980615 - B1

Class - IX

SCIENCE

Time allowed : **3 to 3½** hours | Maximum Marks : **80**

Total No. of Pages : **7**

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 overall choice. However, internal choice has been provided in all the three questions of five marks category. Only one option in such question is to be attempted.
4. All questions to section **A** and all questions of section **B** are to be attempted separately.
5. Question numbers **1** to **4** in section **A** are one mark questions. These are to be answered in **one word** or **one sentence**.
6. Question numbers **5** to **13** are two mark questions, to be answered in about **30 words**.
7. Question numbers **14** to **22** are three mark questions, to be answered in about **50 words**.
8. Question numbers **23** to **25** are five mark questions, to be answered in about **70 words**.
9. Question numbers **26** to **41** in section **B** are multiple choice questions based on practical skills. Each question is a one mark question. You are to choose one most appropriate response out of the four provided to you.
10. An additional **15** minutes time has been allotted to read this question paper only.

SECTION – A

1. What can you say about the motion of a body whose distance-time graph is a line parallel to time-axis. **1**

2. When a solution is said to be saturated ? **1**

3. What is mari-culture ? **1**

4. Name the phiysical quantity which is determined by the rate of change of linear momentum. **1**

5. Name two biotic and two abiotic factors that affects crop production. **2**

6. Explain dispersed phase and dispersing medium in relation to colloidal solution. **2**

7. A car starts with velocity 10 m/s and accelerates at rate 5 m/s^2. Find the final velocity when the car has travelled a distance 30 m. **2**

8. Draw a neat and labeled diagram for neuron. **2**

9. Write two differences between plasma membrane and cell wall. **2**

10. Why we wear cotton clothes during summer ? **2**

11. A body covers a semicircle of radius 7 cm in 5 second. Find its velocity. **2**

12. State universal law of gravitation. How the force between the two bodies is affected if the distance between them is tripled ? **2**

13. It is dangerous to jump out of a moving bus. Explain why ? **2**

14. Define (1) Green revolution (2) White revolution (3) Hybridisation of crops. **3**

15. List any three factors for which variety improvement for crops is done. Explain any one in detail. **3**

16. Define the following terms. **3**

` (a) Latent heat of fusion
(b) Sublimation
(c) Evaporation

17. Show by an activity that the gases are highly compressible as compared to solids and liquids. **3**

18. (a) Define momentum. **3**

(b) A cricket player lowers his hands while catching the ball. Explain why ?

19. A cricket ball is dropped from a height of 20 m. **3**

(i) Calculate the speed of the ball when it hits the ground.

(ii) Calculate the time it takes to fall through this height. ($g = 10\ m/s^2$)

20. Draw a neat diagram for a plant cell. Label the following parts in the diagram : **3**

(i) Cell wall (ii) Nucleus (iii) Chloroplast (iv) Vacuoles

21. Derive an expression for acceleration due to gravity on the surface of earth in terms of mass and radius of earth. **3**

22. Draw a graph velocity versus time for a body starts to move with velocity 'u' under a constant acceleration a for time t. Using this graph derive an expression for distance covered 's' in time 't'. **3**

23. (a) What role vacuoles play in a typical plant cell ? **5**

(b) What will happen if Golgi Apparatus is removed from the cell ?

(c) Why the inner membrane of Mitochondria deeply folded ?

OR

(a) What is plasma membrane ? Why it is called selectively permeable ?

(b) How Mitochondria and Plastid different from other organelles of the cell ?

(c) What role the smooth endoplasmic retaculum play in the liver cells of vertebrates ?

24. (a) State Newton's III law of motion. **5**

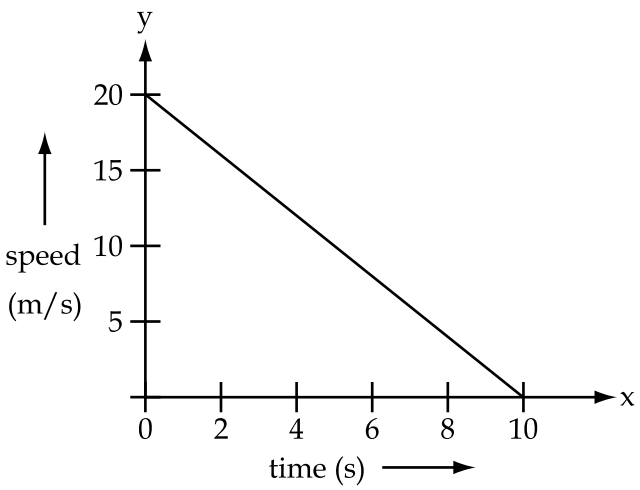
(b) Explain why is it difficult to hold a hose, which ejects a large amount of water at a high velocity.

(c) Why action and reaction don't cancel each other.

OR

(a) State Newton's second law of motion. Give its mathematical expression and hence define the unit of force.

(b) The velocity time graph of a ball of mass 20g moving along a stright line on a long table is given in fig. How much force does the table exert on the ball to bring it to rest.



25. (a) Give any two point of difference between mixture and compound. **5**

(b) Draw a labelled diagram of the apparatus used for fractional distillation.

OR

(a) Write any two point of differences between chemical and physical change ?

(b) State one instance where water undergoes a physical change and one in which undergoes a chemical change.

(c) Mention any two applications of chromatography.

SECTION – B

26. Which of the following shows Tyndall effect : **1**

(a) True solution (b) Colloidal solution

(c) Suspension (d) None of the above

27. Which of the following is stable when allowed to stand undisturbed for some time ? **1**

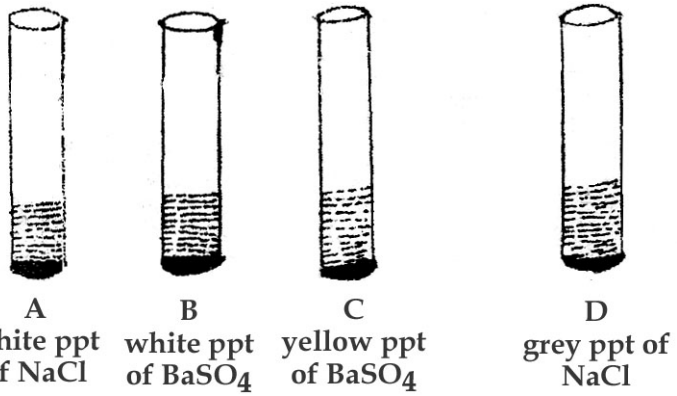
(a) sugar solution (b) alum (c) salt solution (d) all of these

28. Which change occurs when zinc metal reacts with dil H_2SO_4 acid ? **1**

(a) Physical change (b) Physical and chemical change

(c) Chemical change (d) None of these

29. Which of the following precipitate is formed when sodium sulphate and barium chloride reacts : **1**



(a) A (b) B (c) C (d) D

30. One of the following is not visible in cheek cell : **1**

(a) cell membrane (b) nucleus (c) cell wall (d) cytoplasm

31. On observing onion peel slide under low power of compound microscope which set of structure are clearly seen : **1**

(a) cell wall, cell membrane, nucleus, cytoplasm

(b) nucleus, cell membrane, vacuole, chromosome

(c) cell wall, cell membrane, mitochondria, vacuole

(d) cell wall, nucleus, vacuole, chromosome

32. which one of the following is not a characteristic feature of parenchyma : **1**

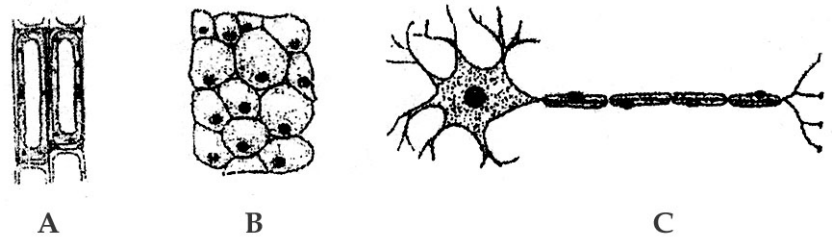
(a) Intercellular spaces are present between the cells

(b) each cell has a large vacuole

(c) composed of thin walled large living cells

(d) cells are isodiametric and non living

33. Identify the following slides in the correct order based on the features : **1**



A B C

(a) nerve cell, parenchyma, sclerenchyma

(b) sclerenchyma, nerve cell, parenchyma

(c) sclerenchyma, parenchyma, nerve cell

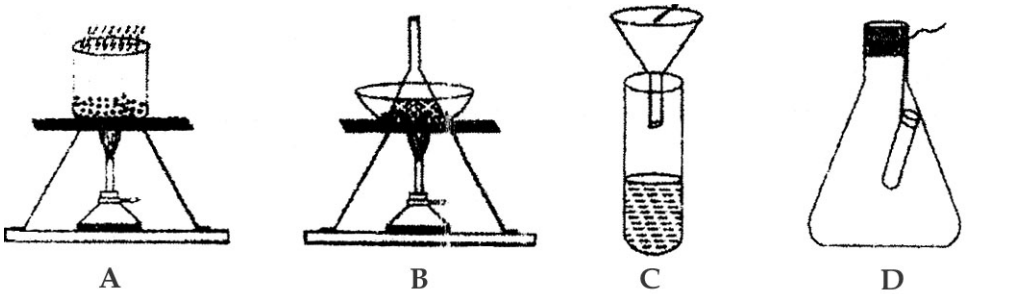
(d) parenchyma, sclerenchyma, nerve cell

34. A mixture of sand, common salt and ammonium chloride can be separated by the process of : **1**

(a) filtration (b) distillation

(c) sublimation (d) all of these

35. Which one of the following figures describe the process of sublimation ? **1**



A B C D

(a) A (b) B (c) C (d) D

36. Which of the following reagent is used to test the presence of starch in the food storage ? **1**

(a) iodine (b) methylene blue

(c) Benedict's reagent (d) dilute hydrochloric acid

37. Which of the under mentioned food groups will not turn blue black when treated with iodine ? **1**

(a) rice, potato, bread

(b) bread, wheat, corn flour

(c) rice water, boiled potato, corn starch

(d) dal, fish, meat

38. Sulphur is soluble in : **1**

(a) water (b) carbon disulphide

(c) both (a) and (b) (d) neither (a) nor (b)

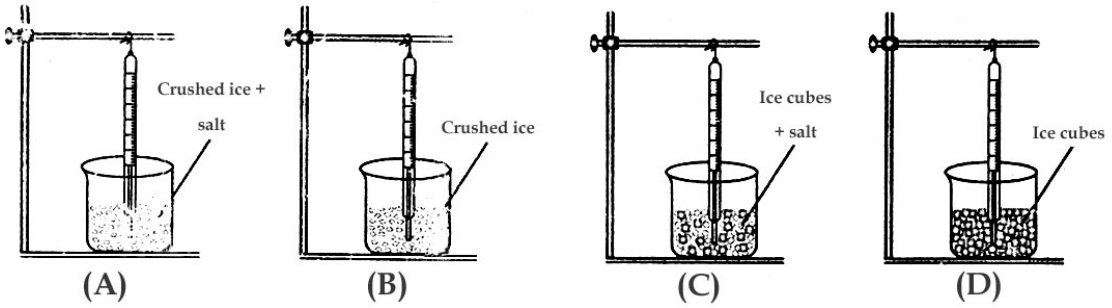
39. Which compound is formed when iron is heated with sulphur ? **1**

(a) FeS (b) Fe_2S_3 (c) FeS_2 (d) Fe_2S

40. Below are the melting points of ice as given by four students, which one is correct : **1**

(a) $-0°C$ (b) 273 K (c) 100°C (d) 373 K

41. The correct set up for finding the melting point of ice is : **1**



(a) A (b) B (c) C (d) none of these

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