



**ANANDALAYA**  
**ANNUAL EXAMINATION**  
**Class : VII**

Subject: Science  
Date : 09/03/2020

M.M: 80  
Time: 3 Hours

**General Instructions:**

1. The question paper comprises four sections A, B, C and D. Attempt all the sections.
2. This question paper consists of a total of 30 questions. All questions are compulsory.
3. All questions in Section A are objective type questions and carry one mark each.
4. All questions in Section B and Section C are short answer type questions and carry two and three marks respectively.
5. All questions in Section D are long answer type questions and carry five marks each.

**SECTION A**

1. A kink is seen near the bulb of a clinical thermometer because: (1)  
(a) it shows the presence of mercury.  
(b) it prevents mercury level from falling on its own.  
(c) it prevents mercury level from rising.  
(d) it is an air bubble trapped in that place.
2. The strength of an electromagnet increases when the magnitude of current flows through it \_\_\_\_\_. (1)  
(a) decreases                      (b) increases                      (c) zero                      (d) both (a) & (b)
3. Conventionally, the negative terminal is shown as a \_\_\_\_\_. (1)  
(a) long thin line.                      (b) short fat line.                      (c) long wavy line.                      (d) short wavy line.
4. Rupa's mother made a concentrated sugar syrup by dissolving sugar in hot water. On cooling, crystals of sugar got separated. This indicates a \_\_\_\_\_. (1)  
(a) physical change that can be reversed.  
(b) chemical change that can be reversed.  
(c) physical change that cannot be reversed.  
(d) chemical change that cannot be reversed.
5. Which of the following set of substances contain acids? (1)  
(a) Grapes, Milk  
(b) Vinegar, Soap  
(c) Curd, Soda bicarbonate solution  
(d) Tomato juice, Water
6. Selective breeding is the process of (1)  
(a) Selecting the offsprings with desired properties.  
(b) Selecting the parents with desired properties.  
(c) Selecting an area for breeding.  
(d) Selecting fine hair for good quality wool.
7. The characteristic of forests is that \_\_\_\_\_.  
(a) they grow                      (b) they undergo change  
(c) they regenerate                      (d) they grow, change and regenerate

8. The oxygenated blood is transported to all parts of the body through \_\_\_\_\_. (1)  
 (a) Aorta (b) Superior vena cava (c) Inferior vena cava (d) Pulmonary vein
9. The chest cavity is divided into thorax and abdomen by \_\_\_\_\_. (1)  
 (a) Trachea (b) Lungs (c) Ribs (d) Diaphragm
10. Answer question numbers 10(a) - 10(d) on the basis of your understanding of the following paragraph and the related concepts studied.
- A pendulum is a metallic ball or weight suspended from a pivot so that it can swing freely. When a pendulum is displaced sideways from its resting, mean position, it is subject to a restoring force due to gravity that will accelerate it back toward the mean or equilibrium position. When released, the restoring force acting on the pendulum's mass causes it to oscillate about the equilibrium position, swinging back and forth. The time for one complete cycle, a left swing and a right swing, is called the period. The period depends on the length of the pendulum and also to a slight degree on the amplitude, the width of the pendulum's swing.
- (a) A simple pendulum oscillates between two extreme positions. Is this motion uniform or non uniform? (1)  
 (b) A pendulum takes 25 seconds to complete 20 oscillations. Calculate time period of the pendulum. (1)  
 (c) Time period of the pendulum increases with increase in length of the pendulum. State True/False. (1)  
 (d) A metallic ball suspended by a long thread in a pendulum is called \_\_\_\_\_. (1)
11. Following are the steps involved in the preparation of crystals of copper sulphate :
- Continue adding copper sulphate powder till no more powder can be dissolved.
  - Large translucent copper sulphate crystals are formed.
  - Take a cupful of water in a beaker and add a few drops of dilute sulphuric acid. Heat the water.
  - Filter the solution. Allow it to cool.
  - When it starts boiling add copper sulphate powder slowly, while stirring continuously
- (a) Arrange the steps in correct sequence. (1)  
 (b) What is crystallization? (1)  
 (c) Crystallization is a \_\_\_\_\_ change. (1)
12. In order to understand the process of transpiration in plants, an outdoor activity was demonstrated to the students on a sunny day. A well watered plant was selected and one of its branches was covered with a translucent polythene bag. This set up was made airtight. After 15 minutes, the students were asked to observe the set up.
- (a) What could be their observation? (1)  
 (b) Which process is the basis for their observation? (1)  
 (c) Which are the structures in the leaf that is responsible for this process? (1)  
 (d) Why was the set up made air tight? (1)

#### SECTION B

13. (a) Define average speed. (2)  
 (b) A train runs with the speed 108 km/h and a running car can cover 25 m/s. Which one runs faster?
14. (a) What is a solenoid? (2)  
 (b) How is it different from a coil?

15. Compare the reactions to the use of litmus paper and phenolphthalein as an indicator for the given solutions. (2)  
(i) Lime juice and (ii) Milk of Magnesia
16. Suggest two better housekeeping practices that can be adopted to reduce waste generation. (2)
17. Name two processes that lead to soil formation. (2)
18. (a) Why is glucose drip given to patients in the hospitals? (2)  
(b) Name the carbohydrate that can be digested by ruminants but not by humans.

### SECTION C

19. (a) State two characteristics of a fuse. (3)  
(b) Why does a copper wire in a closed circuit not get hot, but a nichrome wire does?
20. Identify the given mirror and write one use of it. (3)  
(a) Mirror gives virtual, erect and small size image of an object.  
(b) Mirror gives virtual, erect and big size image of an object.  
(c) Mirror gives virtual, erect and same size image of an object.
21. What are the indications of the following chemical changes? (3)  
(a) Blowing air into limewater through your mouth.  
(b) Rusting of iron.  
(c) Putting iron nail in copper sulphate solution.
22. What is the occupational hazard for the workers in the wool industry? Give examples of two more occupational hazards. (3)
23. (a) Name the organ that produces Bile. (3)  
(b) Which component of the food does it help to digest?  
(c) Give the scientific terms for the following processes:  
(i) Intake of food. (ii) Breakdown of complex food molecules.
24. How will you prove that exhaled air contains carbon dioxide? Write the result, reaction and conclusion. (3)

### SECTION D

25. (a) You go to the market and buy a toy for your little brother. After coming home you remove the plastic packaging material in which the toy is wrapped, and throw it carelessly in a drain outside your home. (5)  
(i) What can be the result of your carelessness (two points)?  
(ii) What should you have done?  
(b) Mention two ways that can be used for sewage disposal if a proper sewage treatment plant is not available.

OR

One day Sachin had gone to his uncle who lives in a village. He saw there are a large number of people who defecate in open because proper toilet facilities are not there. He wondered about ground water contamination, as he studied in his class that this act may cause water-borne diseases. He convinced the village people to make toilets to avoid such an outbreak of water borne diseases.

- (a) Which water borne diseases may spread due to this? (Any two)  
(b) Which type of toilet Sachin may have suggested to the villagers? Explain its installation.

26. (a) Acids are either mineral or organic—what are the differences between the two? (5)  
(b) All acids contain hydrogen. What happens if you replace this hydrogen with a metal?  
Explain with an example.
27. (a) Name the phenomenon of light that is involved for the formation of image of an object by spherical lenses. (5)  
(b) Write any two points of difference between the following:  
(i) Real and virtual images and (ii) Converging and diverging lenses.  
OR  
(a) Describe an experiment to prove that white light composes of seven colours.  
(b) What is the band of colours called?
28. Explain the three different modes of transfer of heat by giving an example each. (5)
29. (a) Explain how Carbon dioxide and Oxygen cycle is balanced with a forest cover? (5)  
(b) What is the role of decomposers in a forest? Explain.  
OR  
(a) Write on three services that we get from forests.  
(b) Explain why there is no waste in a forest?
30. (a) Anu took a soil sample to study the rate of percolation of water in it. She observed that it took 15 minutes for 150 ml of water to percolate. Calculate the rate of percolation of water. (5)  
(b) Suggest two ways to prevent soil erosion.  
(c) Why is the use of Kulhar by Indian Railways reduced recently?  
(d) Define Soil Erosion.