

**ARMY PUBLIC SCHOOL SHILLONG**  
**ANNUAL EXAMINATION (2022-23)**  
**CLASS: VII**  
**SUBJECT: SCIENCE**

**Time:  $2\frac{1}{2}$  hours**

**Maximum Marks: 80**

**General Instructions:**

- i) The question paper comprises of six sections A, B, C, D, E, and F. There are 39 questions in the question paper. **All questions are compulsory.**
- ii) **Section A** – Question no. 1 to 20 are of one mark each. These questions contain multiple choice questions (MCQs, fill in the blank) and one word answer type questions and True/False.
- iii) **Section B** – Question no.21 to 26 are short answer type questions, carrying 2 marks of each. Answer to these questions should be in the range of 30 to 50 words.
- iv) **Section C** – question no. 27 to 32 are short answer type questions, carrying 3 marks of each. Answer to these questions should be in the range of 50 to 80 words.
- iii) **Section D** – Question no. 33 to 35 are long answer type questions, carrying 4 marks each. Answer to these questions should be in the range of 80 to 100 words.
- iv) **Section E** - Question no. 36 and 37 are competency case-based questions/sources based integrated questions carrying 4 marks each.
- iv) **Section F** – Question no. 38 and 39 are long answer type questions, carrying 5 marks of each. Answer to these questions should be in the range of 80 to 120 words.

**SECTION A**

**Select and write the one most appropriate option out of the four options.**

- Q1. The general process that takes place at a sheep shearing shed is 1
- (a) removal of fleece
  - (b) separating hair of different textures
  - (c) washing of sheep fibre to remove grease
  - (d) rolling of sheep fibre into yarn
- Q2. The basic unit of speed is: 1
- (a) km/min
  - (b) m/min
  - (c) km/h
  - (d) m/s
- Q3. Water cycle does not involve which of the following? 1
- (a) Evaporation
  - (b) Condensation
  - (c) Formation of clouds
  - (d) Rainwater harvesting
- Q4. Identify “A” from the diagram given below 1



- (a) spiracles
- (b) tracheae
- (c) lungs
- (d) gills

- Q5. Which of the following is not prepared from the wood obtained from forest? 1
- (a) Paper
  - (b) Thermocol
  - (c) Matchsticks
  - (d) Plywood

**Fill in the blanks with the correct answer:**

- Q6. The motion of our hands while running is \_\_\_\_\_ motion. 1
- Q7. The reaction between an acid and a base is known as \_\_\_\_\_ reaction. 1
- Q8. The fusion of male and female gamete is known as \_\_\_\_\_. 1
- Q9. \_\_\_\_\_ mirror is used by dentist to see an enlarged image of the teeth. 1
- Q10. \_\_\_\_\_ carry oxygen-rich blood from the heart to all parts of the body. 1

**Write the following in one word.**

- Q11. A water-borne disease. 1
- Q12. Motion of a simple pendulum. 1
- Q13. Mehak observed that a pond with clear water was covered up with a green algae within a week. By which method of reproduction did the algae spread so rapidly? 1
- Q14. An anaerobic organism. 1
- Q15. The image that cannot be formed on the screen. 1

**Write True or False**

- Q16. Fishes use gills for respiration. 1
- Q17. Real images are formed only by convex mirrors. 1
- Q18. Speedometer is used to measure the distance moved by the vehicles. 1
- Q19. The activated sludge is about 97% water. 1
- Q20. Potato reproduces from seeds. 1

**SECTION B**

**Answer the following questions.**

- Q21. Classify the following processes into physical or chemical changes. 2
- (a) Beating of aluminium metal to make aluminium foil.
  - (b) Digestion of food.
  - (c) Cutting of a log of wood into pieces.
  - (d) Burning of crackers.
- Q22. A bus travels 54 km in 90 min. Calculate the speed of the bus. 2
- Q23. Differentiate between aerobic and anaerobic respiration. 2
- Q24. On a field trip, the students collected flowers of different plants like papaya, rose, cucumber, mustard, lady's finger, Petunia, cucumber, corn, pea, etc. 2
- (a) Name any three plants which have unisexual flowers?
  - (b) Name any three plants that have bisexual flower?
- Q25. Name the tissues of a plant which carries: 2
- (a) water and minerals from roots to the leaves.
  - (b) food from the leaves to the other parts of the plant.

- Q26. The various steps involved in processing of fibre into wool are given below. 2  
(a) Dyeing (b) Rolling (c) Sorting (d) Scouring (e) Shearing  
(f) Cleaning of burrs.  
Write the above steps in the correct sequence in which they are carried out.

### SECTION C

**Answer the following questions.**

- Q27. State three characteristics of a plane mirror. 3  
Q28. Define the following: (a) Rearing (b) Shearing (c) Sericulture 3  
Q29. Draw symbols to represent: (a) Connecting wires (b) Bulb (c) Cell (d) Switch in on 3  
position (e) Battery.  
Q30. Paheli observed that most of the fish in the pond of her village were gradually 3  
dying. She also observed that the wastes of a factory in their village are flowing  
into the pond which probably caused the fish to die.  
(a) Explain why the fish were dying?  
(b) If the factory waste is acidic in nature, how can it be neutralised?  
Q31. What is an electric fuse? Distinguish between an open and a closed circuit. 3  
Q32. There are three animals named A, B and C. Among them A can stay on land as well 3  
as in water. When it stays at land it respire through lungs but when it goes into  
water, it respire through its moist skin. Animal B has specific organs to respire in  
the water which is not found in any other water animal. While animal C is a water  
animal which respire through nostrils and lungs. Identify the animals A, B and C.

### SECTION D

**Answer the following questions.**

- Q33. Acids taste sour and bases are bitter in taste. Acetic acid, formic acid, citric acid, 4  
lactic acid, tartaric acid, Calcium hydroxide, ammonium hydroxide and sodium  
hydroxide are found in different substances. Name the substance in which we can  
find:  
(a) Acetic Acid (b) Lactic acid  
(c) Calcium hydroxide (d) Sodium Hydroxide.  
Q34. (a) Sketch the reproductive parts of a flower. 4  
(b) Differentiate between asexual and sexual reproduction.  
Q35. If you leave a piece of iron in the open for a few days, it acquires a film of brownish 4  
substance called rust.  
(a) What are the conditions essential for formation of rust?  
(b) How can we prevent rusting of iron?

### SECTION E (CASE STUDY BASED QUESTIONS)

- Q36. **Read the following and answer the questions.**

**Boojho and his friends along with their teachers went to a forest for a field trip. On the way they saw trees, herbs, flowers, insects, etc. Boojho saw a deer crossing the stream of water which disappeared into the bushes. The teacher**

**informed Boojho that dense bushes and the tall grass provide animals with the food and shelter. They also protect them from carnivores that live in the forest. Tibu then started looking closely at the forest floor. Soon he called and showed the children droppings of some animals. The teacher explained the difference between various types of droppings. They informed them that the forest officers could recognize the presence of some animals in the forest by their droppings and footprints. Boojho called every one and showed them a large, decaying heap of animal dropping. Several beetles and grubs were feeding on the heap and a bunch of seedlings was sprouting. “These seedlings are of the herbs and shrubs the animals also disperse the seeds of certain plants and help the forest to grow and regenerate. The decaying animal dung also provides nutrients to the seedlings to grow. The wide variety of animals helps the forest to regenerate and grow. Decomposers help in maintaining the supply of nutrients to the growing plants in the forest. Therefore, the forest is a ‘dynamic living entity’ — full of life and vitality.”**

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|----|---|---|
| a. | What does the forest provide to humans?       | 1 |
| b. | Explain why there is no waste in forests?     | 1 |
| c. | Who helps the forests to regenerate and grow? | 1 |
| d. | What will happen if the forests disappear?    | 1 |

**Q37. Read the following and answer the questions.**

**All of us use water in our homes and make it dirty. Rich in lather, mixed with oil, black–brown water that goes down the drains from sinks, showers, toilets, laundries is dirty. It is called wastewater. This used water should not be wasted. We must clean it up by removing pollutants. Clean water that is fit for use is unfortunately not available to all. It has been reported that more than one billion of people have no access to safe drinking water. This accounts for a large number of water-related diseases and even deaths. People even children walk for several kilometres to collect clean water. The increasing scarcity of freshwater is due to population growth, pollution, industrial development, mismanagement and other factors.**

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|----|--|---|
| a. | What causes water related diseases?                    | 1 |
| b. | Name two chemicals used to disinfect water.            | 1 |
| c. | What are the sources of waste water?                   | 1 |
| d. | Why should oils and fats be not released in the drain? | 1 |

## **SECTION F**

**Answer the following questions.**

- |      |   |   |
|------|---|---|
| Q38. | With the help of a schematic diagram describe the function of heart                       | 5 |
| Q39. | What will be the effect of water scarcity on plants? What role can we play to save water? | 5 |