

SBOA SCHOOL AND JUNIOR COLLEGE CHENNAI - 101

CLASS VII –SCIENCE

HIGHER ORDER THINKING QUESTIONS

1. Potato and ginger are both underground parts that store food. Where is the food prepared in these plants?
2. A goat eats away all the leaves of a small plant (balsam). However, in a few days, new leaves could be seen sprouting in the plant again. How did the plant survive without leaves?
3. Nitrogen is an essential nutrient for plant growth. But farmers who cultivate pulse crops like green gram, bengal gram, black gram, etc. do not apply nitrogenous fertilizers during cultivation. Why?
4. Wheat dough if left in the open, after a few days, starts to emit a foul smell and becomes unfit for use. Give reason.
5. Sunlight, chlorophyll, carbon dioxide, water and minerals are raw materials essential for photosynthesis. Do you know where they are available? Fill in the blanks with the appropriate raw materials.
 - (a) Available in the plant : _____
 - (b) Available in the soil : _____, _____
 - (c) Available in the air : _____
 - (d) Available during day : _____
6. Wild animals like tiger, wolf, lion and leopard do not eat plants. Does this mean that they can survive without plants? Can you provide a suitable explanation?
7. You were blindfolded and asked to identify the drinks provided in two different glasses. You could identify drink A as lime juice and B as bitter melon juice. How could you do it in spite of being blindfolded?
8. Boojho took some grains of boiled rice in test tube 'A' and Paheli took boiled and chewed rice in test tube 'B'. Both of them poured 1 – 2 drops of iodine solution into the test tube and observed the colour change. What colour change would they have observed? Give reasons for your answer
9. 'A' got her gall bladder removed surgically as she was diagnosed with stones in her gall bladder. After the surgery, she faced problems in digestion of certain food items when consumed in bulk. Can you tell which kind of food items would they be and why?
10. Ruminants such as cows and buffaloes swallow their food hurriedly and then sit restfully and chew their food. Can you reason why?
11. Boojho and Paheli were eating their food hurriedly so that they could go out and play during the recess. Suddenly, Boojho started coughing violently. Think of the reasons why he was coughing and discuss with your friends.
12. Read the following passage carefully and answer the questions that follow it.

Bile juice is stored in a sac called, gall bladder, located near its organ of secretion, liver. The gall bladder releases the bile juice into the small intestine whenever food reaches there. Though bile juice is devoid of any digestive

enzymes, it is required for the digestion of fats. The fats cannot be digested easily because they are insoluble in water and are present as large globules. Bile juice breaks down big fat droplets into smaller droplets. These are then easily digested by the enzymes released from the pancreas.

- (a) Which organ secretes the bile juice?
- (b) Why is digestion of fats difficult as compared to that of other nutrients?
- (c) How does bile juice help in digestion of fat?
- (d) Where is the digestion of fat completed?
- (e) Does bile juice digest fat completely?

13. Various steps involved to obtain wool from fleece are given here.

- (i) Picking out the burrs
- (ii) Dyeing in various colours
- (iii) Shearing
- (iv) Scouring
- (v) Sorting

Write the above steps in the correct sequence in which they are carried out.

14. Some words related with silk are jumbled up. Write them in their correct form.

- (a) TURECULRISE
- (b) WILSMORK
- (c) BELMURRY
- (d) RINGLEEE

15. Steps for the production of silk are given below in a jumbled order. Arrange them in their proper sequence.

- (a) Eggs are warmed to a suitable temperature for the larvae to hatch from eggs.
- (b) Fibers are taken out from the cocoon.
- (c) After 25 to 30 days, the caterpillars stop eating and start spinning cocoons.
- (d) The larvae/caterpillars or silkworms are kept in clean trays along with freshly chopped mulberry leaves.
- (e) Female silk moths lay eggs.
- (f) Cocoons are kept under the sun or boiled in water.

16. Paheli went to the market to buy sarees for her mother. She took out a thread from the edge of the two sarees shown by the shopkeeper and burnt them. One thread burnt with a smell of burning hair and the other burnt with the smell of burning paper. Which thread is from a pure cotton saree and which one from a pure silk saree? Give reason for your answer.

17. Explain the phrase – “Unity is Strength” on the basis of the making of fabric from fibre.

18. Shopkeepers selling ice blocks usually cover them with jute sacks. Explain why.

19. To keep her soup warm Paheli wrapped the container in which it was kept with a woollen cloth. Can she apply the same method to keep a glass of cold drink ,cool? Give reason for your answer.

20. For setting curd, a small amount of curd is added to warm milk. The microbes present in the curd help in setting if the temperature of the mixture remains approximately between 35°C to 40°C. At places, where room temperature remains much below the range, setting of curd becomes difficult. Suggest a way to set curd in such a situation.

21. You may have noticed that a few sharp jerks are given to clinical thermometer before using it. Why is it done so?
22. 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?
23. While constructing a house in a coastal area, in which direction should the windows preferably face and why?
24. Paheli is suffering from indigestion due to acidity. Is it advisable to give her orange juice in this situation and why?
25. While playing in a park, a child was stung by a wasp. Some elders suggested applying paste of baking soda and others lemon juice as remedy. Which remedy do you think is appropriate and why?
26. Boojho, Paheli and their friend Golu were provided with a test tube each containing China rose solution which was pink in colour. Boojho added two drops of solution 'A' in his test tube and got dark pink colour. Paheli added 2 drops of solution 'B' to her test tube and got green colour. Golu added 2 drops of solution 'C' but could not get any change in colour. Suggest the possible cause for the variation in their results.
27. A farmer was unhappy because of his low crop yield. He discussed the problem with an agricultural scientist and realised that the soil of his field was either too acidic or too basic. What remedy would you suggest the farmer to neutralise the soil?
28. You are provided with four test tubes containing sugar solution, baking soda solution, tamarind solution, salt solution. Write down an activity to find the nature (acidic/basic/neutral) of each solution.
29. Paheli observed that most of the fish in the pond of her village were gradually dying. She also observed that the waste of a factory in their village is flowing into the pond which probably caused the fish to die.
- Explain why the fish were dying.
 - If the factory waste is acidic in nature, how can it be neutralised?
30. Write word equations for two chemical reactions with the help of materials given in the box.
- Air, copper sulphate, iron, vinegar, iron oxide, carbon dioxide, iron sulphate, copper, lime water, water.
31. Give an example of a chemical reaction for each of the following situations:
- A change in colour is observed.
 - A gas is evolved.
 - Sound is produced.
32. "A fish dies when taken out of water whereas a wall lizard will die if kept under water." Mention the term used to describe such abilities that allow fish and lizard to survive in their respective habitats.
33. Mention two adaptive features of penguin and Seal that help it in swimming
34. Name the ocean which is mainly responsible to bring rain bearing monsoon winds to Kerala coast in June every year?

35. To expel hot air out of the kitchen, 'A' has an exhaust fan fitted on the window of her kitchen and 'B' has a similar exhaust fan fitted on the wall near the ceiling of her kitchen. Which of the exhaust fan will expel the hot air more effectively? Explain why?

36. Why is it advisable not to shut all the doors and windows during a storm?

37. A flat in Mumbai with a balcony facing the sea has some clothes hung on a clothes line in the balcony. Towards which direction the clothes will be blown in the afternoon? Explain.

38. A flag mounted on a flag post near the sea coast flutters in the direction of sea. At what time of the day does this happen – at midnight or in the afternoon? Explain.

39. Paheli kept an empty bottle made of plastic inside a refrigerator. After few hours, when she opened the refrigerator she found the bottle had collapsed. Explain the possible reason.

40. Is it a good practice to remove grass and small plants that are growing in an open, unused field? Give reason to support your answer.