

CBSE Class 9 Science Sample Paper SA 1

SUBJECT: SCIENCE
CLASS : IX

MAX. MARKS : 90
DURATION : 3 HRS

General Instructions:

- (i) The question paper comprise of two sections , A & B. You are to attempt both the sections.
- (ii) All questions are compulsory..
- (iii) All questions of section A and Section B are to be attempted separately.
- (iv) Question number 1 – 3 in section A are of one mark. These are to be answered in one word or in one sentence.
- (v) Question number 4 – 6 in section A are of two marks. These are to be answered in about thirty words each.
- (vi) Question number 7– 18 in section A are of three marks. These are to be answered in about fifty words each.
- (vii) Question number 19 – 24 in section A are of five marks. These are to be answered in about seventy words each.
- (viii) Questions number 25 – 33 in section B are multiple choice questions based on practical skills. Each question is of one mark. You are to select one appropriate response out of the four provided.
- (ix) Questions no. 34-36 are of two marks each and are based on practical skill.

SECTION – A

1. What is the term used for cattle feeds which are less in fibres but rich in nutrients.
2. Name two fresh water varieties of fishes.
3. A farming system with minimal or no use of chemicals is called, what?
4. Liquids generally have lower density as compared to solids. But you must have observed that ice floats on water. Explain why?

5. Convert the following temperature to Kelvin scale.
(a) 25°C (b) 373°C
6. State the universal law of gravitation.
7. How Xylem is different from Phloem? Give three points each.
8. What produces more severe burn, boiling water or steam? Give explanation.
9. A solution contains 40 g of common salt in 320 g of water. Calculate the concentration mass by mass by mass percentage of the solution.
10. Name the process used for separating following mixtures,
(a) Drugs from blood
(b) Different fractions from petroleum
(c) Purification of salt that we get from sea water.
11. Differentiate between prokaryotic and eukaryotic cells, giving at least three points each.
12. What do you mean by simple permanent tissue? Name the three different types of simple permanent tissue.
13. Differentiate between the following -
(a) Tendon and Ligament.
(b) Primary meristem and Secondary meristem.
14. Draw a neat labeled diagram of plant cell or a Neuron.
15. Draw a graph for a car moving with uniform acceleration from the data given below. What is the quantity which is measured by the area occupied below the velocity- time graph.

Time(s)	Velocity of the car(m/s)
0	0
5	8
10	16
15	24
20	32
25	40
30	48

16. What is uniform circular motion? An artificial satellite is moving in a circular orbit of radius 42250 km. Calculate its speed if it takes 24 hours to revolve around the earth.
17. (a) State Newton's First law of motion.
(b) Which has more inertia a bicycle or a train. Why?
18. From a rifle of mass 4 kg, a bullet of mass 50 g is fired with an initial velocity of 35 ms^{-1} . Calculate the initial recoil velocity of the rifle.
19. (a) Define momentum? Does it have direction and magnitude?
(b) Which would require a greater force, accelerating a 2kg mass at 5ms^{-2} or a 4kg mass at 2ms^{-2} ?
20. A train starting from rest attains a velocity of 72kmh^{-1} in 5 minutes. Assuming that the acceleration is uniform, find (i) the acceleration and (ii) the distance travelled by the train for attaining this velocity.
21. How manure is different from fertilizers? Which one of the two improves soil texture? Name the bee variety used for commercial honey production.
22. (a) Colloids and suspension are used in our daily life, giving suitable examples present their properties in a tabular form.
(b) Which one of the following is not a mixture? Air, water and soil.
23. (a) State Archimedes' Principle and give equation for relative density.
(b) Relative density of silver is 10.8. The density of water is 10^3kgm^{-3} . What is the density of silver in SI unit.
24. (a) What produces more severe burns boiling water or steam? Give explanation for your answer.
(b) Name the four factors on which evaporation depends.

SECTION – B

25. Which of the following technique can be used for bringing genetical changes in plants.
- (a) Tissue culture
 - (b) Asexual reproduction
 - (c) Gene manipulation
 - (d) All
26. The quality of honey depends on
- (a) Temperature
 - (b) Trees
 - (c) Pasturage
 - (d) Grasses
27. In the laboratory we prepared two solutions one of NaCl in water and another starch in water. With the help of a torch both the solutions were tested for Tyndal effect. The result obtained was –
- (a) Solution of NaCl showed Tyndal effect.
 - (b) Solution of starch showed Tyndal effect.
 - (c) Both the solutions showed Tyndal effect.
 - (d) Non of the two showed the Tyndal effect.
28. For separating different pigments from an extract of flower petals, which one of the following process is used –
- (a) Filtration
 - (b) Chromatography
 - (c) Crystallisation
 - (d) Distillation
29. Iron filings and sulphur powder were mixed and heated strongly. After cooling, the product was checked with a magnet. No iron filing were separated. The product thus formed was –
- (a) An element
 - (b) A mixture
 - (c) A compound
 - (d) An alloy
30. For separating cream from milk which of the following techniques will be used –
- (a) Chromatography
 - (b) Evaporation
 - (c) Centrifugation
 - (d) None
31. When an iron nail was put into the copper sulphate solution, then after sometime we had observed reddish brown deposit on the iron nail. This deposition was of –
- (a) Sulphur
 - (b) Oxygen
 - (c) Iron
 - (d) Copper
32. On many medicines bottle it is written “shake well before use” can you tell what type of mixture the bottle is containing?
- (a) Pure solution
 - (b) Unsaturated solution
 - (c) Colloid
 - (d) Suspension
33. Which of the following is a homogenous mixture?
- (a) Soda water
 - (b) Wood
 - (c) Air
 - (d) Soil

34. Why do we see water droplets on outer surface of a glass containing ice cold water?
35. What happens when the plant cells are supplied with hypertonic solution? Also name the process.
36. While observing a slide of dicot leaf, how did you recognised the stomata and accessory cells.

