

NCERT Solution

Weather, Climate and Adaptations of Animals to Climate

Exercise

1. Name the elements that determine the weather of a place.

Answer:

The elements that determine the weather of place are temperature, humidity, rain fall and wind speed.

2. When are the maximum and minimum temperatures likely to occur during the day?

Answer

The maximum temperature of the day occurs in the afternoon while the minimum temperature occurs early in the morning.

3. Fill in the blanks:

(i) The average weather taken over a long time is called _____.

(ii) A place receives very little rainfall and the temperature is high throughout the year, the climate of that place will be _____ and _____.

(iii) The two regions of the earth with extreme climatic conditions are _____ and _____.

Answer:

(i) The average weather taken over a long time is called climate.

(ii) A place receives very little rainfall and the temperature is high throughout the year, the climate of that place will be hot and dry.

(iii) The two regions of the earth with extreme climatic conditions are the polar region and the tropical region.

4. Indicate the type of climate of the following areas:

(a) Jammu and Kashmir: _____

(b) Kerala: _____

(c) Rajasthan: _____

(d) North-east India: _____

Answer:

- (a) Jammu and Kashmir : Moderately hot and wet for a part of year.
- (b) Kerala : Very hot and wet
- (c) Rajasthan : Hot and dry
- (d) North-east India : Wet

5. Which of the two changes frequently, weather or climate?

Answer:

The weather at a place changes frequently as it is being day to- day condition of the atmosphere at a place with respect to the temperature, humidity, rainfall, wind speed, any of these elements, can vary over very short periods of time.

6. Following are some of the characteristics of animals:

- (i) Diets heavy on fruits
- (ii) White fur
- (iii) Need to migrate
- (iv) Loud voice
- (v) Sticky pads on feet
- (vi) Layer of fat under skin
- (vii) Wide and large paws
- (viii) Bright colours
- (ix) Strong tails
- (x) Long and large beak

For each characteristic indicate whether it is adaptation for tropical rainforests or polar regions. Do you think that some of these characteristics can be adapted for both regions?

Answer :

- (i) Diets heavy on fruits ----- tropical rainforests
- (ii) White fur ----- polar region
- (iii) Need to migrate ----- polar region
- (iv) Loud voice ----- tropical rainforests
- (v) Sticky pads on feet ----- tropical rainforests
- (vi) Layer of fat under skin ----- polar region
- (vii) Wide and large paws ----- polar region
- (viii) Bright colours -----tropical rainforests
- (ix) Strong tails -----tropical rainforests
- (x) Long and large beak -----tropical rainforests

7. The tropical rain forest has a large population of animals. Explain why it is so.

Answer:

The tropical rain forest has a large population of animals because it experience continuous warmth and rain throughout the year. Such climatic conditions in rain forests are highly suitable for supporting an enormous number and variety of plants and animals.

8. Explain, with examples, why we find animals of certain kind living in particular climatic conditions.

Answer:

We find animals of certain kind living in particular climatic conditions because animals are adapted to survive in the conditions in which they live. Animals living in very cold and hot climate must possess special features to protect themselves against the extreme cold or heat.

For example , animals in the polar region like polar bears are adapted to the extremely cold climate by having some special characteristics such as white fur, strong sense of smell, a layer of fat under the skin, wide and large paws for swimming and walking, etc.

Polar bears have white fur so that they are not easily visible in the snowy white background. It protects them from their predators. It also helps them in catching their prey. To protect them from extreme cold, they have two thick layers of fur. They also have a layer of fat

under their skin. In fact, they are so well-insulated that they have to move slowly and rest often to avoid getting overheated. Physical activities on warm days necessitate cooling. So, the polar bear goes for swimming. It is a good swimmer. Its paws are wide and large, which help it not only to swim well but also walk with ease in the snow. While swimming under water, it can close its nostrils and can remain under water for long durations. It has a strong sense of smell so that it can catch its prey for food.

9. How do elephant living in the tropical rain forest adapt itself ?

Answer:

An elephant living in the tropical rain forest, has adapted to the conditions of rain forests in many remarkable ways. Like for example it uses its trunk as a nose because of which it has a strong sense of smell. The trunk is also used by it for picking up food. Moreover, its tusks are modified teeth. These can tear the bark of trees that elephant loves to eat. So, the elephant is able to handle the competition for food rather well. Large ears of the elephant help it to hear even very soft sounds. They also help the elephant to keep cool in the hot and humid climate of the rain forests.

10. Choose the correct option which answers the following question:

A carnivore with stripes on its body moves very fast while catching its prey. It is likely to be found in

- (i) polar regions
- (ii) deserts
- (iii) oceans
- (iv) tropical rain forests

Answer :

- (iv) Tropical rain forests (Tiger)

11. Which features adapt polar bears to live in extremely cold climate?

- (i) A white fur, fat below skin, keen sense of smell.
- (ii) Thin skin, large eyes, a white fur.
- (iii) A long tail, strong claws, white large paws.
- (iv) White body, paws for swimming, gills for respiration.

Answer :

(i) A white fur, fat below skin, keen sense of smell.

12. Which option best describes a tropical region?

(i) hot and humid

(ii) moderate temperature, heavy rainfall

(iii) cold and humid

(iv) hot and dry

Answer :

(i) hot and humid