CBSE Class 9 Science Sample Paper
Set 3

Duration: 3 hrs
Total Marks: 80

General Instructions:

- The question paper is divided into five sections – A, B, C, D, and E.
- All questions are compulsory and you should attempt all sections.
- In sections B, C, D, and E you have an option to answer any one question.
- Questions 1 and 2 in Section A carry one mark.
- Question 3 to 5 in Section B carry two marks.
- Question 6 to 15 in Section C carry three marks.
- Question 16 to 21 in Section D carry five marks.
- Question 22 to 27 in Section E are based on practical skills. Each question carries two marks. You can answer the questions in brief.

Section A (1 mark each)

Q#1: What is Evaporation?

Q#2: Which man-made compounds cause ozone-layer depletion?

Section B (2 marks each)

Q#3: Describe how evaporation causes cooling.

(OR)

Give two differences between evaporation and boiling of a liquid.

Q#4: A saline water solution contains 50 grams of salt dissolved in 400 grams of water. Calculate the concentration of the solution in terms of mass-by-mass percentage of the solution.
(OR)

What is a solution? What are the components of a solution?

Q#5: what are plastids? What are the types of plastids?

Section C (3 marks each)

Q#6: Give any 3 properties of metals.

(OR)

Give any 3 differences between mixtures and compounds.

Q#7: What are ions? Give two examples of ionic compounds.

Q#8: Give three observations from Rutherford's alpha-scattering experiment.

Q#9: Describe tissues. Give the two main types of plant tissues.

Q#10: Beginning from rest, Batman accelerates his Batmobile to reach a velocity of 60 meters per second in 10 seconds. Then he applies the brakes and the velocity of the Batmobile decreases to 10 meters per second in the next 1 second. Calculate the acceleration of the Batmobile in both cases.

Q#11: What is the work that must be done to increase the velocity of a bike that weighs 200 kg from 20 m/s to 30 m/s.

Q#12: Draw and label a diagram showing the auditory parts of the human ear.

Q#13: What are acute and chronic diseases? Give an example for both.

(OR)

What are infectious diseases? Give two ways that an infectious disease may spread.

Q#14: Draw a diagram to explain the nitrogen cycle in nature.

Q#15: Give 3 factors for which crop variety improvement is done.

Section D (5 marks each)

Q#16: Give any 5 postulates of Dalton's atomic theory.

(OR)

(i) Give the chemical formulae of (a) sodium oxide and (b) sodium sulfide (c) Magnesium Hydroxide.

(ii) Give the names of the following compounds (a) $Al_2(SO_4)_3$ (b) KNO_3

Q#17: What are Neurons? Draw a clear and labeled diagram of a neuron.

Q#18: (i) What are the 7 chief classification groups used to classify living organisms? (ii) Name the 5 kingdoms into which all living organisms are classified.

Q#19: (i) State Newton's three laws of motion.

(ii) Find the value of the constant force that is applied for 1 second on a 10kg object to increase the velocity of the object from 5 m/s to 10 m/s.

Q#20: What is the Universal Law of Gravitation? Obtain a Mathematical equation for it. Also, give two points highlighting its importance.

Q#21: List 5 Differences between Potential energy and Kinetic energy.

Section E (2 marks each)

Q#22: We encounter many animals on a day to day basis. Some of these animals are also kept as pets in human homes, such as dogs. How can dogs be classified scientifically?

Q#23: We come across a wide range of motions every day. Give an example of acceleration which is in the direction of motion and acceleration which is against the direction of motion.

Q#24: Give two examples where we experience inertia in our day to day lives.

(OR)

Q#24: List two situations wherein the third law of motion can be observed.

Q#25: Describe any 2 situations in which we can feel the effects of buoyancy.

Q#26: In high-speed aircraft testing zones, the windows of buildings are reinforced. Why is this important?

Q#27: Give two examples of diseases which may arise from the formation of puddles due to excessive rain and poor drainage systems.