Instructions:

1) All questions are compulsory.

2) Attempt all the sections separately.

3) Write the question numbers as it is given in the question paper. Do not change or modify the question numbers.

4) Draw neat & labeled diagrams wherever required.

SECTION - A

Q I. Multiple Choice Questions:  
(1X15=15)

1. Which instrument is used to measure air pressure?
   a. Manometer  
   b. Barometer  
   c. Hydrometer  
   d. Anemometer

2. Which of these is a strong acid?
   a. sulphuric acid  
   b. citric acid  
   c. acetic acid  
   d. tartaric acid

3. Which microorganism is responsible for the fatal blood disease called sorter's disease?
   a. Virus, Anthrax  
   b. Algae, Anthrax  
   c. Bacteria, Anthrax  
   d. Animal, Anthrax

4. Pick a good conductor of heat from the following:
   a. Aluminium  
   b. Plastic  
   c. Wood  
   d. Rubber

5. The trapped air under the feathers of a bird:
   a. Reduces heat transfer through conduction.  
   b. Increases heat transfer through conduction.  
   c. Stops heat transfer by conduction.  
   d. Does not affect heat transfer through conduction.

6. Neutralization of calcium hydroxide with hydrochloric acid is an example of ________.
   a. chemical change  
   b. physical change  
   c. both chemical and physical change  
   d. no change
7. The colour of methyl orange in acidic medium is ________.
   a. pink   b. purple
   c. red   d. yellow

8. Stainless steel is an alloy of iron with ________.
   a. zinc   b. aluminium
   c. chromium and nickel   d. chromium and copper

9. A typhoon is known as a ________.
   a. Cyclone   b. Tornado
   c. Volcano   d. Earthquake

10. When wind speed increases, air pressure ___________.
   a. increases   b. decreases
   c. remains constant   d. none of these

11. Which of these absorbs and retains the maximum water?
   a. Sandy soil   b. Clayey soil
   c. Loam soil   d. Sandy-loam soil

12. The food substance digested in the buccal cavity is ________.
   a. starch   b. cellulose
   c. proteins   d. fats

13. A long winter sleep of animals is called__________.
   a. aestivation   b. hibernation
   c. cold sleep   d. deep sleep

14. A plant with only heterotrophic mode of nutrition:
   a. Amarbel   b. Pitcher plant
   c. Fungi   d. Algae

15. Camouflage shown in polar bears is due to ________.
   a. thick fur   b. padded feet
   c. white fur   d. two layers of fat

Q II. Write True or False: (1X5=5)

1. Pancreas is the largest gland in our body.
2. Soil is a mixture of rock particles and humus.
3. Mercury level falls easily in a clinical thermometer.
4. Increased wind speed results in increased air pressure.
5. Plant intake carbon dioxide during respiration.
Q III. Match the following columns: \hspace{5cm} (1X5=5)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Natural indicator</td>
<td>a) sericulture</td>
</tr>
<tr>
<td>2. Rearing of silkworm to obtain silk</td>
<td>b) temperature, humidity, etc</td>
</tr>
<tr>
<td>3. Elements of weather</td>
<td>c) radiation</td>
</tr>
<tr>
<td>4. Clayey soil</td>
<td>d) litmus</td>
</tr>
<tr>
<td>5. Sun’s energy</td>
<td>e) small particles</td>
</tr>
</tbody>
</table>

Q.IV. Answer in one sentence: \hspace{5cm} (1X6=6)

1. Define: Neutralization.
2. When we look out of the classroom window, are we observing climate or weather?
3. Name any two good conductors of heat.
4. What are villi?
5. Name the part of amoeba which helps in capturing food.
6. What is reeling?

Q.V. Answer in 2-3 sentences: \hspace{5cm} (2X13=26)

1. List four types of natural fibres and their sources.
2. Write the word equation of the process by which starch is produced in plants.
3. Describe the two situations that result in the formation of wind currents.
4. Give reason: A loosely knitted sweater will keep you warmer than tightly knitted one.
5. Explain why the bottom of a pond is cooler than the top during a hot summer day.
6. How are nutrients replenished in the soil?
7. (i) What is the purpose of scouring the sheared skin obtained from sheep?
   (ii) How is it done?
8. Write two points of differences between parasites and saprotrophs.
9. Name the species from which angora wool is obtained? In which region is it found?
10. Classify the changes as physical change or chemical change:
    (a) photosynthesis (b) dissolving sugar in water
11. Write two ways to prevent soil erosion?
12. Convert: 37°C into °F.

13. Why does a tropical rainforest have a large population of animals?

SECTION – B

Q.VI. Answer the following questions in brief:  
(3X6=18)

1. Explain the process of obtaining silk thread from the cocoon.

2. Name and explain the process in which the movement of heat takes place from one end of a solid to other end that has a different temperature.

3. What is the function of acid and digestive juices in the stomach?

4. Name one method by which rusting of iron can be prevented. What do you understand by galvanization?

5. Write three adaptations of polar bear?

6. Draw a neat and labeled diagram of cyclone?

Q.VII. Answer the following questions (any three):  
(3X5=15)

1. (i) Explain the formation of acid rain.
   (ii) Does acid rain affect the soil profile?
   (iii) How is soil important for plant growth?

2. An area in America is prone to a weather condition A wherein a dark funnel shaped cloud reaches from the sky to the ground. There is B seen during rainy season which includes sound and lightening. B can also develop into a destructive weather event called C. The C has a middle area of low air pressure named D.
   (i) What are A & B?
   (ii) What are C & D?
   (iii) Give another name for C.

3. Describe Human digestive system with the help of a diagram.

4. (i) Which thermometer is used to measure body temperature?
   (ii) Which thermometer is used to measure high temperatures?
   (iii) Write any three differences between clinical and laboratory thermometer?

5. Explain in brief various steps involved in processing of fibres into wool.

-------------ALL THE BEST--------------