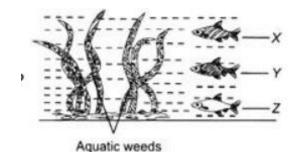|	INDIAN SCHOOL AL WADI AL KABIR	
Class: VII	DEPARTMENT OF SCIENCE- 2020-2021	Date: 15.11.2020
Worksheet No.: 11 WITH ANSWERS	Topic: WEATHER, CLIMATE AND ADAPTATIONS OF ANIMALS TO CLIMATE	Note: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.:

I. OBJECTIVE TYPE QUESTIONS

1. Scientific study of weather is _____
   a. Ornithology   c. Meteorology
   b. Pedology   d. Physiology

2. A carnivore with stripes on its body moves very fast while catching its prey. It is likely to be found in-
   a. Polar regions   c. Oceans
   b. Deserts   d. Tropical rainforests

3. In which region the sun does not rise for six months and does not set for the other six months?
   a. Northern regions   c. Equator regions
   b. Southern regions   d. Polar regions

4. Which features adapt polar bears to live in extremely cold climate?
   a. A white fur, fat below skin, keen sense of smell.
   b. Thin skin, large eyes, white fur.
   c. A long tail, strong claws, white large paws.
   d. White body, paws for swimming, gills for respiration.

5. Migration of bird takes place because _____
   a. they can't survive in cold place.
   b. they can't fly during winter.
   c. they don't get food.
   d. there is scarcity of water.

6. Three species of fish X, Y and Z with different body patterns are found in a lake. A predator who feeds on all these three fish is introduced into the lake. Which of these fish will be least affected?

Aquatic weeds

    a.   Fish Z because it lives near the ground.
    b.   Fish Y because it can show camouflage
    c.   Fish X because it lives near surface.
    d.   All three fish will be equally affected.

7. Which option best describes a tropical region?
    a. Hot and humid   b. Moderate temperature, heavy rainfall
    c. Cold and humid   d. Hot and dry

For the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below-

    i) Both A and R are true and R is correct explanation of the assertion.
    ii) Both A and R are true but R is not the correct explanation of the assertion.
    iii) A is true but R is false.
    iv) A is false but R is true

8. Assertion (A): Penguins are good swimmers.
   Reason (R): Penguins have webbed feet and streamlined body.
      (i) Both A and R are true and R is correct explanation of the assertion.
9. Assertion (A): A leaf insect looks like leaves and polar bears have white fur.
   Reason (R): They use their bodies to attack enemies.
      (iii) A is true but R is false.
10. Assertion (A): The lion tailed macaque lives on trees in tropical rain forest.
    Reason (R): Macaques have silver – white mane
      (ii) Both A and R are true but R is not the correct explanation of the assertion.

II. BASIC CONCEPT LEVEL QUESTIONS

1. What is meant by weather of a place? [Hint: The day-to-day condition of the atmosphere at a place with respect to the temperature, humidity, rainfall and wind-speed is called the weather.]
2. What is hibernation? [Hint: Certain animals go into deep sleep during extreme cold condition. This is called hibernation]
3. What is adaptation? [Hint: A special feature displayed by an organism to live and reproduce successfully in a particular environment is called adaptation.]
4. Name an organism which hibernates. [Hint: Bears/ Snakes/ Bats/ Skunks/ Hedgehogs.]
5. What do you mean by nocturnal animal?

[Hint: Animals that remain active during night and sleep during day are called nocturnal animals. Example: Owls, Bats, Hedgehogs, Foxes, Aardvarks]

6. Describe the climate of tropical rainforest. [The tropical rainforest has a warm and wet climate. The summer temperature can be as high as 50°C and in winters, the minimum temperature seldom goes below 15-20°C. The tropical rainforest gets plenty of rainfall.]

7. What is blubber? What is its importance for polar bear? [Hint: The thick layer of fat present under skin of polar bear is called blubber. It acts like an insulator and helps the animal to keep warm.]

8. What do you understand by migration? [Hint: Birds undergo seasonal journey from colder to warmer place in order to cope up with cold and shortage of food supply during winter months. This seasonal journey is called migration.]

9. Explain the adaptations which help in protection of Red-eyed tree frog. [Hint: Red-eyed frog has developed sticky pads on its feet to help it climb trees. Large red eyes with silt-like black pupil scares away predators]

10. Which feature helps a penguin to block cold Antarctic water from reaching its skin? [Hint: The penguin has thick layers of stiff and densely packed feathers that block the cold Antarctic waters from reaching its skin.]

III. INTERMEDIATE LEVEL QUESTIONS-

1. Write three differences between weather and climate.

Weather	Climate
Weather is the atmospheric condition of a place on a particular day.	Climate is the average weather condition of a place over a long period of time.
Weather changes every day and may change several times a day.	Climate generally remains unchanged for a few days.
Weather conditions generally depend on temperature, humidity and rainfall of a place. These factors are known as elements of weather.	The climate of a place generally depends on altitude, latitude and distance from the sea and wind.

2. How is fur on the body helpful to polar bear? [Hint: The thick white fur provides warmth and also helps the animal to *camouflage* as the white colour blends with the snow.]

3. Why does Siberian crane migrate? [Hint: Birds must remain warm to survive. So Siberian crane migrate to warmer regions in India when winter sets in. They travel back to Siberia after the winter is over]

4. What are the various body features which make penguin a good swimmer? [Hint: Streamlined body, webbed feet and paddle like flippers makes the penguin a good swimmer.]

5. The polar bear has big paws. What might be the advantage of this? [Hint: The wide and large paws of polar bear help them to swim and walk with ease in the snow.]

6. How do large ears help the elephant to survive in the forest? [Hint: Elephants have large ears with keen sense of hearing. The large ears also help them to lose heat from the body, thus maintaining the body temperature.]

7. How is lion- tailed macaque adapted to live on trees? [Hint: Lion- tailed macaque is an **arboreal** animal and is adapted to grasp the branches with its long muscular tail and hold on to the branches with its hands and feet.]

8. A Toucan has a long and sharp beak. How does this adaptation help the bird in its survival on trees? [Hint: The Toucan has a big, strong and sharp beak to squash many kinds of nuts and berries found on trees. It also feeds on small birds and lizards using its beak and narrow leather-like tongue.]

IV. <u>ADVANCED LEVEL QUESTIONS-</u>

1. Tropical Rain Forests have a large population of animals. Explain why this is so? [Hint-The tropical rainforest has a large population of animals due to favourable climatic conditions and easy availability of different kinds of foods. These regions are hot and humid with ample rainfall which supports the growth of animals and plants.]

2. An elephant has a long trunk. How does this adaptation help the elephant to live and survive in its habitat? [Hint-Elephant's upper lip is fused with the nose and is modified in the form of a long **trunk**, which is used for breathing, smelling, feeding, drinking, and lifting load, grasping and defence.]

3. What is camouflage? How it is useful to animals? [Hint-The colour and pattern on bodies of certain animals blend with their surroundings. Such property is called camouflage. It protects them from their predators and also help them in catching their prey. Example: Polar bears have white fur so that they are not easily visible in the snowy white background.]

V. EXEMPLAR QUESTIONS-

1. A fish dies when taken out of water, whereas a wall lizard will die if kept under water. Mention the term used to describe such abilities that allow fish and lizard to survive in their respective habitats. [Hint-Adaptation is the term used to describe such ability. Animals are adapted to survive in the conditions in which they live. So, fish dies when taken out of water while wall lizard dies if kept under water.]

2. Why is it difficult to predict the weather of a place while it is easy to predict its climate? [Hint-Weather is a complex phenomenon which can vary over a short period of time and thus it is difficult to predict the weather of a place while it is easier to predict climate as it is the average weather pattern taken for a long time.]

3. The animal P having white colour lives in Arctic region whereas another animal Q having black and white colour lives in Antarctic region. Both these animals have thick layer of fat under the skin.

a) What could be animals – P and Q be? [Hint: P- Polar bear; Q- Penguin.]

b) In what type of surroundings do these animals live? [Hint: Polar Regions- extreme cold climatic conditions]

c) What is the function of layer of fat under the skin of these animals? [Hint: Thick layer of fat called *blubber* present under its skin acts like an *insulator,* keeping their bodies warm.]

d) Which of these animals could be called a bird? [Hint- Penguin]

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