

**O. P. JINDAL SCHOOL, SAVITRI NAGAR**  
**Half Yearly Examination– (2025-26)**

Class: VII  
 Subject : Science  
 Name \_\_\_\_\_

MM – 80  
 Time- 3 hours  
 Roll No. \_\_\_\_\_

*Fifteen minutes extra will be given for reading the Question Paper. General Instructions – All the questions are compulsory.*

1. The Question paper comprises of 6 sections A, B, C, D, E, F. There are 24 questions in all.
2. Section A, Q1 comprises of 12 MCQ type questions and carries 1 mark each.
3. Section B, Q2 to Q3comprises of 4 ,4 Case-Based type questions.
4. Section C, Q4 comprises of 2 Assertion-Reason type questions.
5. Section D, Q5 to Q12 are very short answer type questions, carries 2 marks each.
6. Section E, Q13 to Q21 are short answer type questions, carries 3 marks each.
7. Section F, Q22 to Q24 are long answer type questions, carries 5 marks each.

**SECTION A**

**Q1. Choose The Correct Option.**

- i. The small pores that are present on the leaves -  
 (a) Lamina      (b) Chlorophyll      (c) Stomata      (d) Guard cells
- ii. Bacteria found in the roots of legumes-  
 (a)Rhizobium      (b) Fungi      (c) Protozoa      (d)Lactobacillus
- iii. The process of utilization of food into simpler substances is called-  
 (a) Ingestion      (b) Digestion      (c) Absorption      (d) Assimilation
- iv. The partially chewed food in the ruminants stomach is called-  
 (a) Caecum      (b) Cud      (c) Glucose      (d) Oxygen
- v. Which of the following cloth is a good reflector of heat?  
 (a) Black colour      (b) Thick      (c) White colour      (d) Woolen
- vi. Mercury used in thermometers because-  
 (a) It is inexpensive      (b) It has a high boiling point  
 (c) It is visible and expands uniformly      (d) It is a solid at room temperature

vii. Which of the following is released in an ant bite-

(a) Baking soda      (b) Formic acid      (c) Vinegar      (d) Ammonium hydroxide

viii. The acid which is found in curd is-

(a) Citric acid      (b) Lactic acid      (c) Acetic acid      (d) Tartaric acid

ix. The time interval between one full moon and the next full moon is called-

(a) Year      (b) Month      (c) Day      (d) Week

x. The SI unit of speed is-

(a) s/m      (b) m/s      (c) ms      (d) m

xi. The process of breaking down glucose to release alcohol by yeast is called----- respiration.

(a) Assimilation      (b) Cellular      (c) Aerobic      (d) Anaerobic

xii. The respiratory organ in humans is-

(a) Lungs      (b) Kidney      (c) Heart      (d) Brain

## SECTION B

**Q.2 Read the passage and answer the given questions:**

A cell is the smallest structural and functional unit of an organism. Each cell of an organism performs certain functions such as nutrition, transport, excretion and reproduction. To perform these functions, the cell needs energy. During breathing, we breathe in air. Air contains oxygen. We breathe out air which is rich in carbon dioxide. The air we breathe in is transported to all parts of the body and ultimately to each cell. In the cells, oxygen in the air helps in the breakdown of food. The process of breakdown of food in the cell with the release of energy is called cellular respiration. Cellular respiration takes place in the cells of all organisms.

(i) Which is the smallest unit of all organisms?

(a) Nose      (b) Lungs      (c) Cell      (d) Ear

(ii) Cellular respiration takes place in

(a) cells      (b) soil      (c) Rocks      (d) Plants

(iii) \_\_\_\_\_ helps to breakdown food.

(a) Carbon dioxide      (b) Acids      (c) Oxygen      (d) Nitrogen

(iv) During exhalation we throw out air rich in-

- (a) Nitrogen
- (b) Carbon dioxide
- (c) Hydrogen
- (d) Oxygen

**Q.3** Read the following passage and answer the following questions.

Fig-1

Ria had a fever, so her mother used a clinical thermometer to check her body temperature. Before using it, she ensured the mercury level was below  $35^{\circ}\text{C}$ , then placed the bulb of the thermometer under Ria's tongue. After a minute, the reading showed  $38.5^{\circ}\text{C}$ . Concerned, Ria's mother washed the thermometer with antiseptic solution and advised her to rest.

Fig-2

During a cooking class, students noticed that the metal handle of a frying pan became hot while cooking. Their teacher explained that the heat from the stove traveled through the metal by conduction. She also pointed out that some pans have wooden or plastic handles to prevent burns.



Fig. 1



Fig - 2

(i) The mercury level of the thermometer before using should be below  
(a)  $35^{\circ}\text{C}$  (b)  $40^{\circ}\text{C}$  (c)  $45^{\circ}\text{C}$  (d)  $0^{\circ}\text{C}$

(ii) Which thermometer is used by Ria?  
(a) Laboratory (b) Clinical (c) Cannot be said (d) None of these

(iii) The handle of the frying pan in fig.2 is made of  
(a) Metal (b) Wood (c) Plastic (d) None

(iv) The process of transfer of heat in the shown fig.2 is  
(a) Conduction (b) Convection (c) radiation (d) Either (a) or (b)

### SECTION C

**Q4.** A statement of Assertion is given by the corresponding statement of Reason.

Choose the correct answer.

(i) **Assertion :** Switch is a safety device which helps to break or make a circuit.

**Reason :** The switch has a metal plate with low melting point.

- (a) Assertion and reason both are correct and reason is correct explanation for assertion.
- (b) Assertion and reason both are correct and reason is not correct explanation for assertion.
- (c) Assertion is correct but reason is a wrong statement.
- (d) Assertion is wrong but reason is a correct statement.

**(ii) Assertion :** Silver is widely used in electrical appliances.

**Reason :** It is a very good conductor of electricity.

- (a) Assertion and reason both are correct and reason is correct explanation for assertion.
- (b) Assertion and reason both are correct and reason is not correct explanation for assertion.
- (c) Assertion is correct but reason is a wrong statement.
- (d) Assertion is wrong but reason is a correct statement.

### SECTION -D

**Q5. Name the following:**

- (i) A relationship between two organisms for their mutual benefit.
- (ii) The green pigments that help in photosynthesis.

**Q6. Write two differences between autotrophs and heterotrophs.**

**OR**

How do the nutrients of the soil get replenished?

**Q7. What is alimentary canal? Name the longest tube in the alimentary canal.**

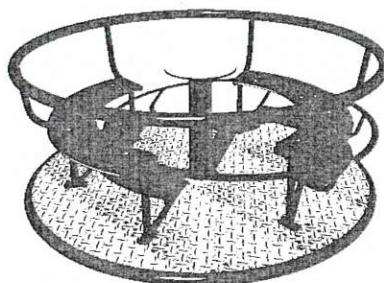
**Q8. Explain why?**

- (i) Calamine lotion is applied in case of ant bite.
- (ii) Organic matter is added to treat basic soil.

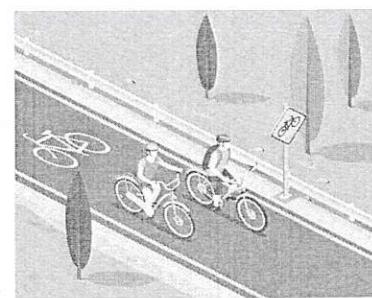
**Q9. Show the shape of the distance-time graph for the motion in the following cases:**

- (i) A car moving with a variable speed.
- (ii) A car parked on a side road

**Q10. Classify the following as motion along a straight line, circular or oscillatory motion:**



(i)



(ii)

**Q.11** What do you mean by an electric circuit? Draw the symbols of the following.

- (i) Cell
- (ii) Switch open

**Q.12** What is an electromagnet? Mention any two uses of it.

**OR**

Why are fuses used in electric circuits? What is the characteristic of fuse wire?

## SECTION E

**Q.13** Mention any three disadvantages of heating effect of electric current.

**OR**

Draw and label an electric bulb? Name any two electric devices where the heating effect of current is used.

**Q.14** Rahul moves from his house to his friend's house in a bike with a speed of 20 km/h. If the distance covered by Rahul is 40 km then find the time taken by him to cover the distance.

**Q.15** Sachin attended a zumba class for 2 hours and did a lot of physical exercises. After doing so she got muscle cramp. What might be the reason? What can be done to get relief from muscle cramp?

**OR**

Draw and label the human respiratory organ.

**Q.16** Write any three differences between acids and bases.

**Q.17** Discuss why wearing more layers of clothing during winter keeps us warmer than wearing just one thick piece of clothing.

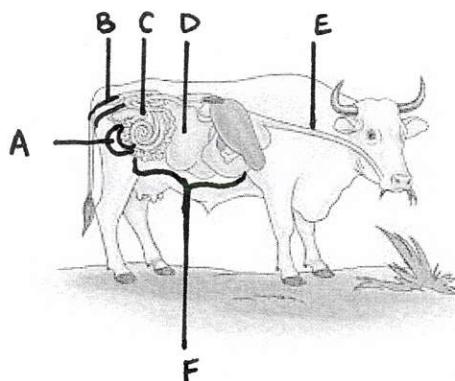
**Q.18** Write any three precautions that need to be observed while reading a laboratory thermometer?

**Q.19** Draw and label the human digestive system. Name the associated glands that help in digestion.

**Q.20** Can we survive only on raw, leafy vegetables/grass? Discuss.

**OR**

Identify A, B, C, D, E, F in the following diagram shown.



**Q.21** Explain how pitcher plants get their food?

## SECTION F

**Q.22** (i) What is neutralization reaction? Give one example of it and write the chemical equation for it.

(ii) Name any three natural indicators. Mention their colours in acids and bases.

**OR**

(i) Name any three natural acids and their sources.

(ii) Mohit has three soft drinks in his shop. One is acidic, one is basic and one neutral drink. But those are not labeled. Explain how can he identify the nature of the drinks with only turmeric indicator.

**Q.23.** Describe how different organisms exchange gases.

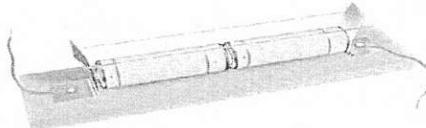
- (i) Human being
- (ii) Insects
- (iii) Fish
- (iv) Frog
- (v) Earthworm

**OR**

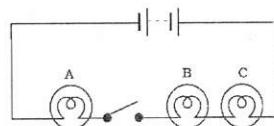
A food stall owner was preparing dough for making bhaturas. He added a pinch of yeast and sugar to the dough and left it in a warm place. After few hours, the dough had risen. There was a sour smell too.

- (i) Why did the dough rise?
- (ii) Why did the dough smell sour?
- (iii) Why was sugar added to the dough?
- (iv) What would have happened if the dough was kept in the refrigerator, soon after it was prepared? Give reason.

**Q24.** (i) Zubeda made an electric circuit using a cell holder shown in fig. a switch and a bulb. When she put the switch in the 'ON' position, the bulb did not glow. Help Zubeda to identify any four possible defects in the circuit.



- (ii) What will be the order in which the bulbs A, B and C will glow when the switch is moved to the 'ON' position in the following fig.?



**OR**

Explain the working of an electric bell with the help of well labelled diagram.

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