

Name: Parthavi
Class: VII E
Subject: Science (086)
Date: 17/01/25
Invigilator's Sign.: [Signature]
Time allowed: 2 Hours 30 Minutes
Maximum Marks: 60



SET A
SUBJECT CODE: 086

General Instructions:

- This question paper consists of 30 questions in 5 sections.*
- All questions are compulsory.*
- Section A consists of 15 Objective Type questions carrying 1 mark each.*
- Section B consists of 6 Very Short Answer type questions carrying 2 marks each. Answers to these questions should be in the range of 30 to 50 words.*
- Section C consists of 5 Short Answer type questions carrying 3 marks each. Answers to these questions should be in the range of 50 to 80 words.*
- Section D consists of 2 Long Answer type questions carrying 5 marks each. Answer to these questions should be in the range of 80 to 120 words.*
- Section E consists of 2 case-based unit of assessment of 4 marks each with sub-parts.*

SECTION A (Objective Type Questions)

Select and write one most appropriate option out of the four options given for each of the questions 1- 15

- Q1. An athlete attains a maximum speed of 36 km/h. The speed is equal to : (1)
(a) 5 m/s (b) 10 m/s (c) 15 m/s (d) 20 m/s
- Q2. Phenolphthalein is a synthetic indicator and its colour in acidic and basic solutions, respectively are : (1)
(a) red and blue (b) blue and red (c) pink and colourless (d) colourless and pink
- Q3. The normal temperature of human body is ____ (1)
(a) 37.5°C (b) 37.0°C (c) 35.0°C (d) 42.0°C
- Q4. Which of the following substance is neither acidic nor basic? (1)
(a) Sodium sulphate (b) Sodium hydroxide (c) Sodium chloride (d) Sodium bicarbonate
- Q5. Which of the following pair of teeth differ in structure but are similar in function? (1)
(a) canines and incisors (b) molars and premolars
(c) incisors and molars (d) premolars and canines
- Q6. The absorption of nutrients and exchange of respiratory gases between blood and tissues takes place in ____ (1)
(a) veins (b) arteries (c) heart (d) capillaries
- Q7. _____ experimented with various pendulums to verify his observation. He found that a pendulum of a given length takes always the same time to complete one oscillation. (1)
(a) Galileo (b) Newton (c) Avogadro (d) Albert Einstein

- Q8. Aquatic animals like fish excrete their wastes in gaseous form as: (1)
(a) oxygen (b) hydrogen (c) ammonia (d) nitrogen
- Q9. _____ is a toxic substance and is very difficult to dispose of if a thermometer breaks. (1)
(a) Magnesium (b) Manganese (c) Mercury (d) Molybdenum
- Q10. Impure copper sulphate powder can be purified by the process of: (1)
(a) galvanization (b) crystallization (c) evaporation (d) sublimation
- Q11. The transfer of heat by _____ does not require any medium. (1)
(a) radiation (b) convection (c) conduction (d) condensation
- Q12. The saliva breaks down the starch into _____. (1)
(a) glycerol (b) sugars (c) fatty acids (d) peptides
- Q 13. Which of the following is a chemical change? (1)
(a) Twinkling of stars (b) Cooking of vegetables (c) Cutting of fruits (d) Boiling of water

Question numbers 14 to 15 are Assertion- Reasoning based questions. These consist of two statements- Assertion (A) and Reason (R). Answer these questions selecting the appropriate options given below:

- (a) Both A and R is true and R is the correct explanation of A.
(b) Both A and R is true and R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

- Q14. Assertion (A): A doctor uses the stethoscope as a device to amplify the sound of the heart. (1)
Reason (R): It consists of two chest piece that carries a sensitive diaphragm, two ear pieces and a tube joining the parts.
- Q15. Assertion (A): Changes can be of two types, physical and chemical. (1)
Reason (R): In physical changes new substances are produced.

SECTION B (Very Short Answer Type Questions)

- Q16. The distance between two stations is 240 km. A train takes 4 hours to cover this distance. Calculate the speed of the train in m/s. (2)
- Q17. Payal noticed water being pulled up by a motor-pump to an overhead tank of a five-storeyed building. She wondered how water moves up to great heights in the tall trees standing next to the building. Can you tell why? Suggest one importance of the above process involved in plants. (2)
- Q18. In a classroom activity, a group of students tested soil from two pots. Pot A's soil was highly acidic, and Pot B's soil was highly basic. What should they add to each pot to make the soil suitable for plant growth? (2)
- Q19. What is meant by the term "rumination"? Name any two ruminants. (2)
- Q20. Piyush has four solutions: vinegar, soap water, tamarind water, distilled water and tries to test with china rose indicator. Predict the colour change in each case. (2)

Q21. Write a word equation for the following chemical change:

- (a) When an iron nail is dipped in copper sulphate solution, the solution changes its colour and a brown deposit on the iron nail is observed. (1)
- (b) When carbon dioxide is passed through lime water , a new substance is formed which makes lime water milky. (1)

SECTION C (Short Answer Type Questions)

Q 22. Answer the following:

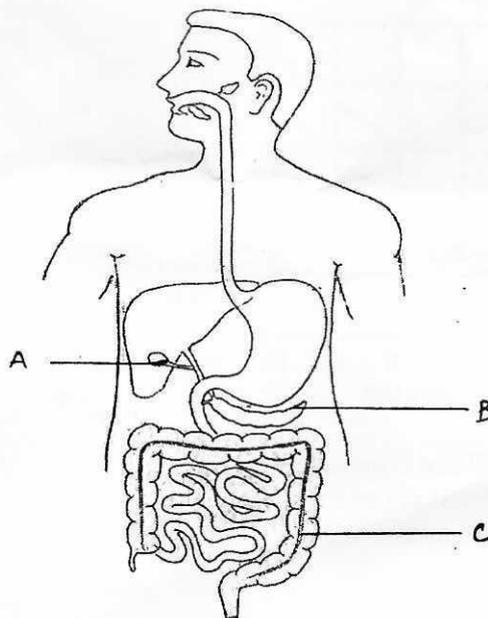
- (a) Why is a frying pan made of metal but the handle of frying pan is made of plastic or wood. (1)
- (b) Why does sea breeze occur during the day in coastal areas? (1)
- (c) Why are windows of coastal houses made to face the sea? (1)

Q23. Answer the following:

- (a) What does calamine solution contain and when it is used? (1)
- (b) What is an indicator? (1)
- (c) Name the indicator that turns basic solutions to red and also mention the type of indicator. (1)

Q24. A car moves at a speed of 60 km/ h for 10 minutes and then at the speed of 120 km/h for the next 10 minutes. What is the total distance covered by the car (in km)? (3)

Q25. Identify the part A , B and C of human digestive system and mention their function: (3)



- Q26. (a) Suppose you are given the choice in winter of using either one thick blanket or two thin blankets joined together. What would you choose and why? (1)
- (b) At a camp site there are tents of two shades – one made with black fabric and the other with white fabric. Which one will you prefer for resting on a hot summer afternoon? Give reason for your choice. Would you like to prefer the same tent during winter? (2)

SECTION D (Long Answer Type Questions)

Q27. Answer the following:

- (a) What happens when baking soda is added to vinegar? Write a word equation for this reaction. Name the type of change which takes place. (2)
- (b) Explain in brief any three methods for preventing iron from rusting. (3)

Q28. Answer the following:

- (a) List one structural and one functional difference between arteries and veins. (2)
(b) Draw a diagram of the human excretory system and label the various parts. (3)

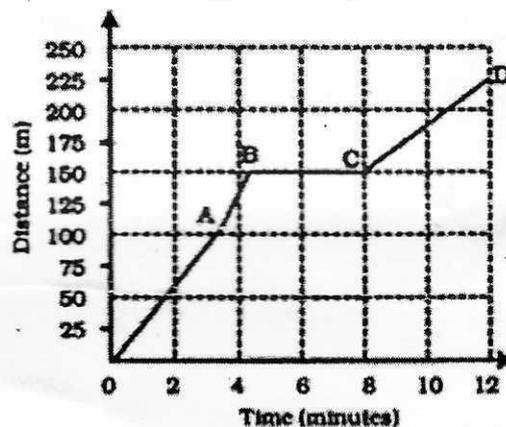
SECTION E (Case Based Question)

Q29. We take in food through the mouth, digest and utilise it. The unused parts of the food are defecated. The food components gradually get digested as food travels through the various compartments. The inner walls of the stomach and the small intestine, and the various glands associated with the canal secrete digestive juices. The digestive juices convert complex substances of food into simpler ones. The digestive tract and the associated glands together constitute the digestive system.

Answer the following questions :

- (a) What is alimentary canal? (1)
(b) How does the food move forward in the alimentary canal? (1)
(c) Name any two associated glands of the canal. (1)
(d) Identify the part of the alimentary canal that is a thick - walled bag, it's shape is like a flattened J and is the widest part of the canal. Mention its any one secretion. (1)

Q30. Boojho goes to the ground to play football. The distance-time graph of his journey from his home to the ground is given below in a graph.



Answer the following:

- (a) What does the graph between points B and C indicate about the motion of Boojho? (1)
(b) Is the motion between 0 to 4 minutes uniform or non-uniform? (1)
(c) What is his speed at C. of his journey in m/min and m/s? (2)