

# PRACTICE PAPER 1

## Science Class 9th (Term I)

### Instructions

1. This paper has 40 questions.
2. All questions are compulsory, each question carry 1 marks.
3. Answer the questions as per given instructions.

Time : 90 Minutes

Max. Marks : 40

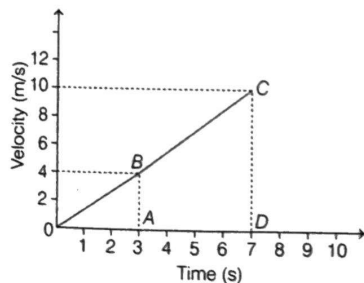
### Multiple Choice Questions

**Direction** (Q. Nos. 1-20) Each of the question has four options out of which only one is correct. Select the correct option as your answer.

1. Which of the following materials are classified as pure substances?

- (a) CaO, CO<sub>2</sub>, NaCl
- (b) Wood, mercury and water
- (c) Iron, ice and milk
- (d) Iron, milk and blood

2. In the following figure of velocity-time graph for the motion of the body, the total distance covered by the body from 3 s to 7 s is



- (a) 29 m
- (b) 56 m
- (c) 14 m
- (d) 35 m

3. Which of the following property does not proves that water is a compound?

- (a) The ratio of hydrogen and oxygen by mass in water is fixed (i.e. 1:8)

- (b) Water has fixed boiling point (b.p.)
- (c) The constituents of water cannot be separated by simple physical methods
- (d) Distilled water and tap water have same taste and constituents

4. Cell arises from pre-existing cell was stated by

- (a) Haeckel
- (b) Virchow
- (c) Hooke
- (d) Schleiden

5. What will happen if the cell will placed in isotonic solution?

- (a) Swell up
- (b) Shrink
- (c) Remain same
- (d) None of the above

6. What happened if saturated solution is cooled?

- (a) It becomes unsaturated
- (b) It becomes supersaturated
- (c) It will get transparent
- (d) It will remain unaffected

7. Which one of the following cellular functions is performed by endoplasmic reticulum ?

- (a) Production of hydrolytic enzymes
- (b) Supply of energy to cell
- (c) Formation of lysosomes
- (d) Production of vacuoles

**8. Which of the following situations involves the Newton's second law of motion?**

- (a) A force can stop a lighter vehicle as well as a heavier vehicle which are moving
- (b) A force can accelerate a lighter vehicle more easily than a heavier vehicle which are moving
- (c) A force exerted by a lighter vehicle on collision with a heavier results in both the vehicles coming to standstill
- (d) A force exerted by the escaping air from a balloon in the downward direction makes the balloon to go upwards

**9. Dividing tissues are present in**

- (a) simple parenchyma tissue
- (b) complex parenchyma tissue
- (c) meristematic tissue
- (d) All of the above

**10. Two objects have masses in the ratio 1 : 2. If the forces acting on them are in the ratio 2 : 1, then the ratio of their accelerations is**

- (a) 1:1
- (b) 1:2
- (c) 2:1
- (d) 4:1

**11. Small pores on the epidermis of leaf are called**

- (a) stomata
- (b) cuticle
- (c) guard cells
- (d) cork

**12. Cells of cork are**

- (a) dead and loosely arranged
- (b) dead and compactly arranged
- (c) living and compactly arranged
- (d) living and loosely arranged

**13. Which of the following statement is correct?**

- (a) Average speed of an object can never be zero
- (b) Average velocity of a moving object can be zero
- (c) The motion of the moon and the earth is the uniform circular motion
- (d) All of the above

**14. Match the following columns.**

Column I	Column II
A. Cambium	1. Air cavities
B. Suberin	2. Round nuclei
C. Columnar epithelium	3. Elongated nuclei
D. Cuboidal epithelium	4. Cork
E. Aerenchyma	5. Lateral meristem

**Codes**

- |       |   |   |   |   |
|-------|---|---|---|---|
| A     | B | C | D | E |
| (a) 5 | 4 | 3 | 2 | 1 |
| (b) 3 | 1 | 4 | 5 | 2 |
| (c) 4 | 5 | 1 | 2 | 3 |
| (d) 5 | 4 | 3 | 1 | 2 |

**15. If a body is moving on a circular path of radius 21 cm with velocity of 2 m/s, then time taken by the body to complete half revolution is**

- (a) 11 s
- (b) 22 s
- (c) 44 s
- (d) 33 s

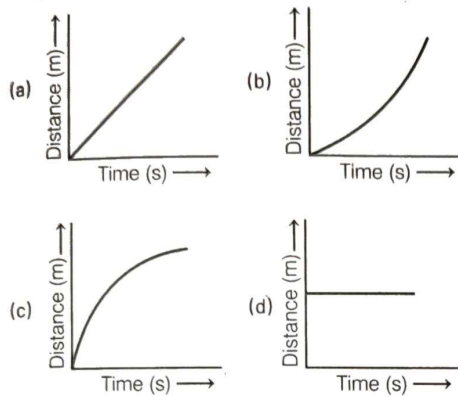
**16. While doing work and running, you move your organs like hands, legs, etc. Which among the following is correct?**

- (a) Smooth muscles contract and pull the ligament to move the bones
- (b) Smooth muscles contract and pull the tendons to move the bones
- (c) Skeletal muscles contract and pull the ligament to move the bones
- (d) Skeletal muscles contract and pull the tendon to move the bones

**17. A person met with an accident in which two long bones of hand were dislocated. Which among the following may be the possible reason?**

- (a) Tendon break
- (b) Break of skeletal muscle
- (c) Ligament break
- (d) Areolar tissue break

18. Which of the following figures represents uniform motion of a moving object correctly?



19. In a tissue, the structure of cells varies according to their
- origin
  - function
  - gene content
  - None of the above
20. Which of the following types of cells is involved in making the lining of oesophagus and mouth?
- Cuboidal epithelium
  - Columnar epithelium
  - Squamous epithelium
  - Stratified epithelium

### Assertion-Reasoning MCQs

**Direction** (Q. Nos. 21-28) For given questions two statements are given, one labelled **Assertion (A)** and the other labelled **Reason (R)**. Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below.

- Both A and R are true and R is the correct explanation of A
- Both A and R are true, but R is not the correct explanation of A
- A is true, but R is false
- A is false, but R is true

21. **Assertion** Distance travelled by a body may be positive, negative or zero.

**Reason** Shortest distance travelled by the body between two points is called distance.

22. **Assertion** Rate of change of momentum of a body is equal to resultant force applied on the body.

**Reason** Change in momentum is equal to impulsive force.

23. **Assertion** For uniform motion, velocity is the same as the average velocity at all instants.

**Reason** In uniform motion along a straight line, the object covers equal distances in equal intervals of time.

24. **Assertion** Pure substances in which molecules are made up of only one kind of atoms are known as elements.

**Reason** Hydrogen, oxygen and nitrogen are elements.

25. **Assertion** Colloidal particles can be separated by centrifugation method.

**Reason** This is because when colloidal solution is spun rapidly, so that the denser particles are forced to the bottom and the lighter particles stay at the top.

26. **Assertion** Cells of cork are impervious to gases and water.

**Reason** They have suberin in their walls.

27. **Assertion** Heart can pump blood throughout the body.

**Reason** It is made up of cardiac muscles.

28. **Assertion** Stomach and intestine of our body has columnar epithelium.

**Reason** Columnar epithelium helps in secretion and absorption.

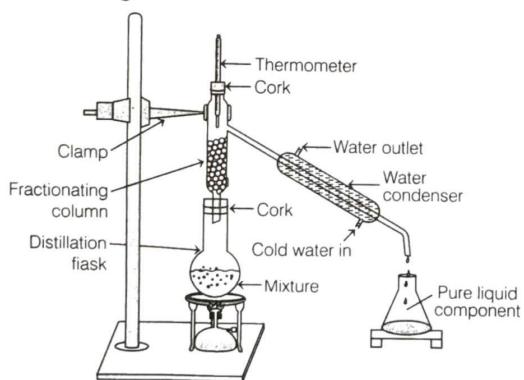
**Case Based MCQs**

**Direction** (Q. No. 29-32) Read the passage given below and answer the following questions

If the boiling point of two miscible liquids present in a mixture are very close to one another, i.e. less than 25 K, the separation cannot be achieved by simple distillation. This is because at the boiling point of the more volatile liquid of the mixture, there will be a sufficient vapours of the less volatile liquid as well. Thus, both the liquids will distill together and the separation cannot be achieved.

The separation of such a liquid mixture into individual components can, however, be achieved by fractional distillation, which involves repeated distillations and condensation. Fractional distillation is carried out in a fractionating column.

Take a mixture of two miscible liquids in distillation flask provided with a fractionating column. Start heating the mixture till the mixture starts boiling.



29. For simple distillation, the difference in boiling point of two liquids should be  
 (a)  $>25^{\circ}\text{C}$  (b)  $<25^{\circ}$   
 (c)  $\approx 15^{\circ}\text{C}$  (d) None of these

30. By fractional distillation, which of the following can be separated?  
 (a) aqueous solution of salt  
 (b) Acetone and water  
 (c) ethyl alcohol and water  
 (d) All of the above

31. What happened when mixture started heating?

- (a) The liquid which have low boiling point started distilling first  
 (b) The liquid which high boiling point started distilling first  
 (c) The impurity evaporated first  
 (d) The boiling of mixture remained constant

32. The two liquid 'X' and 'Y' have boiling point  $78^{\circ}\text{C}$  and  $100^{\circ}\text{C}$  respectively. Which will vapourised first?

- (a) X  
 (b) Y  
 (c) Both X and Y  
 (d) Depends on room temperature

Or The separation of petrol into its components is done by

- (a) sublimation (b) chromatography  
 (c) distillation (d) fractional distillation

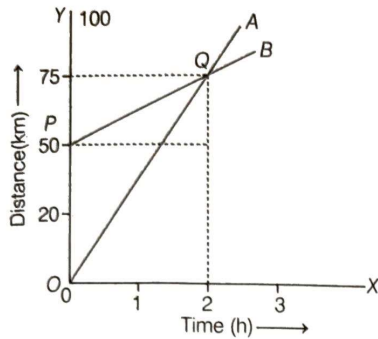
**Direction** (Q. No. 33-36) Read the passage given below and answer the following questions

The change in the position of an object with time can be represented on the distance-time graph adopting a convenient scale of choice. In this graph, time is taken along the  $x$ -axis and distance is taken along the  $y$ -axis.

Distance-time graphs can be employed under various conditions where objects move with uniform speed, non-uniform speed, remain at rest etc.

We know that, when an object travels equal distances in equal intervals of time, it moves with uniform speed. This shows that the distance travelled by the object is directly proportional to time taken. Thus, for uniform speed, a graph of distance travelled against time is a straight line, we can also use the term uniform velocity in place of uniform speed if we take the magnitude of displacement equal to the distance travelled by the object along the  $y$ -axis.

The distance-time graph of two trains is shown in figure. The trains start simultaneously in the same direction.



33. How much is *B* ahead of *A* when the motion starts?  
 (a) 20 km (b) 50 km  
 (c) 75 km (d) zero
34. What is the speed of *B*?  
 (a) 5 km/h  
 (b) 7.5 km/h  
 (c) 12.5 km/h  
 (d) 25 km/h
35. At what distance and time *A* will catch *B*?  
 (a) 20 km, 2 h  
 (b) 50 km, 1 h  
 (c) 75 km, 1 h  
 (d) 75 km, 2 h
36. What is the difference between speeds of *A* and *B*?  
 (a) 37.5 km/h (b) 25 km/h  
 (c) 12.5 km/h (d) 40 km/h
- Or The speed of trains *A* and *B* will be respectively,  
 (a) uniform, non-uniform  
 (b) uniform, uniform  
 (c) non-uniform, uniform  
 (d) non-uniform, non-uniform

**Direction (Q. No. 37-40)** Read the passage given below and answer the following questions

Mitochondria are the small rod-shaped organelles. They are sites of cellular respiration, hence provide energy for the vital activities of living cells. They are absent in bacteria and red blood cells of mammals.

Mitochondria is a semiautonomous cell organelle in the eukaryotic cell. This characteristics is present in another cell organelle which is found only in plant cells, i.e. plastids. They are similar to mitochondria in external structure. Like the mitochondria, plastids also have their own DNA and ribosomes. They are of two types i.e. chromoplast and leucoplast.

37. Mitochondria are also known as  
 (a) kitchen of the cell  
 (b) control unit of the cell  
 (c) powerhouse of the cell  
 (d) suicidal bags of the cell
38. Mitochondria release energy in the form of  
 (a) ADP (b) ATP  
 (c) carbohydrates (d) DNA
39. Mitochondria have ..... membrane coverings.  
 (a) two (b) three  
 (c) zero (d) one
40. Coloured plastids are called  
 (a) chromoplasts (b) chloroplasts  
 (c) leucoplasts (d) Both (a) and (b)
- Or Which part of the mitochondrial membrane form ATP?  
 (a) Outer membrane  
 (b) Inner membrane  
 (c) Middle membrane  
 (d) Both (a) and (b)

# PRACTICE PAPER 1

## OMRSHEET

**Instructions**

- Use black or blue ball point pens and avoid gel pens and fountain pens for filling the sheets
- Darken the bubbles completely. Don't put a tick mark or a cross mark half-filled or over-filled bubbles will not be read by the software.



- Do not write anything on the OMR Sheet
- Multiple markings are invalid

1	(a)	(b)	(c)	(d)
2	(a)	(b)	(c)	(d)
3	(a)	(b)	(c)	(d)
4	(a)	(b)	(c)	(d)
5	(a)	(b)	(c)	(d)
6	(a)	(b)	(c)	(d)
7	(a)	(b)	(c)	(d)
8	(a)	(b)	(c)	(d)
9	(a)	(b)	(c)	(d)
10	(a)	(b)	(c)	(d)
11	(a)	(b)	(c)	(d)
12	(a)	(b)	(c)	(d)
13	(a)	(b)	(c)	(d)
14	(a)	(b)	(c)	(d)
15	(a)	(b)	(c)	(d)
16	(a)	(b)	(c)	(d)
17	(a)	(b)	(c)	(d)
18	(a)	(b)	(c)	(d)
19	(a)	(b)	(c)	(d)
20	(a)	(b)	(c)	(d)
21	(a)	(b)	(c)	(d)
22	(a)	(b)	(c)	(d)

23	(a)	(b)	(c)	(d)
24	(a)	(b)	(c)	(d)
25	(a)	(b)	(c)	(d)
26	(a)	(b)	(c)	(d)
27	(a)	(b)	(c)	(d)
28	(a)	(b)	(c)	(d)
29	(a)	(b)	(c)	(d)
30	(a)	(b)	(c)	(d)
31	(a)	(b)	(c)	(d)
32	(a)	(b)	(c)	(d)
Or	(a)	(b)	(c)	(d)
33	(a)	(b)	(c)	(d)
34	(a)	(b)	(c)	(d)
35	(a)	(b)	(c)	(d)
36	(a)	(b)	(c)	(d)
Or	(a)	(b)	(c)	(d)
37	(a)	(b)	(c)	(d)
38	(a)	(b)	(c)	(d)
39	(a)	(b)	(c)	(d)
40	(a)	(b)	(c)	(d)
Or	(a)	(b)	(c)	(d)

Students should not write anything below this line

SIGNATURE OF EXAMINER WITH DATE
---------------------------------

MARKS SCORED
--------------