

Name: Siyqa  
Class: VII F  
Subject: Science (086)  
Date: 24/02/2024  
Invigilator's Sign.: [Signature]  
Time allowed: 2 Hours 30 Minutes  
Maximum Marks: 60



SET A  
SUBJECT CODE: 086

**General Instructions:**

- i. This question paper consists of 30 questions in 5 sections.
- ii. All questions are compulsory.
- iii. Section A consists of 16 objective type questions carrying 1 mark each.
- iv. Section B consists of 4 Very Short Answer type questions carrying 2 marks each. Answers to these questions should be in the range of 30 to 50 words.
- v. Section C consists of 6 Short Answer type questions carrying 3 marks each. Answers to these questions should be in the range of 50 to 80 words.
- vi. Section D consists of 2 Long Answer type questions carrying 5 marks each. Answer to these questions should be in the range of 80 to 120 words.
- vii. Section E consists of 2 case-based unit of assessment of 4 marks each with sub-parts.

**SECTION A (Objective Type Questions)**

Select and write one most appropriate option out of the four options given for each of the questions 1-16

- Q1. Which structure is responsible for transportation of water in plants? (1)  
a) xylem (b) phloem (c) stomata (d) guard cells
- Q2. The procedure of cleaning the blood of a person by using an artificial machine is known as: (1)  
a) hydrolysis (b) dialysis (c) ketolysis (d) photolysis
- Q3. Which of the following is a chemical change? (1)  
(a) stretching of rubber band (b) melting of ice  
(c) cooking a pot of rice (d) bursting a balloon
- Q4. What happens during the first process in wastewater treatment? (1)  
(a) large particles are removed using a filter (b) water is sterilized  
(c) water is aerated (d) microorganisms are added to the water
- Q5. Which of the following is not a reason for deforestation? (1)  
(a) urbanization (b) mining (c) afforestation (d) expansion of houses
- Q6. The blood vessel which carries deoxygenated blood from heart to lungs is: (1)  
(a) main artery (b) pulmonary artery (c) main vein (d) pulmonary vein
- Q7. Nichrome wire is used in: (1)  
(a) CFL (b) electric fuse (c) MCB (d) hair dryer

Q8. The sound produced in a door bell is due to: (1)  
(a) chemical effect of current (b) heating effect of current  
(c) magnetic effect of current (d) cooling effect of current

Q9. *Bryophyllum* can reproduce by its: (1)  
(a) Stem (b) root (c) leaves (d) flowers

Q10. Mature Ovary forms the: (1)  
(a) Seed (b) pistil (c) fruit (d) stamen

Q11. The reflection of light occurs when: (1)  
(a) light passes through a medium (b) light is absorbed by the surface  
(c) light bounces back from a surface (d) light refracts at a surface

Q12. The image formed by a plane mirror is: (1)  
(a) Real and inverted (b) virtual and upright (c) virtual and inverted (d) real and upright

**Question numbers 13 to 16 are Assertion- Reasoning based questions.**

**These consist of two statements- Assertion (A) and Reason (R). Answer these questions selecting the appropriate options given below:**

- a) Both A and R is true and R is the correct explanation of A.
- b) Both A and R is true and R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true.

Q13. Assertion (A): We should not consume contaminated water. (1)  
Reason (R): Dirty water contains toxic chemicals and germs that can cause diseases.

Q14. Assertion (A): A bisexual flowers have either the male or the female reproductive parts. (1)  
Reason (R): Male gametes are found inside the pollen grains and female gametes are found inside the ovule.

Q15. Assertion(A): The heating effect can be used to produce light in electric bulbs. (1)  
Reason (R): When electric current passes through a filament, the filament heats up and emits light.

Q16. Assertion (A): Formation of rust is a chemical change. (1)  
Reason (R): For formation of rust, iron must be exposed to air only.

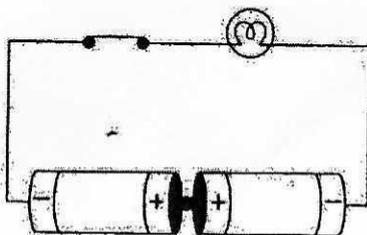
**Section B (Very Short Answer Type Questions)**

Q17. Explain the transportation of nutrients in (i) Plants (ii) Humans . (2)

Q18. Draw a well labelled diagram of female part of flower. (2)

Q19. Imagine you are designing a community-based project to reduce the impact of floods and droughts. How would you incorporate the role of forests in your project? (2)

Q20. The bulb in the circuit shown below does not glow. Identify the problem and make necessary changes in the circuit to make the bulb glow. (2)



### SECTION C (Short Answer Type Questions)

Q21. Answer the following questions:

- (a) How does untreated wastewater affect our health and environment? (2)  
 (b) Name two organic impurities present in sewage. (1)

Q22. Explain the process of fertilisation in flower along with the diagram. (3)

Q23. You are creating a circuit that needs to be protected from excess current. Name the device which you will incorporate to protect it from excess current? On what principle does that device work and how will it safeguard the circuit? (3)

Q24. Mention three differences between concave lens and convex lens? (3)

Q25. Differentiate between arteries and veins based on their structure and function. Also, state the function of capillaries. (3)

Q26. Forests are known as “lungs of the Earth”. Justify the statement. Also, mention another importance of forests to living organisms. (3)

### SECTION D (Long Answer Type Questions)

Q27. Answer the following:

- (a) Explain any three methods of seed dispersal. (3)  
 (b) What is meant by reproduction in plants? Name the two modes of reproduction in plants. (2)

Q28. Explain the process of wastewater treatment in waste water treatment plant in detail? (5)

### SECTION E (Case Study Based Question)

Q29. During a science experiment, Arjun observed that when an iron nail was wrapped with a coil of insulated wire and connected to a battery, it attracts small pins. He observed the phenomena very carefully and noticed that iron nail becomes a temporary magnet.

- (a) What is the phenomenon Arjun observed? Explain how an iron nail becomes a temporary magnet in this experiment. (2)  
 (b) Name two factors that can increase the strength of this temporary magnet. (2)

Q30. Children were playing in the Sun. All of a sudden weather changed. It started raining heavily. After a rainstorm, again the sun started shining. Children observed a beautiful rainbow in the sky. They noticed that the rainbow appears to have different colors arranged in a specific order.

- (a) How is a rainbow formed? Explain the process. (2)

