



Class9 Science Sample Question Paper 2017-18

Time allowed: 03 Hours

Science Class – IX

Maximum Marks: 80

Instruction:

- (i) Question numbers 1 and 2 in Section-A are one mark question. They are to be answered in one word or in one sentence.
- (ii) Question numbers 3 to 5 in Section- A are two marks questions. These are to be answered in 30 words each.
- (iii) Question numbers 6 to 15 in Section-A are three marks questions. These are to be answered in about 50 words each.
- (iv) Question numbers 16 to 21 in Section-A are 5 marks questions. These are to be answered in 70 words each.
- (v) Question numbers 22 to 27 in Section- B are based on practical skills. Each question is a two marks question. These are to be answered in brief
- (vi) There is an internal choice in two questions of three marks each and one question of five marks.

Section-A

Question numbers 1 and 2 in Section-A are one mark question

1. What is monoculture?
2. State the law of conservation of mass.

Question numbers 3 to 5 in Section- A are two marks questions

3. In which state of matter (i) particles have maximum kinetic energy (ii) diffusion is fastest?
4. Name two factors that are responsible for loss of grains during storage. Give two examples of each.
5. Give any two differences between speed and velocity

Question numbers 6 to 15 in Section-A are three marks questions

6. Derive the valency of Aluminium having isotops.
 - (b) Name the subatomic particle whose number is not same in isotopic species of an element
 - (c) Name the element which has no neutron in its atom.
7. What were the observations of Rutherford's α - particle scattering experiment?
8. How does the sound produced by a vibrating body in a medium reach your ear?
9. Give the mathematical formula that relates thrust and pressure. Define 1 pascal.
Calculate the thrust and pressure exerted by a block of 500N on the surface of table if the surface area in contact is 2.5 m^2
10. What is sublimation? Draw a labelled diagram to show the setup of apparatus used for separating common salt and ammonium chloride.
11. Distinguish between homogeneous and heterogeneous mixtures. Classify the following as homogeneous and heterogeneous mixture: (i) brass (ii) smoke.
- 12.(a) State two differences between evaporation and boiling. b) List four factors that affect the rate of evaporation.
13. Ramesh switched from traditional to modern farming practices in which he used large amount of fertilizers and pesticides to gain an increase in profit. His friend Sameer advised him to use manure instead of fertilizer.
 - (a) What values are shown by Ramesh and Sameer?
 - (b) What will be the effect on the soil in long run?
 - (c) What alternative method could be more beneficial for farming?



14. Differentiate between striated, unstriated and car muscles on the basis of their structure, function and site/location in the body.

15. Give reasons for the following

- (a) Isotopes of an element are chemically similar. (b) An atom is electrically neutral.
(d) Ions are more stable than atoms. (c) Noble gases show least reactivity.
(e) Na. has completely filled K and L shells.

Question numbers 16 to 21 in Section- A are 5 marks questions

16. List the following disease into communicable and non-communicable diseases:

- (a) Cancer (b) High blood pressure (c) SARS (d) Night blindness (e) Common cold (f) Typhoid
(g) Diabetes (h) Cholera (i) TB (j) Dengue

17. What is the work done by force of gravity on a satellite moving around the earth? Justify your answer?

(b) A man mass 60 kg run up a flight of 30 steps in 15sec .if each steps is 21 cm high, calculate the power developed by the man.

18. (a) Explain the working of SONAR. (b) Draw graphs to show soft sound and loud sound

19. What management practices are common in dairy and poultry farming? b) What are the differences between broilers and layers? (Any two)

20. (a) Derive graphically the equation for velocity - time relation.(b) Name the device used to measure distance travelled by a vehicle. (c) Can displacement of a moving object be zero?. Give reason.

21. (a) What is osmosis? (b) Draw a labelled diagram of plant cell.

Section-P

Question numbers 22 to 27 in Section- B are based on practical skills. Each question is a two marks question

22. (a) Identify physical and chemical change from the following:-

(i) Burning of magnesium ribbon (ii) Melting of butter.

(b) Give one point of difference between physical and chemical change.

23. Give two precautions that you would take while determining melting point of ice

24. In an experiment, a wooden block is kept on a table and is pulled by two identical spring balances. Based on the given information, answer the following:-

(a) In which direction does the force of friction act on the wooden block? (b) Name and define the law which is applicable in the above situation.

25. State the factors on which buoyant force acting on an object immersed in a fluid depend.

OR, in an experiment to verify law of the conservation of Mass in a chemical reaction, the following steps of procedure are given below

(i) Take 5% solution of 'X' in a flask and, 5% solutions of 'Y' in an ignition tube and hang it in the flask.

(ii) Weigh the flask with its content carefully.

(iii) Compare the mass of the flask before and after the reaction.

(iv) Tilt and Swirl the flask so that the solutions X and Y get mixed. (v) Weigh again.

Write the correct sequence of the procedural steps?

26. Swapnil was provided with a solid sphere of a metal of mass 200 g. He immersed it in a measuring cylinder half filled with water and found that the water level was raised by 60 ml. Calculate the density of the sphere.

27. A cube of copper and a spherical ball of iron having same volume, immersed in salty water. Find the relation between buoyant forces acting on both balls with reasons.