

## Living Organisms And Their Surroundings

### 1-Exercise

#### Multiple Choice Questions

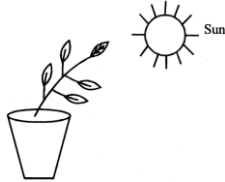
1. Select the characteristics that a plant adapt to survive in desert
  - (a) its leaves are modified into spines
  - (b) its stem is covered with thick waxy layer
  - (c) its root penetrate deep into the ground
  - (d) All of the above
2. The adaptations observed in animals living in mountain habitat are/is
  - (a) they have thick skin and fur
  - (b) they have scales on their bodies
  - (c) Both the above
  - (d) None of the above
3. Which of the following is not a long term adaptation?
  - (a) Feathers in a bird
  - (b) Tanning of skin
  - (c) Prehensile tail
  - (d) Streamlined body
4. Polar bear lives at
  - (a) north pole only
  - (b) south pole only
  - (c) both north pole and south pole
  - (d) both at north pole, south pole and also some forests
5. Select a process in which there is no increase in amount of carbon dioxide in air
  - (a) Breathing
  - (b) Respiration
  - (c) Photosynthesis
  - (d) Decay of vegetation
6. Which of the following is/are terrestrial habitats?
  - (a) Forests
  - (b) Grasslands
  - (c) Desert
  - (d) All of these
7. Which of the following are/is biotic components of a habitat?
  - (a) Lion
  - (b) Tiger
  - (c) Plants
  - (d) All of these
8. From amongst the following, select the a biotic components
  - (i) Air
  - (ii) Water
  - (iii) Heat
  - (iv) Sunlight
  - (a) (i) and (ii) only
  - (b) (ii) and (iii) only
  - (c) (iii) and (iv) only
  - (d) All of these
9. Germination means
  - (a) the beginning of growth of a seed after a period of dormancy
  - (b) the beginning of a new plant from a seed
  - (c) Both the above
  - (d) None of the above
10. The long legs of a camel
  - (a) help it to move fast
  - (b) help it to keep its body away from heat of sand
  - (c) help it to defend itself from its enemies
  - (d) All of the above
11. In desert plants, the process of photosynthesis is carried out by
  - (a) leaves
  - (b) roots
  - (c) stems
  - (d) branches
12. In trees of mountain region, we generally find that
  - (a) they are cone shaped
  - (b) they have non-sloping branch
  - (c) they have needle like leaves
  - (d) only (a) and (c) are correct
13. A snow leopard
  - (a) has thick fur on its body but not on its feet toes
  - (b) has thick fur on its body including its feet and toes
  - (c) Both the above
  - (d) None of the above
14. Select an animal whose body is not streamlined. However when they move in water they make the body shape streamlined.
  - (a) Squids
  - (b) Octopus
  - (c) Both of these
  - (d) None of these
15. Which of the following is correct for frogs?
  - (a) They usually have ponds as their habitat.
  - (b) They have strong front legs.
  - (c) Both the above
  - (d) None of these
16. An instrument used for measuring the rate of transpiration is a
  - (a) Potometer
  - (b) Klinometer
  - (c) Hygrometer
  - (d) Osmometer
17. The sugar and starch content in leaves would be at its lowest
  - (a) at mid-morning
  - (b) in early afternoon

- (c) in early evening      (d) at dawn
- 18.** The rest period which many seeds undergo before they begin to grow is called  
 (a) Viability                      (b) Germination  
 (c) Pollination                    (d) Dormancy
- 19.** An example of a predator is a  
 (a) mouse                          (b) lion  
 (c) rabbit                          (d) deer
- 20.** On land the frog respire mainly by means of its  
 (a) skin                              (b) lungs  
 (c) gills                              (d) mouth
- 21.** If a green leaf of a land plant is immersed in water, which of the following processes do not take place?  
 (a) Respiration                      (b) Photosynthesis  
 (c) Transpiration                    (d) None of these
- 22.** The adaptation that helps a polar bear to locate its prey is \_\_\_\_\_.  
 (a) its very strong sense of smell  
 (b) its long, curved and sharp claws  
 (c) its white fur that is not easily visible in the snowy white back ground  
 (d) layer of fat under its skin
- 23.** Which of the following adaptation is not shown by polar bear?  
 (a) Its body is streamlined.  
 (b) It has two thick layers of fur.  
 (c) It has long, curved and sharp claws.  
 (d) It has a layer of fat under the skin.
- 24.** Select the incorrect statement.  
 In cactus plants,  
 (a) the process of photosynthesis is generally carried out by leaves.  
 (b) the process of photosynthesis is generally carried out by stems.  
 (c) the stem is covered with a thick waxy layer.  
 (d) All of the above
- 25.** In which of the following animals the breathing process is similar to that of human beings?  
 (a) Cows                              (b) Earthworm  
 (c) Fish                                (d) None of these
- 26.** In earthworm the process of breathing occurs  
 (a) through its nose                  (b) through its skin  
 (c) through its mouth                (d) None of these
- 27.** Respiration in plants take place  
 (a) only during day time  
 (b) only during night time  
 (c) day and night  
 (d) only in presence of sunlight
- 28.** Frog belongs to which category?  
 (a) Terrestrial                      (b) Aquatic  
 (c) Amphibious                      (d) Aerial
- 29.** Frog catches its prey with the help of \_\_\_\_\_.  
 (a) teeth                              (b) legs  
 (c) mounth                          (d) tongue
- 30.** What type of leaves are present in submerged plants?  
 (a) Spinous  
 (b) Narrow, long and thin  
 (c) Thick  
 (d) Having layer of wax like substance
- 31.** Horse: Terrestrial: Tortoise: \_\_\_\_\_  
 (a) Terrestrial                      (b) Aquatic  
 (c) Amphibious                      (d) Vertebrate
- 32.** Plants do not move from one place to another in search of food and shelter. Some plants like Mimosa (Touch-me-not) show leaf movements. A sunflower always faces the sun. From the above paragraph what can be concluded?  
 (a) Plants can move their body parts  
 (b) Plants response to stimulus  
 (c) Plants show locomotion  
 (d) Both (a) and (b)
- 33.** When a seed is buried in the soil, in which direction will its root and stem grow?
- | <b>Root</b>         | <b>Stem</b>     |
|---------------------|-----------------|
| (a) Towards earth   | Away from earth |
| (b) Away from earth | Towards earth   |
| (c) Towards earth   | Towards earth   |
| (d) Away from earth | Away from earth |
- 34.** A camel is a desert animal. It shows many adaptations. Which of the following statements (P, Q, R & S) is incorrect?  
 P - It has a hump where fat is stored.  
 Q - It can stay without water for long time.  
 R - It sweats a lot.  
 S - It excretes large amount of urine.  
 (a) P only                              (b) Q only  
 (c) P & Q                              (d) R & S
- 35.** A plant shows the following features  
 (i) roots are reduced in size  
 (ii) stems are long  
 (iii) stems have an spaces  
 (iv) leaves are large and flat

To which category does this plant belong to?

- (a) Polar region
- (b) Desert
- (c) Rainforest
- (d) Oceans

36.



The plant shows

- (a) Phototropism
- (b) Geotropism
- (c) Photosynthesis
- (d) Respiration

37. Small changes take place in the body of a single organism over short period to overcome small problems due to changes in environment is called

- (a) Habitat
- (b) Adaptation
- (c) Acclimatization
- (d) Habit

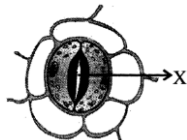
38. Exchange of gases in plants take place through tiny pores on leaves called \_\_\_\_\_.

- (a) holes
- (b) stomata
- (c) veins
- (d) None of these

39. Earthworm breathes through

- (a) gills
- (b) skin
- (c) lungs
- (d) stomata

40. The structure marked X in the given picture is involved in



- (a) Exchange of gases during respiration
- (b) Release of water
- (c) Exchange of gases during photosynthesis
- (d) Both (a) and (c)

41. A plant that loses very little water through transpiration and has very small leaves is adapted to which of the following habitats?

- (a) Mountain regions
- (b) Grasslands
- (c) Forests
- (d) Deserts

42. The type of habitat that is very cold and windy and in some areas of which snowfall occurs in winters is

- (a) mountain regions
- (b) grasslands
- (c) forests
- (d) deserts

43. An animal that live in grasslands, has strong teeth for chewing hard plant stems and has long ears to hear movement of predators is

- (a) Lion
- (b) Tiger
- (c) Deer
- (d) All of these

44. It is an aquatic animal. It has no gills. They breathe in air through their nostrils or blow holes.

It is

- (a) Dolphins
- (b) Octopus
- (c) Both of these
- (d) None of these

45. The stems of plant are long, hollow and light, and its root are much reduced in size. It is adapted to which one of the following habitats?

- (a) Desert
- (b) Terrestrial
- (c) Aquatic
- (d) None of these

46. Which of the following statement(s) is/are correct?

- (a) Ponds, swamps and lakes are examples of aquatic habitats.
- (b) There is no variations in the habitats located in different parts of the world.
- (c) A biotic community consists of a single population.
- (d) Sunlight and heat are biotic components of a habitat.

47. Which of the following statement(s) is/are correct?

- (a) The body structure of a camel helps it to survive in a desert.
- (b) The dung of camel is dry.
- (c) Camels do not sweat.
- (d) All of the above

48. Which of the following statement(s) is/are correct?

- (a) Xerophytes refers to desert plants and animals.
- (b) There are no roots in desert plants.
- (c) Desert plants do not show the process of transpiration.
- (d) In mountains regions we see different kinds of adaptations at different heights.

49. Which of the following statement (s) is/are correct?

- (a) Lions have long claws in their back legs.
- (b) Deer live in forests.
- (c) Mountain goat has weak hooves.
- (d) All of the above

50. Which of the following statement (s) is/are correct?

- (a) Sea animals can move easily in water because they have a streamlined body.  
 (b) The body of octopus is streamlined.  
 (c) The body of squids is streamlined.  
 (d) All of the above

51. The aquatic plants are buoyant because  
 (a) their stems are soft and spongy containing air cavities  
 (b) they have hollow stalk and huge disc like leaves which help the plant to float on water  
 (c) Both the above  
 (d) None of these
52. How does burrowing habit help desert animals to survive hot and dry conditions?  
 (a) The holes and burrows are comparatively cooler and moist  
 (b) By remaining in burrows during day time  
 (c) Both the above  
 (d) None of these
53. How many parts are there in a stamen?  
 (a) 1 (b) 2 (c) 3 (d) 4
54. How many parts are there in a pistil?  
 (a) 1 (b) 3 (c) 4 (d) 5
55. How many mid-ribs are there in a leaf?  
 (a) 1 (b) 2 (c) 3 (d) 4

## 2-Exercise

### Match the Column

**DIRECTION:** Match Column-I with Column-II and select the correct answer using the code given below the columns.

1.

Column-I	Column-II
(a) Habitat	(p) Plants
(b) Biotic component	(q) Terrestrial habitat
(c) Abiotic component	(r) Dwelling place of an organism
(d) Desert	(s) Air

- (a)  $A \rightarrow (p); B \rightarrow (q); C \rightarrow (r); D \rightarrow (s)$   
 (b)  $A \rightarrow (r); B \rightarrow (p); C \rightarrow (s); D \rightarrow (q)$   
 (c)  $A \rightarrow (r); B \rightarrow (s); C \rightarrow (p); D \rightarrow (q)$   
 (d)  $A \rightarrow (q); B \rightarrow (r); C \rightarrow (s); D \rightarrow (p)$

2.

Column-I	Column-II
(a) Predator	(p) Frogs

(b) Prey	(q) Lion
(c) Ponds	(r) Deer
(d) Fish	(s) Streamlined body

- (a)  $A \rightarrow (p); B \rightarrow (q); C \rightarrow (r); D \rightarrow (s)$   
 (b)  $A \rightarrow (q); B \rightarrow (r); C \rightarrow (p); D \rightarrow (s)$   
 (c)  $A \rightarrow (r); B \rightarrow (q); C \rightarrow (s); D \rightarrow (p)$   
 (d)  $A \rightarrow (s); B \rightarrow (p); C \rightarrow (q); D \rightarrow (r)$

3.

Column-I	Column-II
(a) Temporary adaptation	(p) Sage brush
(b) Permanent adaptation	(q) Terrestrial habitat
(c) Desert plant	(r) Presence of feathers in birds
(d) Forests	(s) Tanning by sun

- (a)  $A \rightarrow (s); B \rightarrow (r); C \rightarrow (p); D \rightarrow (q)$   
 (b)  $A \rightarrow (r); B \rightarrow (s); C \rightarrow (p); D \rightarrow (q)$   
 (c)  $A \rightarrow (q); B \rightarrow (p); C \rightarrow (r); D \rightarrow (s)$   
 (d)  $A \rightarrow (p); B \rightarrow (q); C \rightarrow (s); D \rightarrow (r)$

### Passage Based Questions

**DIRECTIONS:** Read the passage(s) given below and answer the questions that follow.

#### Passage -1

The animals and plants of deserts live on the desert soil and breathe air from surroundings. In deserts only little water is available. In deserts days are quite hot and nights are quite cold.

4. Desert rats dig holes to live with in because  
 (a) this offer a moist and cool home  
 (b) the rats like to live in holes  
 (c) rats have sharp teeth to dig holes  
 (d) All of the above
5. Camel  
 (a) is a desert animal (b) lives in burrows  
 (c) Both (a) and (b) (d) None of the above
6. The desert animals that dig holes and burrows in the sand and live within \_\_\_\_\_.  
 (a) never come out of them  
 (b) come out of their burrows at night but remain inactive  
 (c) come out of their burrows during day and become active  
 (d) come out of their burrows during night and become active

### Passage -2

A lion lives in forest. It is a strong animal. It has a light brown colour, long claws in their front leg that can be withdrawn inside the toes. It has eyes in front of its face.

7. The habitat of a lion is  
(a) terrestrial habitat (b) forest  
(c) grassland (d) All of the above
8. The light brown colour of lion helps it  
(a) to hide in green grassland when it hunts for prey  
(b) to hide in dry grassland when it hunts for prey  
(c) Both (a) and (b)  
(d) None of the above
9. The eyes in front of the face of a lion allow it  
(a) to see its prey even at night  
(b) to have correct idea about the location of its prey  
(c) to keep it alert and keep on eye on its prey  
(d) All of the above

### Passage -3

The fish and many other sea animals are adapted to live in sea. They have streamlined bodies which help them to move easily in water. These animals have gills which help them to use oxygen dissolved in water.

10. Select the sea animal that have gills.  
(a) Whales (b) Dolphin  
(c) Fish (d) All of these
11. Fish  
(a) have slippery scales on their bodies  
(b) have flat fins and tails  
(c) Both (a) and (b)  
(d) None of the above
12. Dolphins and whales  
(a) breathe in air through nostrils or blow holes.  
(b) breathe in air when they swim near the surface of water.  
(c) nostrils or blow holes are located in the upper parts of the body of dolphins and whales.  
(d) All of the above

### Assertion/Reason Based Questions

**DIRECTIONS:** The questions in this segment consists of two statements, one labelled as "assertion A" and the other labelled as "reason R". You are to examine these

two statements carefully and decide if the assertion A and reason R are individually true and if so, whether the reason is a correct explanation of the assertion. Select your answers to these items using codes given below:

- (a) Both A and R are true and R is the correct explanation of A.  
(b) Both A and R are true but R is not the correct explanation of A.  
(c) A is true but R is false.  
(d) A is false but R is true.
13. **Assertion (A):** The plants and animals that live on land are said to live in terrestrial habitat.  
**Reason (R):** Ponds, rivers, lakes, etc., are examples of terrestrial habitats.
14. **Assertion (A):** Some abiotic factors like air, water, light and heat are very important for growth of plants.  
**Reason (R):** Some of the above abiotic factors are important for all living organisms.
15. **Assertion (A):** Any animal which adapts itself against heat and water scarcity is well suited for desert conditions.  
**Reason (R):** In deserts only little water is available.
16. **Assertion (A):** The leaves of desert plants are either absent, very small or they are present in shapes of spines.  
**Reason (R):** In deserts only little water is available.
17. **Assertion (A):** Deer has strong teeth and long ears.  
**Reason (R):** The speed of deer helps them to run away from prey.

### Figure Based Questions

18. What adaptations do the organism shown in figure have?

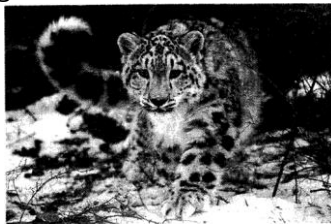


- (a) Strong back legs (b) Webbed feet  
(c) Both (a) and (b) (d) None of these
19. The plant shown in picture is a desert plant. Which of the following characteristics does it adapt to survive in deserts?



- (a) its leaves are modified into spines
- (b) its stem is covered with thick waxy layer
- (c) its root penetrate deep into the ground
- (d) All of the above

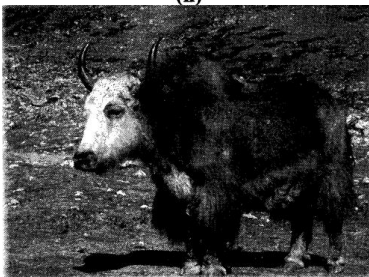
20. Look at the pictures below and tell which of the following is correct?



(i)



(ii)



(iii)

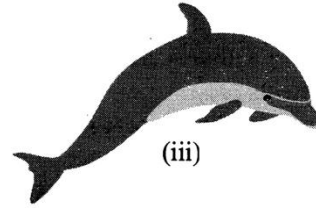
- (a) (i) and (ii) have deserts as their habitat
- (b) (i) lives in forest
- (c) (iii) has grassland as its habitat
- (d) (i), (ii) and (iii) have mountain range as their habitat.

21. Which of the following animals have gills?



(i)

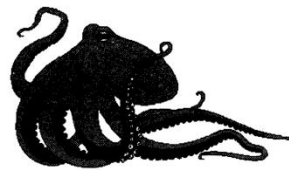
(ii)



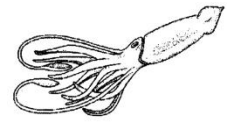
(iii)

- (a) Both (i) and (ii)
- (b) Both (ii) and (iii)
- (c) Both (i) and (iii)
- (d) All of these

22. Select the one having streamlined bodies.



(A)



(B)

- (a) Only A
- (b) Only B
- (c) Both A and B
- (d) None of these

## Hints & Solutions

### 1 - Exercise

#### Multiple Choice Questions

1. (d)
2. (a)
3. (b)
4. (a) It lives at North Pole only.
5. (c) In photosynthesis carbon dioxide is absorbed from air and oxygen is given out.
6. (d)
7. (d)
8. (d)
9. (c)
10. (b)
11. (c)
12. (d) They have sloping branches.
13. (b)
14. (c)

15. (a) They have strong back legs.
16. (a) It is a potometer.
17. (d)
18. (d) It is called dormancy.
19. (b)
20. (d)
21. (d) None of these process can occur as the conditions required for their occurrence are **not** fulfilled.
22. (a) its very strong sense of smell helps it to locate its prey.
23. (a) The body of polar bear is not streamlined.
24. (b) In desert plants photosynthesis is generally carried out by stems and not leaves.  
[NOTE: The leaf-like structure seen in cactus (a desert plant) is, in fact, its stem.]
25. (a) The process of breathing in cows is similar to that in human beings.
26. (b) Earthworm breathes through its skin.
27. (c) Respiration in plants take place day and night.
28. (c)
29. (d)
30. (b)
31. (c) Horse lives on land. Tortoise can live on land and water. So tortoise is amphibious.
32. (d)
33. (a)
34. (d)
35. (d)
36. (a)
37. (c)
38. (b)
39. (b)
40. (d)
41. (d)
42. (a)
43. (c) Lion and tiger are predators.
44. (a)
45. (c)
46. (a) There are large variations in aquatic habitats located in different parts of the world. A biotic community consists of a number of populations. Sunlight and heat are a biotic components.
47. (d)
48. (d) Xerophytes are desert plants. Desert plants have long roots. Desert plants lose very little water through transpiration.
49. (b) Lions have long claws in their front legs. Mountain goats has strong hooves.
50. (a) Squids and octopus do not have streamlined bodies. However when they move in water their body shapes streamlined.
51. (c)
52. (c)
53. (b) These are anther and filament.
54. (b) The three parts of a pistil are style, stigma and ovary.
55. (a) A leaf has 1 mid-rib.

## EXERCISE-2

1. (b)  $A \rightarrow (r); B \rightarrow (p); C \rightarrow (s); D \rightarrow (q)$
2. (b)  $A \rightarrow (q); B \rightarrow (r); C \rightarrow (p); D \rightarrow (s)$

Lion is a predator, deer is prey, frog has pond as its habitat, fish have streamlined body.

3. (a)  $A \rightarrow (s); B \rightarrow (r); C \rightarrow (p); D \rightarrow (q)$   
Sage brush is a desert plant; forest is a kind of terrestrial habitat; Presence of feather in birds is a permanent adaptation and tanning by sun is a temporary adaptation.

### Passage Based Questions

4. (a)  
5. (a)  
6. (d)  
7. (d)  
8. (b)  
9. (b)  
10. (c) Whales and dolphins do not have gills.  
11. (c)  
12. (d)

### Assertion/Reason Based Questions

13. (c) Assertion-A is true, Reason-R is false.  
Ponds, rivers, lakes are aquatic habitats.  
14. (b)  
15. (a)  
16. (b)  
17. (c) A is true, R is false.  
[The speed of deer helps them to run away from its predator not prey]  
18. (c)  
19. (d)  
20. (d)  
21. (b) Dolphin and whale have no gills.  
22. (d)