

SAMPLE QUESTION PAPER 5

(Practical Skills)

Time : 1½ Hours

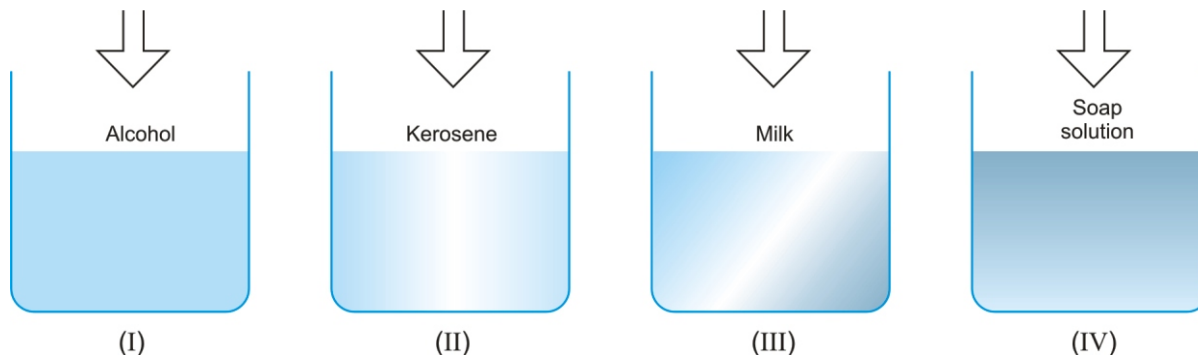
Maximum Marks : 20

INSTRUCTIONS :

Same as in Sample Question Paper 1.

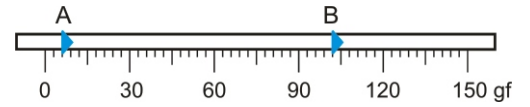
SECTION A

1. Following substances are added to water in a beaker as shown below. The mixture is stirred well. A true solution is found in the beaker :



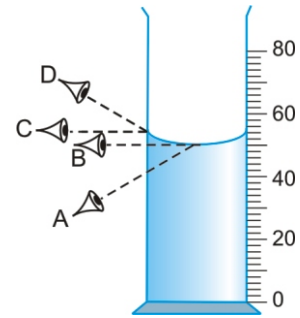
- (a) (I) (b) (II)
(c) (III) (d) (IV)
2. A mixture of iron and sulphur in powdered form is heated gently in a hard glass test tube. It is observed that :
- (a) Sulphur starts melting first (b) Iron starts melting first
(c) The mixture sublimes (d) The mixture becomes red hot without melting.
3. When a mixture of iron and sulphur is strongly heated, a chemical reactions takes place with the formation of the compound iron sulphide. The compound is grinded in a paste and mortar to form a fine powder. A powerful bar magnet is rolled in the above fine powder. It is observed :
- (a) only particles of iron cling to the magnet
(b) only particles of sulphur cling to the magnet
(c) the particles of compound iron sulphide cling to the magnet
(d) none of the particles cling to the magnet.
4. When a magnesium ribbon is heated in air, it catches fire and burns to form magnesium oxide. The appearance of magnesium oxide is like :
- (a) chalk powder (b) table salt or common salt
(c) wood ash (d) powdered sugar.
5. A brightly polished nail is placed in saturated copper sulphate solution for 5 minutes. The nail is taken out. It is found the nail is covered with :
- (a) grey deposit (b) reddish deposit
(c) black deposit (d) blue deposit.

6. The diagram alongside shows the scale of a spring balance. A is the position of the pointer when no weight is attached to the hook of spring balance. B is the position of the pointer, when a stone is attached to its hook. The weight of the stone is :



- (a) 94 gf (b) 92 gf
 (c) 96 g (d) 102 gf

7. The volume of water in the cylinder is best found when the position of the eye is :



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

8. When a pulse is generated in a tightly stretched rope :

- (a) Most of the rope remains undisturbed for all the time
 (b) Few parts of remain undisturbed for some time
 (c) All the parts of rope get disturbed
 (d) None of these.

9. When the heart pumps blood in the arteries, the disturbance produced in the blood is commonly known as :

- (a) Longitudinal wave (b) Mechanical wave
 (c) Pulse (d) None of these.

10. A stone is suspended from a spring balance and its weight is recorded. The stone is then immersed completely in brine solution, water, alcohol and petrol one by one.

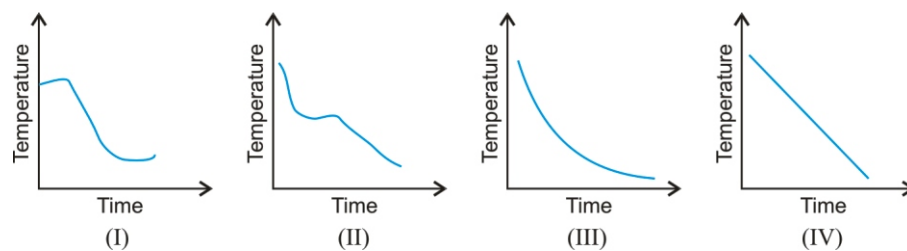
The maximum weight of stone when immersed completely is in :

- (a) brine (b) water
 (c) alcohol (d) petrol.

11. Metallic tubes are employed in the verification of laws of reflection of sound. These tubes are highly polished from inside, because this make sound waves to :

- (a) travel faster
 (b) move in straight line
 (c) concentrate into powerful beam
 (d) have multiple reflections and prevent spreading of sound.

12.



Four students plotted a graph between the rise in temperature and the time. The correct graph is :

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

13. Lateral conjugation can be seen in

(a) *Spirogyra*

(b) Moss

(c) Fern

(d) Mushroom.

14. The muscles that show striations yet are involuntary are those of

(a) stomach

(b) upper arm

(c) heart

(d) lower legs.

15. Which out of the undermentioned is common to both plant kingdom and animal kingdom

(a) cuticle

(b) large vacuolated cells

(c) cellulose

(d) glycogen.

16. The pink scaly leaves of onion are meant for

(a) reproduction

(b) perennation

(i.e., overcoming unfavourable conditions)

(c) protection

(d) ornamentation.

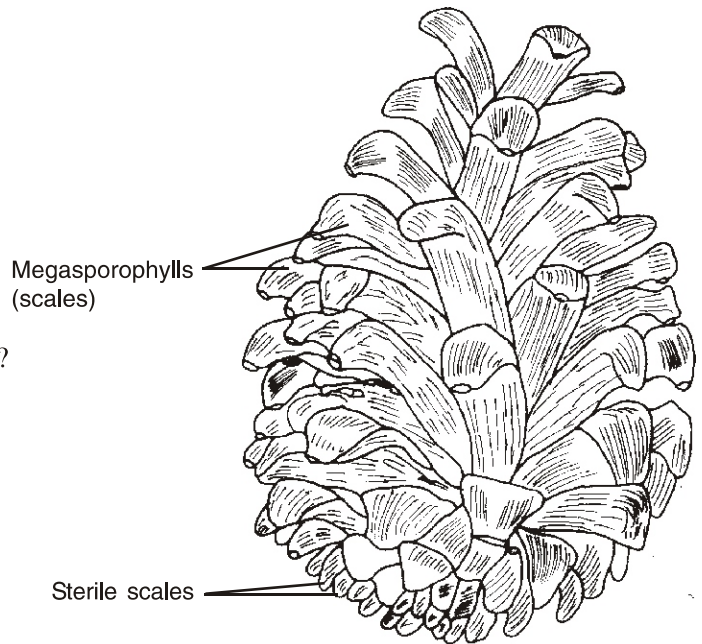
18. See the picture. Which of the following does it represent?

(a) Male cone of *Pinus*

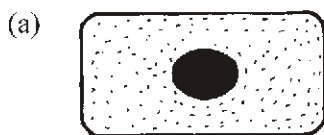
(b) Female cone of *Pinus*

(c) Rachis of fern

(d) Annulus of *Agaricus*.



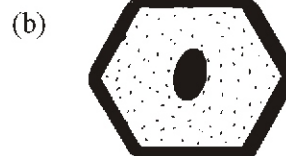
18. Collenchyma cells are distinctly different from parenchyma. Which diagram brings out the difference best?



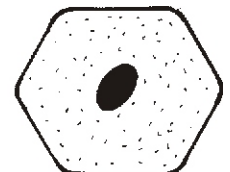
Collenchyma



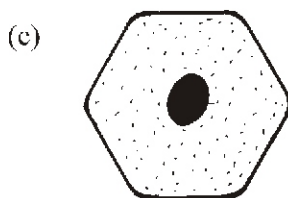
Parenchyma



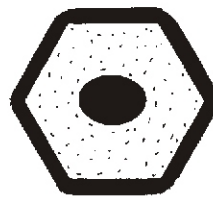
Collenchyma



Parenchyma



Collenchyma



Parenchyma



Collenchyma



Parenchyma

(a)

(b)

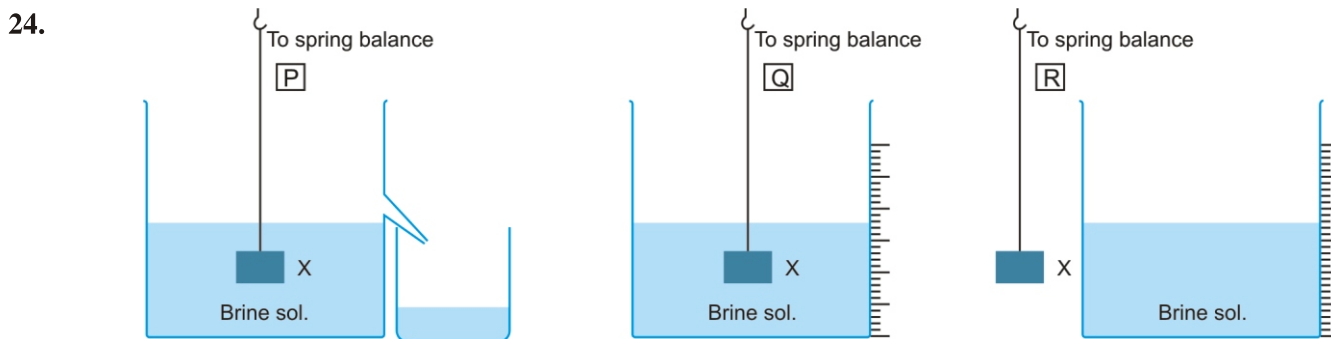
(c)

(d)

19. The process of evaporation is employed to separate a soluble substance from its mixture if :
- (a) substance is soluble in water
- (b) substance is soluble in water and does not decompose heating
- (c) substance is soluble in water and decompose on heating
- (d) substance is soluble in water, but sublimes on heating.
20. A mixture of marble and two chemical substances which do not react chemically is heated, when the mixture started giving dense white fumes. These fumes condensed on a cold glass plate to form white powdery mass. This white powdery substance may be :
- (a) sodium chloride (b) copper sulphate
- (c) ammonium chloride (d) sodium nitrate.

SECTION B

21. Which statement is not correct in case of mixture of starch and water?
- (a) The mixture is translucent to light
- (b) The mixture is transparent to light
- (c) The mixture passes through filter paper and no residue is left on the filter paper
- (d) No residue settles down when the mixture is allowed to stand.
22. The compound iron sulphide is formed by heating iron filings with dilute sulphuric acid. A colourless gas is evolved which :
- (a) has no smell, but turns lead acetate paper black
- (b) has a foul smell, but does not turn lead acetate paper black
- (c) has a foul smell, and turns lead acetate paper black
- (d) has no smell and does not affect lead acetate paper.
23. You are given a solid cube of aluminium of side 3 cm and density 2.7 g cm^{-3} and four spring balances of range (i) 0 to 50 g and least count of 1 g (ii) range 0 to 100 g and least count of 2 g (iii) range 0 to 200 g and least count of 4 g (iv) range of 500 g and least count of 5 g. The most preferred option for finding the mass is
- (a) spring balance with range 0 to 50 g and least count of 1 g
- (b) spring balance with range 0 to 100 g and least count 2 g
- (c) spring balance with range 0 to 200 g and least count 4 g
- (d) spring balance with range 0 to 500 g and least count 5 g.



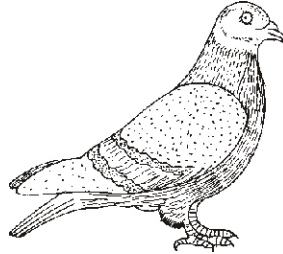
In the above diagram the reading of the spring balances will be :

- (a) different in every case (b) equal to each other in P and R
- (c) equal to each other in P and Q (d) equal to each other in P, Q and R.

25. A student takes four test tubes and half fills each of them with tap water. In the first test tube he adds 1 g of powdered charcoal. In the second test tube 1 g of common salt, in the third test tube a little of egg white and in the fourth test tube kerosene oil. He shakes each of the test tube vigorously and then filters their contents. The residue is left on the filter paper in case of a test in which :

- | | | | |
|------------------------------|--------------------------|----------------------------|--------------------------|
| (a) charcoal powder is added | <input type="checkbox"/> | (b) common salt is added | <input type="checkbox"/> |
| (c) egg white is added | <input type="checkbox"/> | (d) kerosene oil is added. | <input type="checkbox"/> |

26.



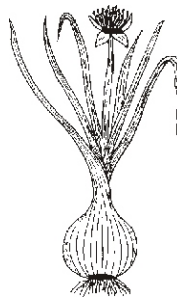
The bird shown above is

- | | | | |
|-----------------------|--------------------------|------------------|--------------------------|
| (a) aquatic | <input type="checkbox"/> | (b) flightless | <input type="checkbox"/> |
| (c) short-flight type | <input type="checkbox"/> | (d) grain eater. | <input type="checkbox"/> |

27. Which of the undermentioned statements is incorrect

- | | |
|---|--------------------------|
| (a) Every food containing carbohydrate carries starch | <input type="checkbox"/> |
| (b) Starch turn bluish black when made to react with iodine | <input type="checkbox"/> |
| (c) Yam is a starch rich vegetable | <input type="checkbox"/> |
| (d) Egg white contains no starch. | <input type="checkbox"/> |

28.



The vegetable drawn above is a modified

- | | | | |
|----------|--------------------------|------------|--------------------------|
| (a) leaf | <input type="checkbox"/> | (b) stem | <input type="checkbox"/> |
| (c) root | <input type="checkbox"/> | (d) flower | <input type="checkbox"/> |

29. Rhizome is the underground stem of

- | | | | |
|-----------------------|--------------------------|----------------------|--------------------------|
| (a) <i>Dryopteris</i> | <input type="checkbox"/> | (b) Pine | <input type="checkbox"/> |
| (c) <i>Agaricus</i> | <input type="checkbox"/> | (d) <i>Spirogyra</i> | <input type="checkbox"/> |

30. 1 g of the mixture of iron and sulphur is placed in a test tube. Into the test tube is poured 3 cc of carbon disulphide. The contents of test tube are vigorously shaken. It is observed :

- | | |
|--|--------------------------|
| (a) Iron particles dissolve, but not that of sulphur | <input type="checkbox"/> |
| (b) Sulphur particles dissolve, but not that of iron | <input type="checkbox"/> |
| (c) Both sulphur and iron particles do not dissolve | <input type="checkbox"/> |
| (d) Both sulphur and iron particles dissolve. | <input type="checkbox"/> |

SCORING KEY AND QUESTIONWISE ANALYSIS FOR SAMPLE PAPER 5

| <i>Q. No.</i> | <i>Key</i> | <i>Skill Tested</i> | <i>Explanation</i> |
|---------------|------------|---------------------|--|
| 1. | (a) | R | Alcohol is soluble in water in all proportions. Kerosene oil is insoluble in water. Milk and soap solution form colloidal solutions in water. |
| 2. | (a) | O | Sulphur melts at 113°C, whereas iron melts above 1300°C. |
| 3. | (d) | O | Iron sulphide is a compound which is non-magnetic in nature. |
| 4. | (c) | O, R | Magnesium oxide is a very fine white powder and resembles the wood ash. Chalk powder, table salt and powdered sugar are granular in nature. |
| 5. | (b) | O, R | Copper is reddish in colour. |
| 6. | (c) | D, O, R | Zero error in spring balance is 6 gf. Thus the weight of the body is $(102 - 6) \text{ gf} = 96 \text{ gf}$. |
| 7. | (b) | M | The eye should be in line with lowest point of the concave surface of water. |
| 8. | (a) | O | Pulse disturbs only that part of rope through which it passes. |
| 9. | (c) | R | Heart produces a disturbance of short duration and hence produces pulse. |
| 10. | (d) | R | Petrol has the lowest density and hence offers the lowest upthrust. Thus, the weight of stone in petrol is maximum. |
| 11. | (d) | M, R | Highly polished surfaces produce multiple reflection. |
| 12. | (b) | O, R | The rise in temperature per unit time increases with the heating of water. |
| 13. | (a) | R | Conjugation occurs between adjacent cells of the same filament. |
| 14. | (c) | R | Heart → as they show faint striations yet they are involuntary. |
| 15. | (a) | R | Cuticle is the epidermal protection as well as the covering of the body of the insects. |
| 16. | (c) | P | The pink scaly leaves serve as protection to brown scaly leaves. |
| 17. | (b) | O | Parenchyma is thin walled while collenchyma has thickenings on the corner. |
| 18. | (b) | R | Big in size with scale like megasporophylls. |
| 19. | (b) | P, R | If the substance decomposes or sublimates, it cannot be separated by evaporation. |
| 20. | (c) | O, R | Only ammonium chloride sublimates to form white powdery mass. |
| 21. | (b) | O, R | The starch solution being colloidal solution is not transparent to light. |
| 22. | (c) | O, R | Hydrogen sulphide gas is evolved which has a foul smell and turns lead acetate paper black on account of the formation of lead sulphide. |
| 23. | (b) | M, R | The mass of aluminium is 72.9 g ($27 \text{ cm}^3 \times 2.7 \text{ gcm}^{-3}$). Thus correct choice of balance is 0 to 100 g with a least count of 2 g. |
| 24. | (c) | M, D, R | Upthrust in case of P and Q is the same and hence P and Q will have same reading. |
| 25. | (a) | O | Charcoal has largest particle size and cannot pass through filter paper. |
| 26. | (c) | O | The bird shown is pigeon and it is a grain eater. |
| 27. | (a) | R | Every carbohydrates is not starch. |
| 28. | (b) | R | Stem → as onion is a modified underground stem. |
| 29. | (a) | R | Underground stem of fern is known as rhizome. |
| 30. | (b) | O, R | Sulphur is soluble in carbon disulphide, but not the iron. |

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