

**SAMPLE PAPER
CLASS VII
SCIENCE**

Time: 3 hours

Max. Marks: 80

General Instructions:

- (i) The question paper comprises of two sections, A and B. You are to attempt both the sections.
 - (ii) All questions are compulsory.
 - (iii) Question numbers 1 and 2 in Section A are one mark questions. They are to be answered in one word or in one sentence.
 - (iv) Question numbers 3 to 5 in Section A are two marks questions. These are to be answered in 30 words each.
 - (v) Question numbers 6 to 15 in Section A are three marks questions. These are to be answered in about 50 words each.
 - (vi) Question numbers 16 to 21 in Section A are five marks questions. These are to be answered in 70 words each.
 - (vii) There is an internal choice in three questions of five marks each.
 - (viii) Question numbers 22 to 27 in Section B are activity based questions. Each question is a two marks question. These are to be answered in brief.
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SECTION A

- 1. Which part of the plant takes part in sexual reproduction? (1)
- 2. Name the natural source of litmus indicator? (1)
- 3. (a) Define rusting. (2)
(b) Write the word equation of the process of rusting.
- 4. What makes an ant sting acidic? How it can be treated? (2)
- 5. A flat in Mumbai with a balcony facing the sea has some clothes hung on a cloth line in the balcony. (2)
(a) To which direction the clothes will be blown in afternoon- towards the sea or away from the sea?
(b) Give a reason to support your answer.
- 6. (a) Why are ventilators made close to the ceilings? (1+2=3)
(b) Write any two examples to prove that air exerts pressure?
- 7. Which property of a conducting wire is utilised in making electric fuse? Explain how does a fuse prevent accidental fire? (3)

8. (a) Name the process and the organ which helps in removing the following waste from the body. (1+2=3)
i. Carbon dioxide
ii. Urine
(b) Why is it necessary to excrete waste products?
9. Give reasons for the following: (3)
(a) Convex lens is used as magnifying glass.
(b) Soap bubble appears colourful.
(c) Headlights of cars and scooters are concave in shape.
10. (a) Mention the mode of seed dispersal in (1+2=3)
i. Castor
ii. Balsam
(b) Mention any two benefits of seed dispersal for plants.
11. Mention any three differences between breathing and respiration. (3)
12. Explain the various steps that lead to the formation of a cyclone. (3)
13. Differentiate the following on the basis of their function. (Write one difference) (3)
(a) Artery and vein
(b) red blood cells and platelets
(c) atrium and ventricle
14. (a) Explain why we feel hungry after doing physical activities. (2+1=3)
(b) Why do we often sneeze when we inhale a lot of dust- laden air?
15. (a) Which vascular tissues help in the transport of water, minerals and food in plants? (1+2=3)
(b) How transpiration is useful for plants? (Write any two points)
16. (a) Draw schematic diagram showing circulation of blood in humans and label the following parts: (4+1=5)
i. Pulmonary artery
ii. Pulmonary vein
iii. Lungs
iv. Capillaries
(b) State any one important function of blood.
17. (a) Explain how rain water turns acidic. (2+2+1=5)
(b) Write the chemical name of the following
i. Acid present in each cell of our body
ii. Substance used to cure acidity

- iii. Acid responsible for sourness of curd.
- iv. Substance used to neutralize acidic soil

(c) Mention the change in colour observed when china rose indicator is added to a soap solution. What does it indicate about the nature of soap solution?

- 18.** (a) Draw a ray diagram to show the path of light through concave lens. (2+2+1=5)
(b) What will be the nature and the size of the image when the object is placed
- i. very close to a concave mirror
 - ii. far away from a convex mirror
- (c) Give one use of concave mirror.

- 19.** (a) write the word equation involved in the following (3+2=5)
(i) breakdown of glucose in the presence of oxygen.
(ii) breakdown of glucose in the muscle cell.
(b) Explain how the movement of ribs and diaphragm occurs during breathing. (4+1=5)

OR

- (a) Explain how the exchange of gases takes place in the following
(i) cockroach
(ii) earthworm
(b) What would happen if a plant is overwatered?

- 20.** (a) Define the term 'Fertilisation'. State any two changes that occur in flower after fertilisation. (3+2=5)
(b) Name the form of asexual reproduction that occurs in the following
- i. Yeast
 - ii. Spirogyra
 - iii. Turmeric
 - iv. Mosses

OR

- (a) Define the term 'Pollination'. Write two differences between self-pollination and cross-pollination.
(b) Write the significance of following features in a pollen grain:
- i. Presence of protective coat
 - ii. Light weight

- 21.** (a) What do you mean by 'overloading' and 'short circuit' in an electric circuit? (2+2+1=5)
(b) State the factors which affect the amount of heat produced in a current carrying wire.
(c) Name any two electrical devices which work on heating effect of electric current.

OR

- (a) Draw a diagram to show the circuit of an electric bell and label the following parts: (4+1=5)
- i. Gong
 - ii. Hammer
 - iii. Electro magnet
 - iv. Contact screw
- (b) Write the function of gong in the electric bell.

SECTION B

22. Rahul observed his image in a plane mirror standing 2 m away from the mirror. He moved 1 m towards the mirror to observe his image closely. (2)
- (a) What is the distance between Rahul and his image after he moves closer?
- (b) Write any two characteristics of the image seen by the Rahul in the plane mirror.
23. Priya wound a long insulated piece of wire around an iron nail in the form of a coil. Free ends of the wire were connected to a cell through a switch. The current is switched on and some pins were placed near the ends of the nail. (2)
- (a) What would Priya observe when current is switched on?
- (b) Would there be any change in the observation if iron nail is replaced by a plastic stick? Justify your answer.
24. Rohit came back home from school by walking. He took rest for an hour. He then went to park to play cricket. (2)
- (a) In which situation Rohit's pulse rate will be the fastest and slowest respectively?
- (b) How can Rohit determine his pulse rate?
25. Shalini took a piece of bread and left it in one corner of her kitchen for three days. She observed fluffy white and green patches on the bread. (2)
- (a) Name the group of microorganisms responsible for these fluffy patches on the bread.
- (b) State two conditions that favour the growth of these microorganisms.
26. Ajay mixed hydrochloric acid with lime water in a test tube while conducting an experiment. (2)
- (a) What are the products formed in the above reaction?
- (b) What change will he observe in the temperature of the reaction?
27. Richa added lemon juice to the test tube containing baking soda while conducting an experiment and observed that some bubbles were formed in the test tube. (2)
- (a) why some bubbles were formed after the addition of lemon juice to the test tube containing baking soda?
- (b) state the nature of change involved in the above reaction.