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DAV PUBLIC SCHOOLS, ODISHA ZONE
HALF YEARLY EXAMINATION, 2023-24

- Please check that this question paper contains **06** printed pages.
- Check that this question paper contains **37** questions.
- Write down the Serial Number of the question in the left side of the margin before attempting it.

CLASS- VI

SUB : SCIENCE AND TECHNOLOGY

Time: 3 Hours

Maximum Marks : 80

General Instructions:

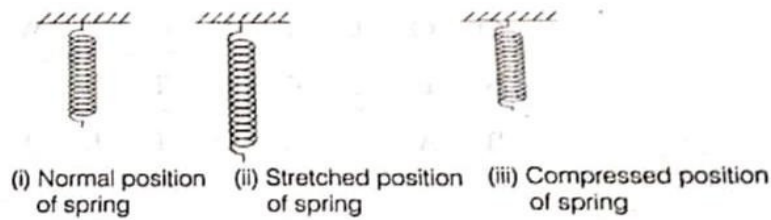
- All questions are compulsory.
- Internal choice have been provided in two questions of 2 marks category and three questions of 3 mark category and in one question of 5 mark category.
- The question paper contains 4 sections.
SECTION A Contains :
 - Question 1-14 ,which are very short answer questions carrying 1 mark each.
 - Question 15 & 16 which are assertion and reason type.
 - Question 17 & 18 are case based type
- **SECTION B** contains
 - Question 19 – 27 which are short answer type I carrying 2 marks each.
- **SECTION C** contains
 - Question 28 – 33 which are short answer type II carrying 3 marks each.
- **SECTION D** contains
 - Question 34 – 37 which are long answer type carrying 5marks each.
 - Draw neat and well labelled diagram where ever necessary

SECTION A

ANSWER THE FOLLOWING QUESTIONS IN ONE WORD OR ONE SENTENCE.

- Q1.** One of the characteristic feature of living organisms is response to stimuli. Prove this statement with an appropriate example.
- Q2.** Define the term reflection.

Q3. Identify any two types of changes from the figure given below



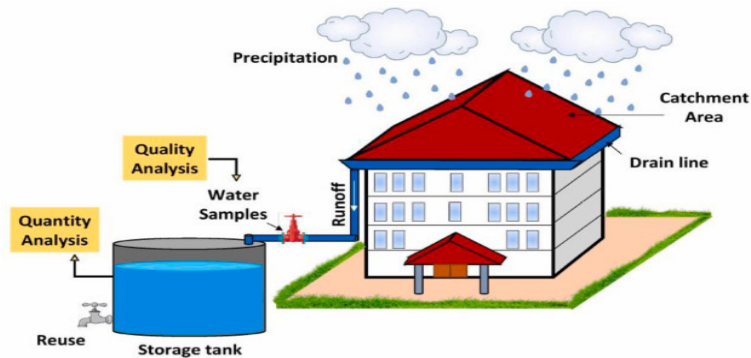
Q4. Name any two unicellular organisms.

Q5. A cauliflower is cut into pieces but there is no new product form. Identify the change.

Q6. Melting of Cadbury chocolate shows the type of change. Choose the correct answer for the classification given below.

(a) Energy absorbed (b) energy released.

Q7. See the picture given below and name the process



Q8. The group of organisms which use natural light for making food are called -----.

Q9. Objects that emit light of their own, are called _____.

Q10. Reema put some tea into four cups made up of paper, glass, metal, and bone china. Identify among the following through which she will be able to see the level of tea clearly from a distance.

Q11. State one importance of decomposers.

Q12. A rainfall, after a storm, removes the dust particles present in the air. State the process of separation applied here?

Q13. Water Works department use the process of filtration to purify water. They use layers of _____ and _____ to filter very large quantities of water.

Q14. Identify the separation methods depicted in the Fig. A and Fig B.

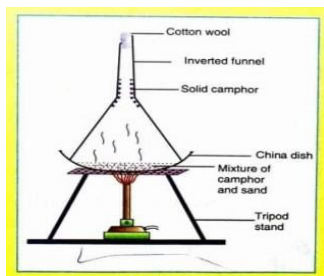


Fig A

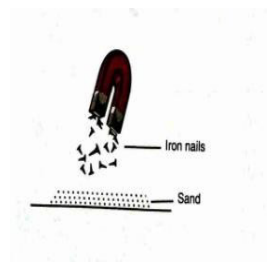


Fig B

DIRECTION: In the following questions, a statement of **assertion (A)** is followed by a statement of **reason(R)**. Mark the correct choices as:

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

Q15. ASSERTION (A): The science book of Std VI is a matter.
REASON(R) : The book occupies space and has some mass.

Q16. ASSERTION (A): Plants use water for preparing their food.
REASON(R) : Plants like Morning Glory respond to light.

Q17. Read the paragraph carefully. This paragraph consists of four bits

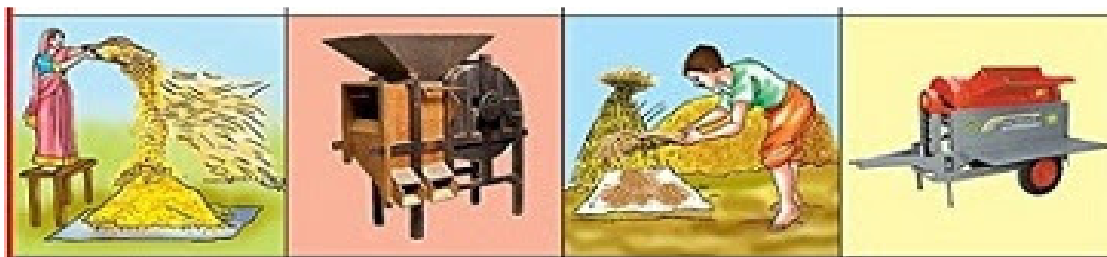
Vitamins are organic compounds that people need in small quantities. Most vitamins need to come from food because the body either does not produce them or produces very little. Each organism has different vitamin requirements. For example, humans need to get vitamin C from their diets, while dogs can produce all the vitamin C that they need. For humans, vitamin D is not available in large enough quantities in food. The human body synthesizes this vitamin when exposed to sunlight, and this is the best source of vitamin D. Different vitamins play different roles in the body, and a person requires a different amount of each vitamin to stay healthy

- (I) Which vitamin is called sunshine vitamin?
(a) Vitamin A (b) Vitamin C (c) Vitamin D (d) Vitamin E
- (II) Beriberi occurs due to lack of _____
(a) Vitamin B (b) Vitamin C (c) Vitamin K (d) Vitamin E
- (III) Due to lack of vitamin E humans suffer from _____
(a) pellagra (b) rickets (c) skin rash (d) sterility
- (IV) Select the vitamin which gets destroyed by heating.
(a) Vitamin A (b) Vitamin C (c) Vitamin K (d) Vitamin E

Q18. Read the paragraph carefully. This paragraph consists of four bits.

In our day-to-day life, we come across a variety of materials like soil, air, oil, milk, etc. Most of the materials are mixtures. The components of mixture can be separated by simple physical methods. The methods for separation of mixtures, are based on the difference in properties of their components. There are many different methods by which components of a mixture can be separated.





- (I) Choose the method of separating soluble solids from its liquid (solution).
 (a) filtration (b) Winnowing (c) Hand-picking (d) Crystallisation
- (II) The method of separation which is used when the quantity of mixture is small and the components are of different shape, size and colour is
 (a) filtration (b) hand picking (c) threshing (d) loading
- (III) The process that helps in obtaining common salt from sea water is _____
 (a) Centrifugation (b) Magnetic separation
 (c) Evaporation (d) Loading
- (IV) Select the correct option that deals with the methods of separation used by the farmers.
 (a) threshing (b) Winnowing
 (c) Sieving (d) Both threshing and winnowing

SECTION B

Q19. We often see buffaloes cooling themselves in pond during summer. Give reason.

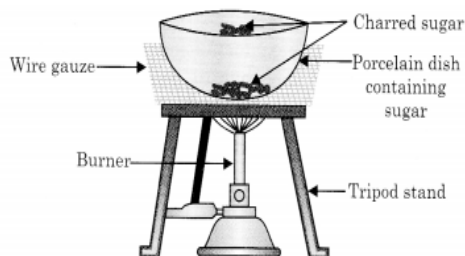
OR

Plants and animals respond to light in different ways. Justify it with suitable example from (a plant and animal).

Q20. Formation of curd is an irreversible as well as chemical change, Comment.

Q21. Some sugar was heated in a porcelain dish using a burner.

- a) What type of change is this?
- b) Illustrate another example of the same type of change.



Q22. Differentiate between mesophytes and hydrophytes. (based on the features.)

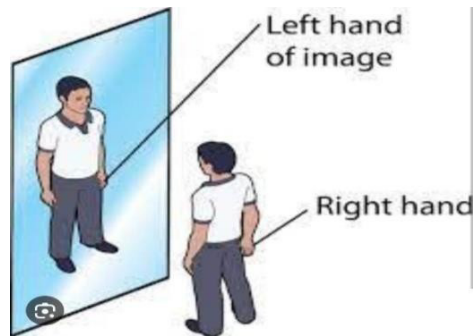
OR

Differentiate between shrubs and trees. (based on the features.)

Q23. X, Y and Z are three gaseous components of air. Gases X and Y can dissolve in the water of rivers but gas Z does not dissolve in water. The aquatic organisms which live in water use the gas Y dissolved in water for respiration for releasing energy from food.

- a) Name the gases X, Y .
- b) What happens to the solubility of a gas in water with the increase in the temperature of water?

- Q24.** From the figure given below.
- Identify the phenomenon.
 - Write down one example where this phenomenon is used in emergency situation.



- Q25.** Carrot, radish are categorised as biennial plants on the basis of their life span. Give reason in two points.
- Q26.** Differentiate between image formed by a plane mirror and shadow. Any two points.
- Q27.** Differentiate between frugivores animals and insectivores animals, with one example of each .

SECTION C

- Q28.** With the help of a neat and labeled diagram show the formation of shadow by heavenly bodies on a full moon day which causes lunar eclipse. Give the reason for this shadow formation.

OR

With the help of a neat and labeled diagram show the formation of shadow by heavenly bodies on a new moon day which causes solar eclipse. Give the reason for this shadow formation.

- Q29.** Compare between solids and gases on the basis of their arrangement of particles, space between them and the force of attraction between them.
- Q30.** Discuss the characteristic features of vertebrates and invertebrates. Any two points with a suitable example.

OR

Give a brief account on the classification of animals on the basis of their mode of reproduction.

- Q31.** Define the centrifugation. Where it is widely used and state the mechanisms.
- Q32.** Differentiate between slow and fast changes and give appropriate example in each case.
- Q33.** Suggest any three measures that you can help to save the environment.

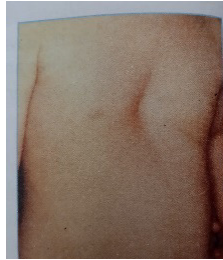
OR

A balance is maintained between the amount of oxygen and carbon dioxide in the atmosphere. Express it through a schematic diagram.

SECTION D

- Q34.**
- Define mixture.
 - Name the components of the following mixture (Air, Crude oil,)
 - Distinguish between homogeneous and heterogeneous mixture.

- Q35.** The picture given below shows a deformation which arises in young children due to deficiency of a food component in their diet.



- Identify the deformation shown above and give reason why is it named so?
 - Name the deficiency disease which leads to the above deformation that is most common in children of six months of age .
 - State two symptoms of these disease answered by you in (b) .
 - This deficiency disease is more prevalent among economically backward classes. Give reasons.
- Q36.** 'A' is a plant that grows on desert. 'B' is the part of this plant which moves very deep into the ground. 'C' is the modified plant part that prevents water loss.
- Name the category of plant 'A' on the basis of habitat.
 - State the part 'B'.
 - Write down one advantage of part 'C'.
 - Give two examples of plant 'A'
 - Find the water requirement of plant A
- Q37.** Explain the activity with a neatly labeled diagram to show that light propagates along a straight line path.

OR

With the help of suitable diagram, explain that the size of shadow formed depend upon the relative position of the source and the opaque object.
