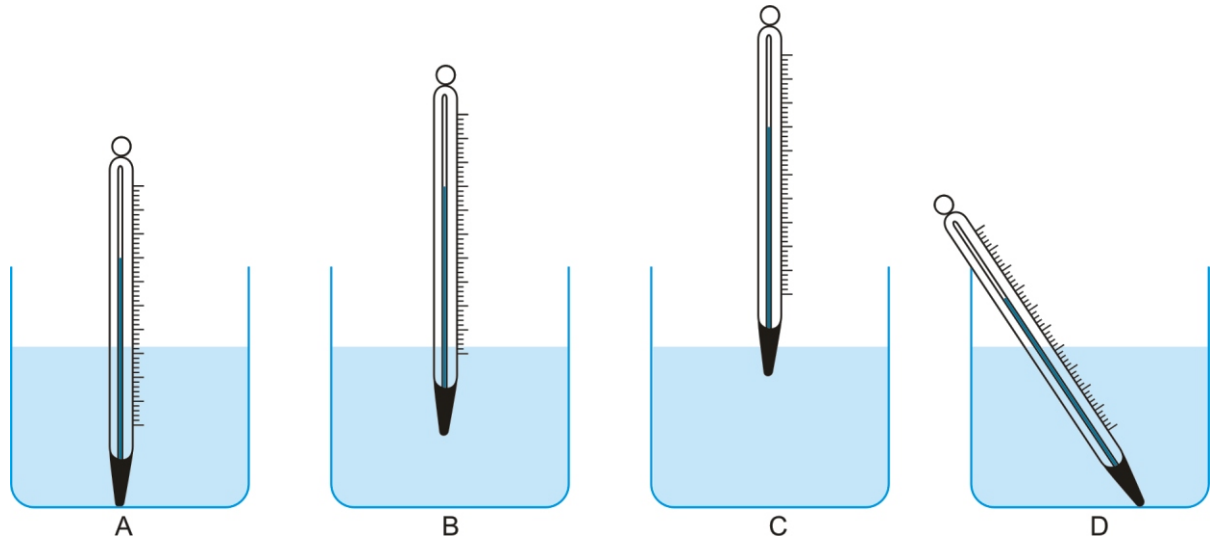
- (a) 1.5 s  (b) 2 s   
 (c) 3 s  (d) 1 s



11. Figure alongside shows a line diagram for the reflection of sound. The ear should be placed at

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

12.



In order to find the relation between the fall in temperature and time for water the correct procedure is shown by :

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

13. The fleshy leaves of onion are usually arranged in an overlapping manner. Usually these leaves are used for making the slide. The part that is taken, is

- (a) epithelial tissue  (b) epinephric tissue   
 (c) epidermal tissue  (d) epilimnionic tissue.

14. The long fibres of jute used for commercial purpose is

- (a) parenchyma  (b) collenchyma   
 (c) sclerenchyma  (d) chlorenchyma

15. The red dye used to stain the human cheek cells is

- (a) Methylene blue  (b) Jansen green   
 (c) Acetocarmine  (d) Eosin

16. While scrapping of the whitish part of potato, the starch granules can be collected on the slide. These granules are usually

- (a) concentric  (b) star shaped   
 (c) rhombic  (d) dotted

17. Prothallus of fern bears

- (a) antheridia only  (b) archegonia only   
 (c) spores  (d) both 'a' and 'b'.

18. Metanil yellow is a common adulterant of

(a) curry powder

(b) atta

(c) tumeric

(d) dal

19. You are provided with a mixture of camphor, sand and common salt. A component of the mixture which can be recovered only by heating is :

(a) sand

(b) common salt

(c) camphor

(d) camphor and common salt.

20. A sound wave strikes the reflecting surface at an angle of  $20^\circ$ . The angle of reflection for the sound wave is

(a)  $20^\circ$

(b)  $70^\circ$

(c)  $40^\circ$

(d)  $140^\circ$

### SECTION B

21. A mixture of iron filings and sulphur are heated in a hard glass test tube. What is NOT observed during reaction is :

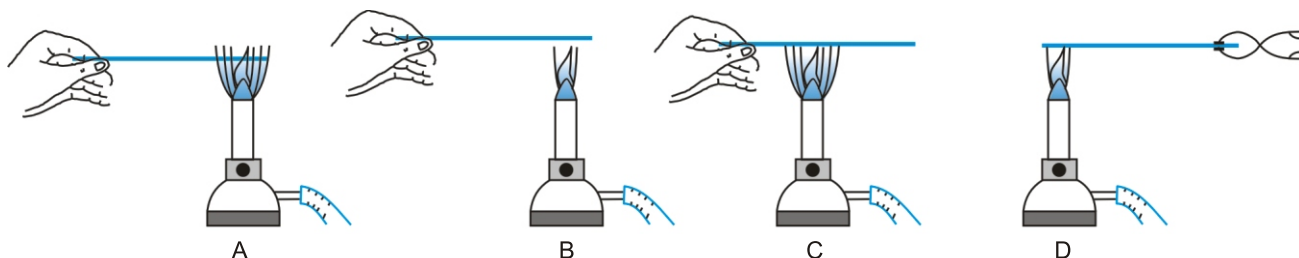
(a) The sulphur melts and forms a pale yellow liquid

(b) The molten sulphur darkens and thickens

(c) The mixture gets red hot

(d) The substance formed at the end of reaction is of brown colour

22.



The correct way of burning a magnesium ribbon in air is shown by :

(a) Fig. A

(b) Fig. B

(c) Fig. C

(d) Fig. D

23. A brass bell is struck with hammer. The sound waves produced in air constitute.

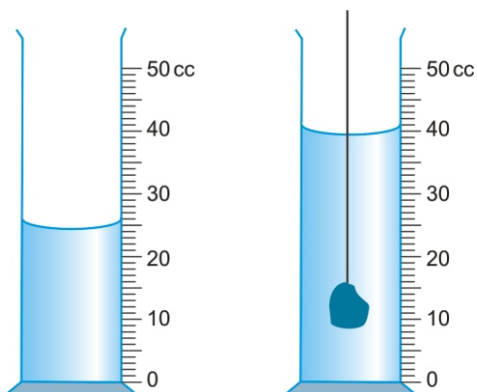
(a) pulse

(b) transverse waves

(c) longitudinal waves

(d) none of these.

24.



A stone of mass 50 g is tied to a fine cotton thread and then immersed in water contained in measuring cylinder. The density of stone is :

- (a) 3.0 g/cc  (b) 3.33 g/cc   
 (c) 2.8 g/cc  (d) 3.2 g/cc.

25. A mixture consists of an insoluble substance X and a soluble substance Y. The mixture is dissolved in water and filtered. The filtrate so collected contains :

- (a) Substance X only  (b) Substance Y only   
 (c) Substance X and water only  (d) Substance Y and water only.

26. Starch is a form of storage carbohydrate. Which colour develops upon interaction with bromine

- (a) bluish black  (b) pale yellow   
 (c) dark black  (d) no colour will develop.

27. Leaves with sori are called

- (a) sporophyll  (b) prothallus   
 (c)ramenta  (d) pileus.

28. Vascular system is developed with

- (a) xylem  (b) phloem   
 (c) parenchyma  (d) both 'a' and 'b'.

29. A bony fish belongs to the phylum

- (a) fish  (b) scale-bearers   
 (c) gill breathers  (d) pisces.

30. A student sets up an apparatus for finding the boiling point of water. When half the water boils off, the temperature shown by the thermometer is :

- (a) more than 100°C  (b) less than 100°C   
 (c) 100°C  (d) none of these.

## SCORING KEY AND QUESTIONWISE ANALYSIS FOR SAMPLE PAPER 4

Q. No.	Key	Skill Tested	Explanation
1.	(b)	R	Soap forms colloidal solution. Sugar, common salt and copper sulphate form true solution.
2.	(b)	O	The mixtures are heterogenous in nature.
3.	(c)	O	Only magnesium ribbon burns with a dazzling white flame.
4.	(c)	O, R	Zinc metal slowly reacts with dilute sulphuric acid to form colourless solution of zinc sulphate and colourless hydrogen gas which appears in the form of bubbles.
5.	(d)	O, R	The reaction is instantaneous as the ions are in solution form, and hence, react to form thick white precipitate of barium sulphate.
6.	(b)	M, O, R	The zero error is 10 gf. Thus, the weight of body is (40 – 10) gf = 30 gf.
7.	(a)	M	In order to find the correct volume, the solid should not touch the sides of measuring

			jar. Furthermore, it should be suspended by a fine cotton thread.
8.	(b)	O, R	There are 10 divisions between 0 and 20 gf. Thus, the least count (magnitude per division) is $20 \text{ gf} \div 10 = 2 \text{ gf}$ .
9.	(b)	O, R	All the segments of spring are in motion and move in the direction of disturbance.
10.	(c)	R	Time = distance travelled $\div$ velocity of pulse = $7.5 \text{ m} \div 2.5 \text{ ms}^{-1} = 3 \text{ s}$ .
11.	(a)	P, M	The reflected sound reaches at B.
12.	(b)	P, M	The bulb of thermometer should be in the middle of liquid and should not touch the sides of the containing vessel.
13.	(c)	R	Epidermis is the tissue being used for making of onion peel slide.
14.	(c)	O	All economically used plant fibres like jute and cotton are modified sclerenchyma.
15.	(c)	P	Eosin is the commonly used dye.
16.	(a)	O	Starch granules are usually concentric.
17.	(d)	O	Prothallus bears antheridia and archegonia — the sex organs.
18.	(d)	P	Metanil yellow is a common adulterant of dal.
19.	(c)	P, R	Camphor sublimates on heating.
20.	(b)	P, R	Angle of incidence is $(90 - 20)^\circ = 70^\circ$ . Therefore, angle of reflection is $70^\circ$ .
21.	(d)	O, R	The substance formed is iron (II) sulphide, which is black in colour and not brown in colour.
22.	(d)	P, M	The magnesium ribbon should be held in fire tongs as it is good conductor of heat. Furthermore, it must be held at the tip of the flame as it is the hottest part of flame.
23.	(c)	O, R	As continuous sound is heard through air, it is possible only on account of longitudinal waves.
24.	(b)	M, O, R	The volume of water displaced is $(40 - 25) \text{ cc} = 15 \text{ cc}$ . Therefore, density of stone is $m/v = 50 \text{ g}/15 \text{ cc} = 3.33 \text{ g/cc}$ .
25.	(d)	O, R	Substance Y is soluble in water.
26.	(c)	D	Bromine is not the reagent for testing starch. Hence no colour will develop.
27.	(a)	O	Undersurface of leaves sori is present.
28.	(d)	R	Vascular tissue is composed of xylem and phloem.
29.	(c)	O	Fish belongs to the phylum pisces.
30.	(c)	O, R	The temperature of water remains constant during change of state.

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