

Summative Assessment : 2015-16

Subject-Science

Class - IX

Time allowed: 3 hours

Maximum Marks: 90

General Instructions:

1. The question paper comprises of two sections, A and B you are to attempt both the sections.
2. All questions are **compulsory**.
3. There is no choice
4. All questions to section A and all questions of section B are to be attempted separately.
5. Question numbers 1 to 3 in section A are one mark questions. These are to be answered in one word or one sentence.
6. Question numbers 4 to 6 are two mark questions, to be answered in about 30 words.
7. Question number 7 to 18 is three mark questions, to be answered in about 50 words.
8. Question number 19 to 24 is five mark questions, to be answered in about 70 words.
9. Question numbers 25 to 33 in section B are multiple choice questions based on practical skills. Each question is a one mark question. You are choosing one most appropriate response out of the four provided to you. Question number 34 to 36 carry two mark each.

SECTION A

- Q1. What is monoculture? 1
- Q2. Define "universal law of gravitation". 2
- Q3. In which state of matter
(i) Particles have maximum kinetic energy
(ii) Diffusion is fastest? 1 mark 2
- Q4. Name two factors that are responsible for loss of grains during storage. Give two examples of each. 2
- Q5. Give any two differences between speed and velocity. 2
- Q6. a) What is meant by latent heat of fusion?
b) Convert the temperature 373 degree Celsius into Kelvin. 2
- Q7. What is sublimation? Draw a labelled diagram to show the setup of apparatus used for separating common salt and ammonium chloride. 3

Q8. Distinguish between homogeneous and heterogeneous mixtures. Classify the following as homogeneous and heterogeneous mixture:

- (i) brass (ii) smoke.

a) State two differences between evaporation and boiling.

b) List four factors that affect the rate of evaporation.

Q10. 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?

Q11. Why plasma membrane is called a selectively permeable membrane? What would happen if the plasma membrane ruptures or breaks down?

Q12. Differentiate between striated, unstriated and cardiac muscles on the basis of their structure, function and site/location in the body.

Q13. What is a neuron? Draw the labeled diagram of neuron.

Q14. (a) When will you say a body is in

- (i) uniform motion (ii) non-uniform motion

(b) Show the path of an object when it is in uniform motion with the help of a graph.

Q15. A train is travelling at a speed of 90 km/h. Brakes are applied so as to produce a uniform acceleration of -0.5 m/s^2 . Find how far the train will go before it is brought to rest.

Q16. a) What is inertia?

b) Give reasons for the following:-

i) Why does dust comes out when a carpet is beaten with a stick?

ii) Why do we fall in the forward direction when a moving bus stops suddenly?

Q17. a) What do you mean by free fall?

b) State two differences between mass and weight.

Q18. a) What do you mean by acceleration due to gravity?

b) What is the value of "g" on the surface of the earth?

c) On what factors, does the value of "g" depend?

Q19. a) What management practices are common in dairy and poultry farming?

b) What are the differences between broilers and layers? (Any two)

Q20. a) What are the characteristics of the particles of matter?

- b) What produces more severe burns, boiling water or steam?
- Q21. a) Define the following :- i) Saturated solution ii) Suspension. (7)
 b) Give three points of difference between True solution and colloidal solution.
- Q22. ~~a) 1) Define momentum. State its S.I. unit.~~
~~ii) An object of mass 50 kg is accelerated uniformly from a velocity of 4m/s to 8 m/s in 8 s. Find the magnitude of the force exerted on the object.~~ 4 1/2 (1)
 b) State Newton's first law of motion.
- Q23. a) Derive graphically the equation for velocity-time relation. -2
 b) Name the device used to measure distance travelled by a vehicle. distance BC
 c) Can displacement of a moving object be zero? Give reason. (3)
- Q24. a) What is osmosis?
 b) Draw a labelled diagram of plant cell.

SECTION - B

- Q25. The test tubes A, B and C are taken with food samples of dal, mustard and rice respectively in powdered form. On adding iodine solution the blue black colour is observed in
 a) Test tube A
 b) Test tube B
 c) Test tube C
 d) None of these test tubes
- Q26. To given three food samples in test tubes A, B and C, reagent HCl is added and solution in B turned to pink colour. So, B confirmed the presence of
 a) Starch
 b) Fat
 c) Metanil yellow
 d) Protein
- Q27. The melting point of pure ice is
 a) 0°C
 b) 1°C
 c) -1°C
 d) 4°C
- Q28. A student was asked to mix the white of an egg with water and stir well. The student observed that
 a) A transparent solution is formed
 b) A translucent mixture solution is formed
 c) Egg white settles down at the bottom

- d) Egg white floats on the surface
- Q29. Which one of the following is not a correct observation when a magnet is moved repeatedly through a mixture of iron filings and sulphur powder kept in a tray?
- a) Most of the iron filings cling to the magnet
 - b) A black mass of iron sulphide is produced
 - c) Colour of sulphur powder changes
 - d) Sulphur powder remains in the tray
- Q30. In the preparation of temporary mount of onion peel which of the following is not used:
- a) water
 - b) glycerine
 - c) safranin
 - d) alcohol
- Q31. Light and dark bands can be seen in the case of:
- a) striated muscles
 - b) smooth muscles
 - c) cardiac muscles
 - d) both (a) & (c)
- Q32. If you are shown two slides of plant tissues – parenchyma and sclerenchyma, you can identify sclerenchyma by the:
- a) Location of nucleus
 - b) Thickness of cell wall
 - c) Size of the cells
 - d) Position of vacuoles
- Q33. Human cheek cells stained in methylene blue and mounted in glycerine were observed with the help of a compound microscope. The Components of the cell which would be seen are:
- a) cell wall, cytoplasm, nucleus
 - b) plasma membrane, cytoplasm, nucleus
 - c) plasma membrane, cytoplasm, nucleus, mitochondria
 - d) plasma membrane, cytoplasm, nucleus, mitochondria, golgi bodies.
- Q.34 (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.
- Q.35 Give two precautions that you would take while determining melting point of ice
- Q.36. 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.