



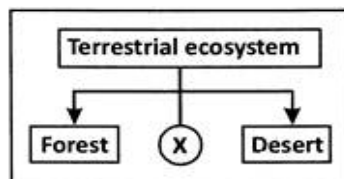
General Instructions:

- I. This question paper consists of 39 questions in 5 sections.
- II. All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
- III. **Section-A** consists of 20 objective type questions carrying 1 mark each.
- IV. **Section-B** consists of 6 very short questions carrying 02 marks each. Answers to these questions should be in the range of 30-50 words.
- V. **Section-C** consists of 7 short answer type questions carrying 03 marks each. Answer to these questions should be in the range of 50-80 words.
- VI. **Section-D** consists of 3 long answer type questions carrying 05 marks each. Answer to these questions should be in the range of 80-120 words.
- VII. **Section E** consists of 3 source-based/case-based units of assessment of 04 marks each with sub-parts.

SECTION-A

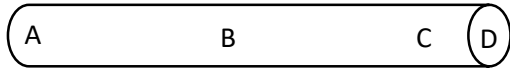
Select and write one most appropriate option out of the four options given for each of the questions 1-20

1. Which of the following represents the correct order of abundance of various gases in air? (1)
(a) Nitrogen>Oxygen>Carbon dioxide (b) Nitrogen>Carbon dioxide>Oxygen
(c) Oxygen>Nitrogen>Carbon dioxide (d) Carbon dioxide>Nitrogen>Oxygen
2. The exchange of gases in plants mainly takes place through: (1)
(a) leaves (b) roots (c) shoots (d) flowers
3. Which of the following is represented by 'X' in the figure given below? (1)



- (a) Ocean (b) Pond (c) River (d) Grass land
4. The most convenient unit for measuring the thickness of a coin is: (1)
(a) centimetre (b) kilometre (c) metre (d) millimetre
5. When an opaque object comes in the way of light, it makes (1)
(a) image (b) object (c) shadow (d) screen
6. Rishi is running short of connecting wires. To complete an electric circuit, he may use a (1)
(a) glass bangle (b) thick thread (c) rubber pipe (d) iron nail
7. The points on a cell where wires are attached are called: (1)
(a) Battery (b) Switch (c) Filaments (d) Terminals
8. What will happen when the two magnets shown below are brought close towards each other? (1)
→ [N | S] [S | N] ←
(a) They will heat up (b) They will attract each other
(c) They will repel each other (d) Nothing will happen
9. The balance of oxygen and carbon dioxide in the atmosphere is maintained by: (1)
(a) plants (b) animals (c) water (d) both a and b

10. Which part of the following rod magnet has the weakest attraction? (1)



- (a) A (b) B (c) C (d) D

11. The two gases that taken together, make up about 99 percent of air are: (1)

A. Nitrogen B. Carbon dioxide C. Oxygen

- (a) A and B (b) A and C (c) A and B (d) B and C

12. Given below are some methods of separation. (1)

X -Winnowing
Y-Threshing
Z-Sieving

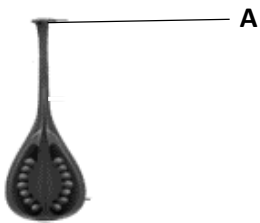
Which of the following methods of separation require air for the separation?

- (a) Only X (b) Only Y and Z (c) Only Z and X (d) X,Y and Z

13. After washing rice and pulses, the water is separated from them by the process of: (1)

- (a) filtration (b) decantation (c) distillation (d) evaporation

14. Observe the given diagram and identify part A. (1)



- (a) stigma (b) style (c) filament (d) ovary

15. The types of plants that have thick, hard, and woody stem are: (1)

- (a) tree (b) shrubs (c) herbs (d) all of these

16. The term used to describe the envelope of air surrounding the earth: (1)

- (a) Biosphere (b) Atmosphere (c) Eco System (d) Environment

Q.no 17-20 Consist of two Statements-Assertion(A) and Reason(R). Answer these questions selecting the appropriate option given below:

- a) Both A and R true and R is the correct explanation of A
b) Both A and R are 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.

17. **Assertion:** The burning of fuel produces smoke. (1)

Reason: Smoke contains gases with suspended dust particles and is often harmful.

18. **Assertion:** A deer has strong teeth for chewing hard plant stems. (1)

Reason: The speed of the deer helps them run away from the predators.

19. **Assertion:** Desert plants lose very little water through transpiration. (1)

Reason: The leaves in desert plants are either absent, very small, or in the form of spines.

20. **Assertion:** A compass is a magnetic device that is used by sailors to find directions. (1)

Reason: The sailors can find directions by use of dial of magnetic compass even if there is no magnetic needle.

SECTION - B

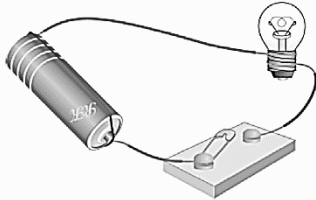
Q.no.21 to 26 are very short answer questions.

21. Is it possible to know the type of root of a plant without pulling it out of the soil? Justify your answer. (2)

OR

List any two functions of roots

22. Will the bulb glow in the circuit shown below? Explain. (2)



23. How does oxygen become available to animals living in soil and water? (2)

24. Sheela, Saima, and Ravi have to dissolve the maximum amount of sugar in the same amount of milk so as to win a game. Ravi took hot, boiling milk, while Saima took ice-cold milk. Sheela managed to get milk at room temperature. Who do you think would win the game and why? (2)

25. Using the “conduction tester” on an object it was found that the bulb begins to glow. Is that object a conductor or an insulator? Explain. (2)

OR

Why do electricians wear rubber gloves while working with electricity?

26. How is a camel adapted to survive in a desert? (two points) (2)

SECTION - C

Q.no.27 to 33 are short answer questions.

27. Mention one adaptation present in the following animals: (3)

(a) In frogs to enable them to swim.

(b) In dolphins and whales to enable them to breathe in air when they swim near the surface of water.

(c) In snow leopards to enable them to walk on snow mountain.

28. (a) What is an electric circuit? (3)

(b) Define the two types of electric circuits.

29. (a) Define the term sedimentation. (3)

(b) Which method will you prefer to use to separate a solid dissolved in a liquid?

(c) What is a saturated solution?

OR

With the help of examples, explain why we need to separate different components of a mixture.

30. What is the difference between a conductor and an insulator? Give two examples of conductors and two of insulators. (3)

31. Write three methods by which a magnet can be demagnetised. (3)

32. Observe the given figure and attempt the questions that follow it. (3)

(a) Name the process demonstrated in the activity?

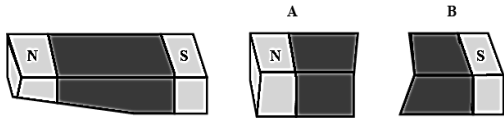
(b) When will this activity show better results – on a bright sunny day or a cloudy day?

(c) What will you observe in the polythene bag after a few hours of setting up the experiment?



33. (a) A bar magnet is cut into two pieces, A and B, from the middle, as shown in the given figure.

(3)



Will the two pieces act as individual magnets? Write the poles of these two pieces.

(b) Write two properties of magnets.

SECTION - D

Q.no.34 to 36 are long answer questions.

34. (a) What is a stimulus?

(5)

(b) "All living things respond to external stimuli". Justify your answer with two examples.

(c) Do plants show response to stimulus? Name one plant that shows response to stimuli.

OR

(a) What is a habitat?

(b) Name two biotic and abiotic components of a habitat.

(c) How is cactus adapted to survive in a desert? (write two points)

(5)

35. (a) The height of a person is 1.72 m. Express it in cm and mm.

(b) Explain why, hand-span cannot be used as a standard unit of length.

(c) What is meant by Standard unit of measurement?

OR

(a) When is an object said to be in motion? Explain with the help of an example.

(b) What is meant by (a) circular motion, and (b) rotational motion? Give one example of each.

36. (a) Why we cannot see our image in the mirror in complete dark room?

(5)

(b) What is the difference between luminous and non-luminous objects?

(c) Classify the following as luminous and non-luminous objects:

Sun, moon, torch, stars

SECTION - E

Q.no.37 to 39 are case-based/data-based questions with 2 to 3 short sub parts. Internal choice is provided in one of these sub-parts.

37. Ramu dipped a bar magnet in a heap of iron filings and pulled it out. He found that iron filings got stuck to the magnet, as shown in the figure.

(4)



(a) Which regions of the magnet have more iron filings sticking to them?

(b) What are these regions called?

(c) Differentiate between magnetic and non-magnetic materials.

OR

(c) Classify the following things into magnetic and non-magnetic materials:

Iron, paper, cobalt, plastic

38. Mira's mother is stitching a frock with the help of a sewing machine for her. Mira observes that the sewing machine remains at the same location while its wheel rotates and the needle moves up and down. (4)

- (a) What type of motion does the needle undergo?
- (b) The wheel moves with a particular motion. Name it.
- (c) State one similarity and one difference between the motion of a bicycle moving on a straight road and a ceiling fan that has been switched on.

OR

(c) Classify the following as rectilinear, circular, periodic, or rotational motion:

- I. The motion of the earth around the sun.
- II. The spinning of the earth on its axis.
- III. The pendulum of the clock
- IV. A cyclist moving on a straight road.

39. A man is sitting on a chair in a dark room near one of the walls. A big mirror is hung on the wall facing the man. When a torch light is put on the man from a distance, then we can see X of the man on the wall behind him. At the same time, Y of the man can be observed in the mirror on the wall. (4)

- a) What is X?
- b) What is Y?
- c) State one way in which X differs from Y.

OR

c) State two characteristics of X.