

ARMY PUBLIC SCHOOL, AHMEDNAGAR
QUESTION BANK : CH. 1 NUTRITION IN PLANTS

MCQ

1. About “Mosquito”, which of the following statement is incorrect?

- [A]. It can be considered as an omnivore.
- [B]. The Adult female feeds on blood to supply protein for eggs.
- [C]. The larva of mosquito, feeds on microorganisms.
- [D]. None of the above

2. Pitcher plant traps insect because it

- [A]. is a heterotroph.
- [B]. grows in soils which lack in nitrogen.
- [C]. does not have chlorophyll.
- [D]. has a digestive system like human beings.

3. Which of the following statements is or are correct?

- [A]. Insectivorous plants do not perform photosynthesis at all and they obtain nutrients from insects.
- [B]. Parasitic nutrition is a type of “Heterotrophic Nutrition”.
- [C]. The association of pulses plant with rhizobium bacteria is example of saprotrophic relationship.
- [D]. None of the above.

4. About “photosynthesis”, which of the statements is or are incorrect?

- [A]. The Solar Energy is captured by the leaves and stored in the form of food.
- [B]. Later on carbohydrate ultimate get converted into chlorophyll.
- [C]. The synthesis prepare of food occurs in the presence of only sunlight.
- [D]. In this process solar energy is converted into chemical energy.

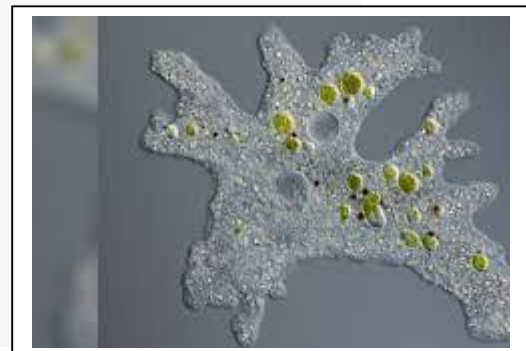
5. Farmers do not apply nitrogenous fertilizers in the cultivation of pulses plant. Why?

- [A]. Pulses plant already have stored much nitrogenous compound.
- [B]. Pulses plant do not need the compound of nitrogen because they are autotrophs.
- [C]. Pulses plant fulfill their needs by saprotrophic nutrition.
- [D]. Pulses plant derive nutrition from the symbiotic association.

Picture Based Questions

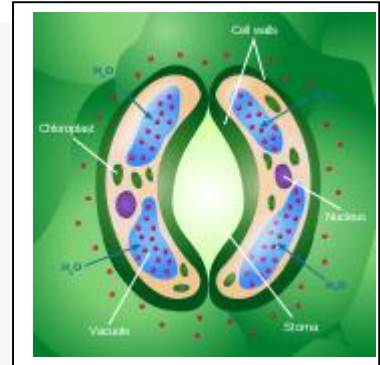
Q1. Identify this irregular shaped unicellular organism

- A. Spirogyra**
- B. Amoeba**
- C. Paramecium**
- D. None of the above**



Q2. These are the opening which are present underside of leaves for exchange of gases. Identify them.

- A. Guard Cells
- B. Chlorophyll
- C. Stomata
- D. All of the above



Q3. The mode of nutrition that is seen in the image is

- A. Autotrophic
- B. Heterotrophic
- C. Saprotrophic
- D. Symbiotic



Assertion and Reason question

Assertion : Plants lack excretory organs.

Reason : Plant usually absorb essential nutrients and lead a passive life.

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false

Assertion : Leguminous plants are nitrogen fixers.

Reason : Leguminous plants have Rhizobium in their root nodules.

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion
- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false

Assertion : The bacterium in free-living condition can fix nitrogen.

Reason : Rhizobium fixes nitrogen asymbiotically.

- A) If both the assertion and the reason are true and the reason is a correct explanation of the assertion

- B) If both the assertion and reason are true but the reason is not a correct explanation of the assertion
- C) If the assertion is true but the reason is false
- D) If both the assertion and reason are false

Plants synthesise carbohydrates through the process of photosynthesis. The carbohydrates are made of carbon, hydrogen and oxygen. These are used to synthesise other components of food such as proteins and fats. But proteins are nitrogenous substances which contain nitrogen. Nitrogen is present in abundance in gaseous form in the air.

However, plants cannot absorb nitrogen in this form. Soil has certain bacteria that convert gaseous nitrogen into a usable form and release it into the soil. These are absorbed by the plants along with water. Also, you might have seen farmers adding fertilisers rich in nitrogen to the soil. In this way the plants fulfil their requirements of nitrogen along with the other constituents. Plants can then synthesise proteins and vitamins.

Besides leaves, photosynthesis also takes place in other green parts of the Plant — in green stems and green branches. The desert plants have scale- or spine-like leaves to reduce loss of water by transpiration. These plants have green stems which carry out photosynthesis.

Q1. Carbohydrates are made up of which of the following components?

- A. Hydrogen
- B. Carbon
- C. Oxygen
- D. None of the above

Q2. _____ is nitrogen containing compound

- A. Carbohydrates
- B. Hydrogen
- C. Oxygen
- D. Proteins

Q3. Which organism convert gaseous nitrogen into useable form?

- A. Earthworm
- B. Cattle
- C. Insects
- D. Bacteria

Q4. How does desert plants reduce loss of water by transpiration?

Q5. How do plants fulfill their requirements of nitrogen?

Short answer questions

1. Photosynthesis requires chlorophyll and a few other raw materials. Add the missing raw materials to the list given below:

Water, minerals, (a) (b)

2. What is the function of guard cells of stomata?

3. Which parts of the plant are called food factories of the plant?

4. Why do some plants feed on insects?

5. Except plants, why can't other living organisms prepare their food using CO₂, water and minerals? [HOTS]

6. A leguminous plant can restore the soil's concentration of mineral nutrients. Can you give examples of some such plants?

7. Algae are green in colour. Why?

8. Plant cannot use the nitrogen present in the soil directly. Why?

9. A mutually beneficial relationship that occurs between two plants. It is known by what name? Give an example.

10. Sunlight, chlorophyll, carbon dioxide, water and minerals are raw materials essential for photosynthesis. Do you know where they are available? Fill in the blanks with the appropriate raw materials.

(a) Available in the plant:

(b) Available in the soil:

(c) Available in the air:

(d) Available during day :

Long answer questions

1. Wheat dough if left in the open, after a few days, starts to emit a foul smell and becomes unfit for use. Give reason

2. Pooja is worried about her new shoes which she wore on special occasions that they were spoiled by fungus during rainy season. Is she right to worry, if yes, then tell why does fungi suddenly appears during the rainy season?

3. Some plants have deep red, violet or brown coloured leaves. Can these leaves perform the photosynthesis process?

4. Asha went to visit her grandfather in his village. He was having a serious discussion with his fellow members regarding the productivity level of crops for present year. They all were worried about how to increase the productivity of crop Asha listened to this and then suggested to the group that the reason may be decreased level of minerals in soil.

She told her grandfather to plant crops like pulses, gram, beans, etc., for a year then follow with regular crops. This will increase the crop productivity?

(a) What will you name the process suggested by Asha? Why is there decrease in crop

productivity?

- (b) What are noted benefits of this process? Will the results be as what Asha expressed?
- (c) What values are shown by Asha?

5. Harish went to visit his grandfather in village where he saw that his grandfather's field of wheat are infected with fungus but no one is aware of this. Harish rushed to his grandfather's side and told him that the field have been infected with fungi. He should use an antifungal agent in his fields to stop this infection.

- (a) What is fungus?
- (b) Can fungus only cause diseases or can it be helpful also?
- (c) What values are shown by Harish?

QUESTION BANK : CH. 2 NUTRITION IN ANIMALS

MCQ

1. Which of the following is the correct sequence of human nutrition?

- A) Ingestion→egestion→digestion absorption →assimilation.
- B) Egestion→ingestion absorption→ assimilation.
- C) Digestion→ assimilation→ingestion → absorption→ egestion.
- D) Ingestion→digestion→absorption assimilation → egestion.

2. Which of the following systems is responsible for producing enzymes that aid in breakdown of substances that are to be absorbed for the body's growth and repair?

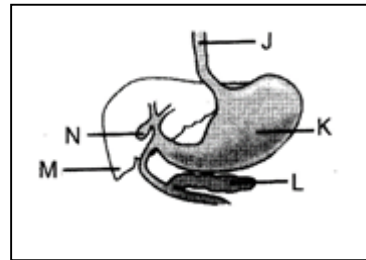
- A) Respiratory system
- B) Digestive system
- C) Circulatory system
- D) Nervous system

3. Herbivores do not produce enzymes that digest cellulose. How does the cellulose in their food get digested?

- A) Algae in their gut convert the cellulose into simple sugars.

- B) Bacteria in their gut convert the cellulose into glucose.
- C) Viruses in their gut convert the cellulose into simple sugars.
- D) Fungi in their gut convert the cellulose into simple sugars.

4. The figure given below shows a part of the human alimentary canal. Which of the two labelled structures produce substances involved in the conversion of fats into fatty acids and glycerol?



- A) J and K
- B) J and N
- C) K and L
- D) L and M

5. Which of the following describes of plaque?

- A) It is hard, protective covering on the tooth.
- B) It is soft covering of the tooth which is present below the visible part.
- C) It is the cavity which contains nerves and blood vessels in a tooth.
- D) It is sticky film of food and bacteria near the gums.

Picture Based Questions

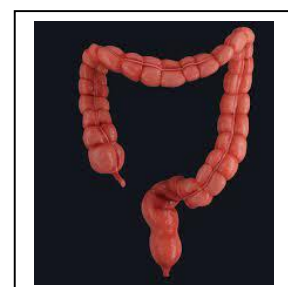


1. Identify the type of teeth

- A. Incisor
- B. Canine
- C. Molar
- D. Premolar

2. Identify the part of digestive organ

- A. Small intestine

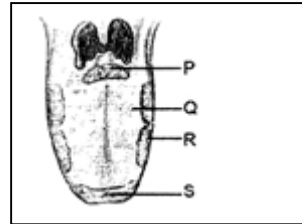


B. Large intestine

C. Pancreas

D. Liver

3. The diagram shows various parts of a human tongue. Which labelled part of tongue is sensitive to the sweet taste?



A) P

B) Q

C) R

D) S

Assertion and Reason Questions

1. Assertion A: Tongue is a fleshy muscular organ.

Reason R: Tongue is used for talking.

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.

2. Assertion A: Food pipe runs through neck and chest. Reason R: When food is not accepted by our stomach it is vomited out.

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.

3. Assertion A: Liver secretes a juice called bile juice.

Reason R: Bile juice is stored in liver.

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.

Passage based questions :

The stomach is a thick walled bag. Its shape is like a flattened J and it is the widest part of the alimentary canal. It receives food from the food pipe at one end and opens into the small intestine at the other. The inner lining of the stomach secretes mucous, hydrochloric acid and digestive juices. The mucous protects the lining of the stomach.

The acid kills many bacteria that enter along with the food and makes the medium in the stomach acid and helps the digestive juices to act. The digestive juices breakdown the proteins into simpler substances.

1. The stomach is a _____ bag

A. Thin walled

B. Thick walled

C. Round

D. J shaped

2. The _____ protects the the lining of the stomach

A. Fluid

B. Membrane

C. Mucous

D. None of the above

3. Which is the widest part of alimentary canal of the human digestive system that is used for churning the food in the body?

- A. Liver
- B. Intestine
- C. Stomach
- D. Food pipe

4. What is the function of acid in the stomach

5. What does the inner lining of the stomach secrete

Short answer questions

1. Explain the role of mucus secreted by stomach.
2. The long structure of small intestine is accommodated in small space within our body. Comment.
3. From which organ of digestive system, the undigested faecal matter is removed?
4. Mention the position of the rumen in ruminants.
5. Name the simple forms of carbohydrates, fats and proteins.
6. Discuss the role of hydrochloric acid secreted by gastric glands.
7. State the functions of molar and premolar teeth.
8. What is peristalsis?
9. Why is digestion of fats difficult as compared to that of other nutrients?
10. Explain of role of pseudopodia in amoeba.

Long answer questions

1. 'A' got her gall bladder removed surgically as she was diagnosed with stones in her gall bladder. After the surgery, she faced problems in digestion of certain food items when consumed in bulk. Can you tell which kind of food items would they be and why?

2. Boojho took some grains of boiled rice in test tube 'A' and Paheli took boiled and chewed rice in test tube 'S'. Both of them poured 1-2 drops of iodine solution into the test tube and observed the colour change. What colour change would they have observed? Give reasons for your Answer:

3. List the preventive measures that one should adopt for avoiding tooth decay.

4. Boojho and Paheli were eating their food hurriedly so that they could go out and play during the recess. Suddenly, Boojho started coughing violently. Think of the reasons, why he was coughing and discuss with your friends?

5. Jaya returned from school and found that grandmother was scolding her maid, Rani as she did not come yesterday. The maid told that his son was passing watery stools frequently that's why she didn't come. Jaya's mother who was listening the discussion came to them and told Rani not to come for coming 3-4 days. She also suggested her to give his son a solution of sugar and salt in clean water, many times a day for fast recovery. Jaya was surprised. She rushed to her mother and asked the scientific reason for it. Her mother

smiled and explained her the importance of this solution.

- (a) Name the term used to describe the condition in which a person passes out watery stools.
- (b) Name the solution of sugar and salt in water. Why is it given to a person suffering from diarrhoea?
- (c) What are the values shown by Jaya?

QUESTION BANK : CH. 3 Fibre to Fabric

MCQ

1) Paheli wanted to buy a gift made of animal fibre obtained without killing the animal. Which of the following would be the right gift

- (a) Woollen shawl
- (b) Silk scarf
- (c) Animal fur cap
- (d) Leather jacket

2) Selective breeding is the process of

- (a) selecting the offsprings with desired properties
- (b) selecting the parents with desired properties
- (c) selecting an area for breeding
- (d) selecting fine hair for good quality wool.

3) Silkworms are widely used for synthesis of silk fibre. Silkworms secrete fibre made of

- (a) fat
- (b) cellulose
- (c) protein
- (d) nylon.

4) The general process that takes place at a sheep shearing shed is

- (a) removal of fleece
- (b) separating hair of different textures
- (c) washing of sheep fibre to remove grease
- (d) rolling of sheep fibre into yarn.

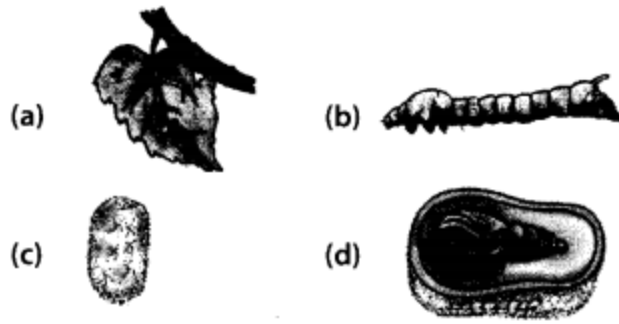
5) Silk is available in various types. Which of the following is not a type of silk?

- (a) Mulberry silk
- (b) Tassar silk
- (c) Mooga silk
- (d) Moth silk

PICTURE BASED QUESTION

1) The given options show caption for each figure , choose the wrong option from the following.

- (a) Eggs of silk moth on mulberry leaves
- (b) Silkworm
- (c) egg
- (d) Cocoon with developing moth



2) Pashmina shawls are popular for their warmth and artistic weaving. This fibre is obtained from _____



- (a) Yak
- (b) Goat
- (c) Sheep
- (d) None of the above

3) India has a wide range of fabrics found in different states . Which state is the largest producer of wool

- (a) Gujrat
- (b) Maharashtra
- (c) Rajasthan
- (e) None of the above



ASSERTION AND REASON QUESTIONS

- 1) (A): Wool is a natural fibre Reason
- (R): Wool is obtained from animals like sheep, llama and goats.

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.

2) (A): Wool is a natural fibre Reason

(R): Wool is obtained from animals like sheep, llama and goats.

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.

3) (A): Scouring is the process of washing sheared fleece in hot water, detergent and alkali in tank Reason

(R): Scouring removes dirt, grass and grease.

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.

PASSAGE BASED QUESTIONS

To improve the quality and production of wool, of our indigenous sheep, cross-breeding programme has been undertaken at a number of research centers in our country. During such trials, indigenous and exotic breeds of sheep are made to cross-breed for the production of superior wool quality and mutton. A superior quality sheep with desirable characteristics will be formed eventually after continuous selection and breeding programmes.

- 1) What is the name of the process of selecting parents for obtaining a desirable baby sheep?
- 2) . What is the name of the process of selecting parents for obtaining a desirable baby sheep?
- 3) Name some indigenous breeds of sheep.
- 4) Give examples of some exotic breeds of sheep.
- 5) Give examples of breeds of sheep famous for its fabric.

SHORT ANSWER QUESTIONS

1. State whether the following statements are True or False. If false, correct them.

- (a) Silkworms are caterpillars of silk moth.
- (b) In India, camels and goats are generally reared for obtaining wool.
- (c) The rearing of silkworms for obtaining silk is called silviculture.

2. Rampur bushair and Bakharwal are the breeds of which animal-sheep or goat?
3. How do the hair of certain animals help in keeping their bodies warm?
4. Write the name of the animal from which wool for pashmina shawls is obtained.
5. What term is used for the following process? Washing of sheep's fleece to remove dust, dirt, dried sweat and grease.
6. Name the process of taking out silk fibres from the cocoon for use as silk.
7. Write the maximum length of continuous silk thread that can be obtained from a cocoon.
8. In the life history of silk moth as
Egg → Larva (or caterpillar) → Pupa → Silk moth which actually makes the silk fibre?
9. Sheep are herbivores, so which type of feed (or food) is provided by shepherds?
10. Steps for the production of silk are given below in a jumbled order. Arrange them in their proper sequence.
 - (a) Eggs are warmed to a suitable temperature for the larvae to hatch from eggs.
 - (b) Fibres are taken out from the cocoon.
 - (c) After 25 to 30 days, the caterpillars stop eating and start spinning cocoons.
 - (d) The larvae/caterpillars or silkworms are kept in clean trays along with freshly chopped mulberry leaves.
 - (e) Female silk moths lay eggs.
 - (f) Cocoons are kept under the sun or boiled in water.

LONG ANSWER QUESTIONS

1. Radhika wanted to buy a silk frock and went to the market with her mother. There they found that the artificial (synthetic) silk was much cheaper and wanted to know why? Do you know why? Find out.
2. From what type of health problems the workers suffered while working in a wool industry?
3. Name the most common silk moth. What are the characteristics of silk fibres obtained from the cocoons of this silk moth?
4. Explain the phrase – 'Unity is Strength' on the basis of the making of fabric from fibre.
5. Neha went to the market with her mother to buy a silk saree for her grandmother. The shopkeeper was showing sarees of different varieties of silk but her mother wanted to take only a pure silk saree and not an artificial one. Neha was confused that how to distinguish between a pure silk and an artificial silk saree. But her mother helped her in selecting a pure silk saree for her grandmother and she was quite elated about that.
Now, answer the following questions:
 - (a) How her mother distinguished between pure silk saree and an artificial silk saree?
 - (b) Is the pure silk saree more costly than an artificial one?
 - (c) What values are shown by Neha's mother?

QUESTION BANK : CH. 4 HEAT

MCQ

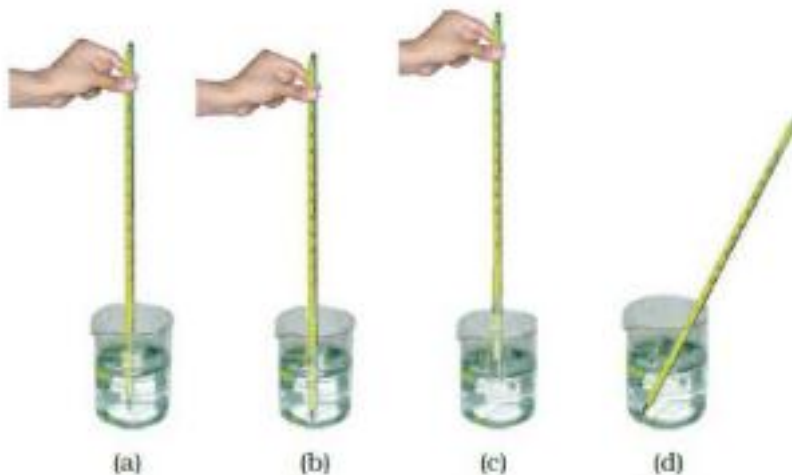
1. Boojho wonders why the level of mercury changes when the bulb of the thermometer is brought in contact with different objects
 - A. Because mercury is a liquid material
 - B. Because bulb has no kink.
 - C. Temperature of object may not be same as mercury
 - D. Every object has different temperature
2. A man wrapped himself with a few layers of newspaper on a cold winter night. This helped him to keep himself warm because.
 - A. Friction between the layers of newspaper produces heat.
 - B. Air trapped between the layers of newspaper is a bad conductor of heat.
 - C. Newspaper is a conductor of heat.
 - D. Newspaper is at a higher temperature than the temperature of the surrounding.
3. Stainless steel pans are usually provided with copper bottoms. The reason for this could be that
 - A. Copper makes the pan more durable
 - B. Such pans appear colorful
 - C. Copper is a better conductor of heat than the stainless

Picture Based Questions

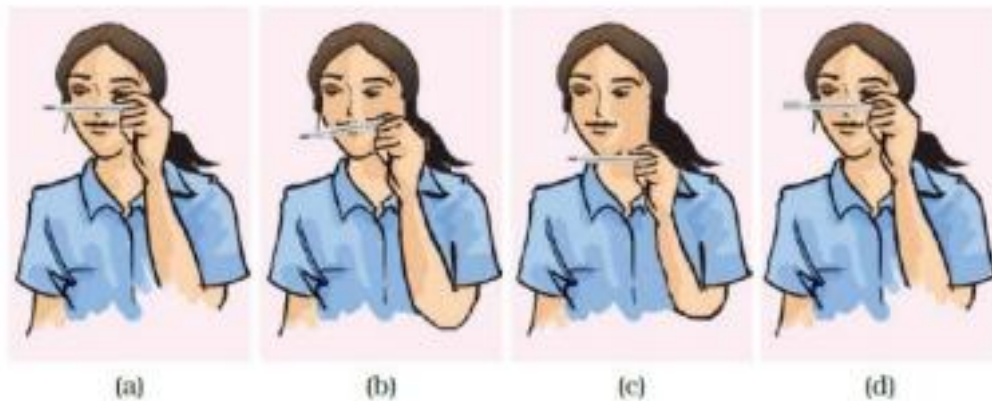
1. Four arrangements to measure temperature of ice in beaker with laboratory thermometer are shown in

Figure

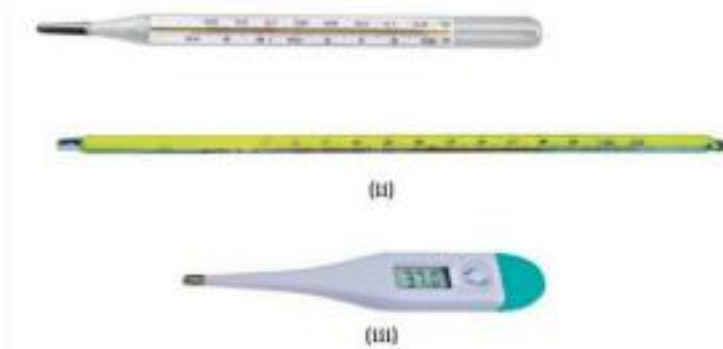
(a, b, c and d). Which one of them shows the correct arrangement for accurate measurement of temperature?



2. Figure given below (a–d) shows a student reading a doctor's thermometer. Which of the figure indicates the correct method of reading temperature?



3. Boojho has three thermometers as shown in figure. He wants to measure the temperature of his body and that of boiling water. Which thermometer (s) should he choose?



- A. Thermometer (i) or (iii) for measuring body temperature and (ii) for measuring the temperature of boiling water.
- B. Thermometer (i) for measuring temperature of both.
- C. Thermometer (ii) for measuring temperature of both.
- D. Thermometer (iii) for measuring temperature of both.

Assertion and Reason questions

1. Assertion : It is hotter over the top of a fire than at the same distance on the sides.

Reason : Air surrounding the fire conducts more heat upwards.

- A) If both assertion and reason are true and the reason is the correct explanation of the assertion.
- B) If both assertion and reason are true but reason is not the correct explanation of the assertion.
- C) If assertion is true but reason is false.
- D) If the assertion and reason both are false.

2. Assertion : Woolen clothes keep the body warm in winter.

Reason : Air is a bad conductor of heat.

A) If both assertion and reason are true and the reason is the correct explanation of the assertion.

B) If both assertion and reason are true but reason is not the correct explanation of the assertion.

C) If assertion is true but reason is false.

D) If the assertion and reason both are false.

Assertion : A brass tumbler feels much colder than a wooden tray on a chilly day.

3. Reason : The thermal conductivity of brass is less than that of wood.

A) If both assertion and reason are true and the reason is the correct explanation of the assertion.

B) If both assertion and reason are true but reason is not the correct explanation of the assertion.

C) If assertion is true but reason is false.

D) If the assertion and reason both are false

Passage based questions

If heat is exchanged between a hot and cold object, the temperature of the cold object goes on increasing due to gain of energy and the temperature of the hot objects attain the same value. In this process, the cold object gains heat energy and the hot object loosed heat energy. If the system of both the objects is isolated from the environment by keeping it inside a heat - resistant box then no energy can flow from inside the box or come into the box. In this situation, we get the following principle.

Heat energy lost by the hot object = heat energy gained by the cold object. This is called the "Principle of heat exchange"

1. Where does heat transfer take place?
 2. In such a situation which principle of heat do you perceive?
 3. How can this principle be explained in short?
 4. Which property of the substance is measured using this principle?
-
1. In a mercury thermometer, the level of mercury rises when its bulb comes in contact with a hot object. What is the reason for this rise in the level of mercury?
 2. Shopkeepers selling ice blocks usually cover them with jute sacks. Explain why.
 3. To keep her soup warm, Paheli wrapped the container in which it was kept with a woollen clothes. Can she apply the same method to keep a glass of cold drink cool? Give reason for your Answer
 4. While constructing a house in a coastal area, in which direction should the windows preferably face and why?
 5. The mercury does not fall or rise in a clinical thermometer when taken out of the mouth. Explain why.
 6. Name the mode of transfer of heat in which medium is not required.
 7. It is preferred to use two thin blankets rather than one thick blanket. Explain the reason
 8. You may have noticed that a few sharp jerks are given to clinical thermometer before using it. Why is it done so?
 9. Differentiate between two modes of transfer of heat, i.e. convection and conduction.
 10. Convert 65°C to degree fahrenheit

Long Answer Questions

1. At a camp site there are tents of two shades. One made with black fabric and the other with white fabric. Which one will you prefer for resting on a hot summer afternoon? Give reason for your choice. Would you like to prefer the same tent during winter?
2. Explain the reason for the following statement, "When heat is applied at the bottom of the water vessel, then it gets heated more quickly than when it is heated at the top."
3. Pooja on her week off entered in her kitchen to cook rice for her family in lunch time. The moment she put fry pan on the gas stove and lighted it through the matchstick, all of sudden her 5 years small daughter entered into the kitchen and tends to touch the hot fry pan. At the same time, Pooja saw her and pushed her away from the hot fry pan. In this way, she saved her child.
 - (a) Explain why do the fry pan are provided with the plastic handles?
 - (b) Mention the values represented by Pooja here towards her 5 years small daughter.
4. Explain the phenomena of sea breeze and land breeze with the help of diagram.

QUESTION BANK : CH. 5 Acid Bases and Salts

MCQ

1. On adding phenolphthalein indicator to a colourless solution, no change is observed. What is the nature of this solution?
 - a. Basic
 - b. Either acidic or basic
 - c. Either acidic or neutral
 - d. Either basic or neutral
2. Consider the following statements :
 - (i) Both acids and bases change colour of all indicators.
 - (ii) If an indicator gives a colour change with an acid, it does not give a change with a base.
 - (iii) If an indicator changes colour with a base, it does not change colour with an acid.
 - (iv) Change of colour with an acid and a base depends on the type of the indicator. Which of the above statements is/are correct?
 - (a) Only (iv)
 - (b) (i) and (iv)
 - (c) (ii) and (iii)
 - (d) (d) All of these

3. When the soil is too basic in nature, plants do not grow well in it. To improve its quality what must be added to the soil?

- (a) Organic matter
- (b) Quicklime
- (c) Slaked lime
- (d) Calamine solution



Picture Based Questions :

Q1. Identify the natural indicator

Q2. This flower is used as a natural indicator



Assertion - Reason Questions

1. Assertion (A): Rain containing excess of pollutants like carbon dioxide, sulphur dioxide, carbonic acid, sulphuric acid and nitric acid

R): Air form

- 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.

2. Assertion (A): Sugar is a neutral substance.

Reason (R): A sugar solution turns red litmus blue.

- 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.

3. Assertion (A): Acids are sour in taste.

Reason (R): Bases are soapy to touch and bitter in taste.

- 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.

Passage based questions

Read the following and answer the questions:

Salt of a strong acid and strong base is neutral with a pH value of 7. NaCl common salt is formed by a combination of hydrochloride and sodium hydroxide solution. This is the salt that is used in food. Some salt is called rock salts bed of rack salt were formed when seas of bygone ages dried up. The common salt thus obtained is an important raw material for various materials of daily use, such as sodium hydroxide, baking soda, washing soda, bleaching powder.

1. Which of the following does not form an acidic salt?
 - a. Phosphoric acid
 - b. Carbonic acid
 - c. Hydrochloric acid
 - d. Sulphuric acid
2. Which of the following salts has no water of crystallization?
 - a. Blue vitriol
 - b. Washing soda
 - c. Baking soda
 - d. Gypsum
3. The formula of baking soda is
 - a. K_2CO
 - b. $KHCO_3$
 - c. $NaHCO_3$
 - d. Na_2CO_3
4. Which of the following is treated with chlorine to obtain bleaching powder
 - a. $CaSO_4$

- b. Ca(OH)_2
- c. Mg(OH)_2
- d. KOH

5. Which of the following salt is used for removing the permanent hardness of water
- a. Washing soda
 - b. Baking soda
 - c. Bleaching powder
 - d. NaOH

SHORT ANSWER QUESTIONS

1. What is the test for acids and bases using litmus paper?
2. What name is given to those substances which do not change the colour of either red or blue litmus paper?
3. Name the acid present in lemon juice and tomato.
4. Name a substance which is used to cure the discomfort caused by indigestion due to over eating.
5. Why does a turmeric stain on white shirt is turned to red when it is washed with soap?
6. Which acid is injected into our body by an ant sting that causes pain?
7. Name the salt formed when hydrochloric acid reacts with sodium hydroxide solution (a base).
8. Which of the following are acidic and which are basic?
Lime water, Vinegar, Toothpaste, Stomach juices, Lemon juice, Baking soda solution, Milk of magnesia, Ammonia solution.
9. Why are sodium bicarbonate and lemon juice used during indigestion?
10. What is a salt? Name any salt and give their formulae.

Long answer questions

Look at the given reaction.

1 Hydrochloric acid + Sodium hydroxide (base) \rightarrow Sodium chloride (salt) + Water

Sodium chloride formed in this reaction remains in solution form. Can we get solid sodium chloride from this solution? Suggest a method (if any).

2. A farmer was unhappy because of his low crop yield. He discussed the problem with an agricultural scientist and realised that the soil of his field was either too acidic or too basic. What remedy would you suggest the farmer to neutralise the soil?
3. Boojho, Paheli and their friend Golu were provided with a test, each containing China rose solution which was pink in colour. Boojho added 2 drops of solution 'A' in his test tube and got dark pink colour. Paheli added 2 drops of solution 'S'to her test tube and got green

colour. Golu added 2 drops of solution 'C but could not get any change in colour. Suggest the possible cause for the variation in their results.

4. Paheli observed that most of the fish in the pond of her village were gradually dying. She also observed that the wastes of a factory in their village are flowing into the pond which probably caused the fish to die.

(a) Explain why the fish were dying?

(b) If the factory waste is acidic in nature, how can it be neutralised?

5. A small amount of hydrochloric acid is always produced in the stomach. Is it useful or harmful for us? If excess of acid is produced in the stomach, what should we do?

CHAPTER 7

MCQ:

- 1) Rainfall is measured by
 - (a) rain gauge
 - (b) water level increase in ponds
 - (c) water level increase in water table
 - (d) none of these
- 2) Which of the following statement is incorrect for penguins?
 - (a) They huddle together
 - (b) They cannot swim
 - (c) They have webbed feet
 - (d) They have streamlined body
- 3) Which is the characteristic feature of tropical rainforests?
 - (a) Hot and humid climate
 - (b) Enormous number and variety of animals
 - (c) Competition for food and shelter
 - (d) All of these

PICTURE BASED QUESTIONS:



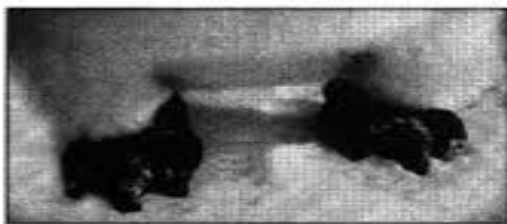
1) The diagram given above shows adaptation to live on trees is:

- a) Change in colour
- b) Change in weight
- c) No any change
- d) Swimming



2) Diagram showing adaptation in

- a) The colour
- b) The beak
- c) Tail
- d) Eyes



3) The above picture shows adaptations in

- a) Penguin
- b) Polar bear
- c) Elephant
- d) Beard ape

ASSERTION REASON TYPE QUESTIONS:

In each of the following questions, a statement of Assertion is given and a corresponding statement of Reason is given just below it. Of the statements, given below, mark the correct answer as:

- (a) Both assertion and reason are true and reason is the correct explanation of assertion.

- (b) Both assertion and reason are true but reason is not the correct explanation of assertion.
(c) Assertion is true but reason is false.
(d) Both Assertion and Reason are false.

- 1) ASSERTION: tropical regions have enriched biodiversity.
REASON: tropical regions have wet and hot climate.
- 2) ASSERTION: polar bear keeps its body warm.
REASON : the polar bear has fat layer inside skin .
- 3) Rajasthan has a dry and hot climate.
Reason: Rajasthan lies in polar region.

PARAGRAPH BASED QUESTION :

: All changes in the weather are caused by the sun. The sun is a huge sphere of hot gases at a very high temperature. The distance of the sun from us is very large. Even then the energy sent out by the sun is so huge that it is the source of all heat and light on the earth. So, the sun is the primary source of energy that causes changes in the weather. Energy absorbed and reflected by the earth's surface, oceans and the atmosphere play important roles in determining the weather at any place. If you live near the sea, you would have realised that the weather at your place is different from that of a place in a desert, or near a mountain.

- A) Define weather.
B) How sun is responsible of weather changes.
C) What is difference between weather and climate?

SHORT ANSWER TYPE QUESTIONS

1. Name the elements that determine the weather of a place.
- 2 When are the maximum and minimum temperature likely to occur during the day?
- 3 The tropical rainforests has a large population of animals. Explain why it is so.
- 4 What is climate?
- 5 What do you mean by the term adaptation?
- 6 Describe the climate of polar regions.
- 7 What is a rain gauge?
- 8 What informations does the daily weather report give?
- 9 Describe the climatic condition of the western region of India with the example of that of Rajasthan.
- 10 Write adaptations in plants living in mountain regions.

LONG ANSWER TYPE QUESTIONS:

- 1) Explain the adaptations of polar bears to live in polar regions. Give the flow chart also.
- 2) How are penguins adapted for cold climate?

- 3) Write a short note on migration.
- 4) Explain the climate of tropical regions.
- 5) A private zoo in tropical region thought of housing penguins to attract more tourists to its place. They arrange an artificial condition to keep them.
 - (a) Do you think penguins will be able to survive? Why?
 - (b) What is the difference between the two habitats, i.e., where penguins live and where they will be shifted?
 - (c) What kind of artificial conditions will be needed to house penguins in tropical region?
 - (d) Do you agree with the steps taken by the zoo?
 - (e) What value of private zoo is shown here?

CHAPTER 8 : Winds, Storms and Cyclones

MCQ :

In which year was Orissa hit by a cyclone?

- (a) 1999
- (b) 2000
- (c) 2001
- (d) 2004

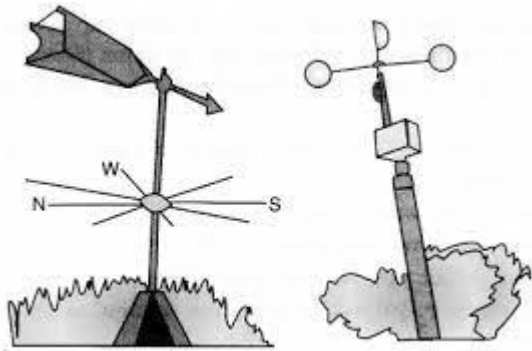
Leaves of trees, banner or flags flutter when wind is blowing. Why?

- (a) Air occupies space
- (b) Air is a mixture of gases
- (c) Air exerts pressure
- (d) Air is colourless

Cyclone warning is issued

- (a) 20 hrs in advance
- (b) 12 hrs in advance
- (c) 24 hrs in advance
- (d) none of these

Picture based questions:



1) The instrument shown in pictures measures:

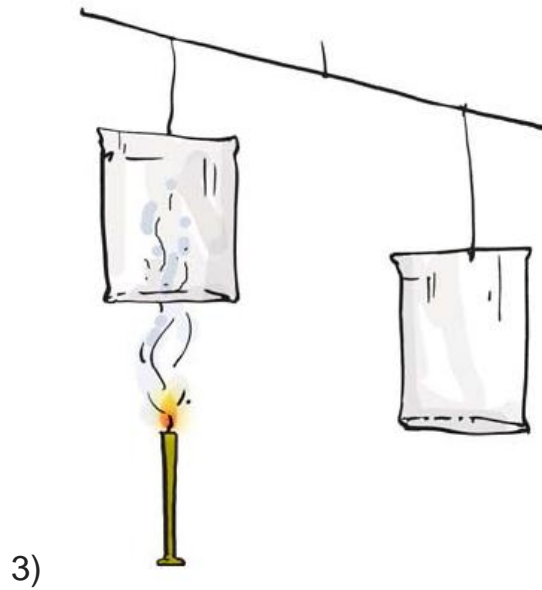
- a) Speed of wind
- b) Direction of wind
- c) Both
- d) None



2)

Diagram shows an experiment regarding

- a) Wind speed
- b) Wind temperature
- c) Air pressure
- d) Air humidity



The diagram shows the following :

- a) Air pressure
- b) Warm air lifts up
- c) Warm air is lighter
- d) Both b) and c)

Assertion / reason type questions:

- a) **Assertion : Air exerts pressure**

Reason : air is a mixture of gases.

- b) **Assertion : hot air lifts up**

Reason : warm air is lighter than cold air.

SHORT ANSWER TYPE QUESTIONS

- Q1) Suggest two methods to find out wind direction at a given place.
- 2) Why is Chandigarh unlikely to be affected by a cyclone?
- 3) Discuss the major cause of winds.
- 4) Name the ocean which is mainly responsible to bring rain bearing monsoon winds to Kerala coast in June every year?
- 5) Briefly describe the effect of heat on air pressure.
- 6) Paheli kept an empty bottle made of plastic inside a refrigerator. After few hours, when she opened the refrigerator she found the bottle had collapsed. Explain the possible reason.
- 7) Name the instrument which is used to measure the speed of wind.
- 8) Can you say why smoke always rises up?
- 9) Monsoon winds are helpful. Do you agree?
- 10) When strong/high speed wind blows, an umbrella held upright at times gets upturned. Explain the reason.

LONG ANSWER TYPE QUESTIONS:

- 1) Mention an example when the cyclone hit a part of India and how much destruction was caused due to it.
- 2) 2) What is cyclone? What factors are responsible for the development of cyclone?

- 3) Explain thunderstorm and how are they produced.
- 4) Give three precautions that should be taken to protect oneself from the thunderstorm.
- 5) Name some effective safety measures against cyclone?

CHAPTER : 9 SOIL

Which one of the following is a step in the formation of soil?

- (a) Earthquakes or volcanic eruptions
- (b) Weathering of rocks
- (c) Addition of humus
- (d) All are involved in the formation of soil

In which horizon of soil minerals are found?

- (a) A
- (b) B
- (c) C
- (d) None of these

Which of the following type of soil will form a colloidal solution when suspended in water?

- (a) Clay
- (b) Silt
- (c) Sand
- (d) Gravel

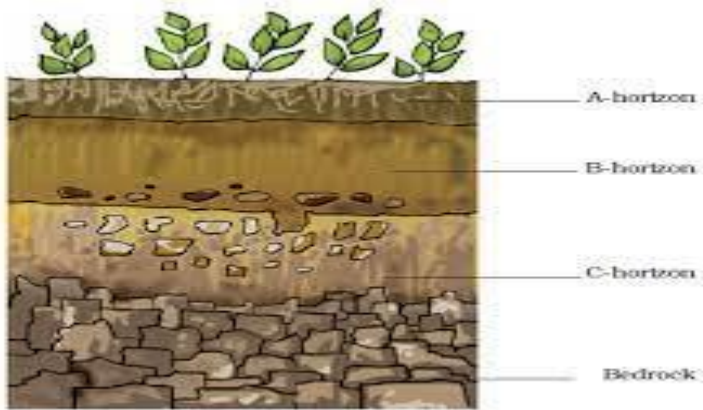
Which factor influences soil formation?

- (a) Climate
- (b) Vegetation
- (c) Parent rock
- (d) All of these

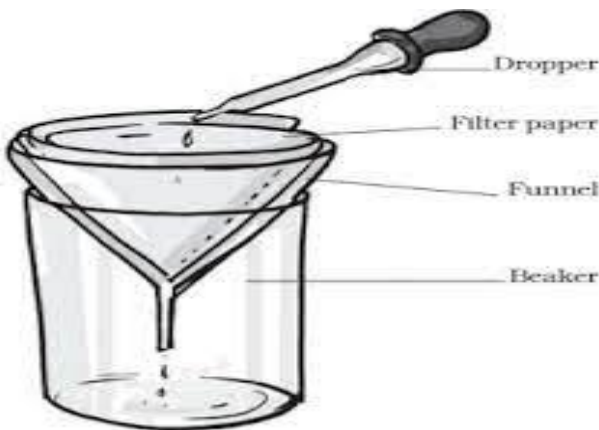
The microorganisms present in the soil require moisture (water) and nutrients for growth and survival. Choose from the options below the habitat (place) where the soil has plenty of water and nutrients.

- (a) Desert
- (b) Forest
- (c) Open field
- (d) Cricket ground

PICTURE BASED QUESTIONS



- 1) In which horizon in soil more humus is occurring?
 a) A b) B c) C d) D



- 2) The diagram is showing experiment for
 a) Soil moisture b) absorption of water c) temperature of soil d) none



- 3) Which type of soil is good for planting the crops?
 a) Clay b) Loamy c) Sandy d) none

ASSERTION/ REASON QUESTIONS :

1) Assertion:-The soil can be classified as Sandy and loamy.

Reasoning:- The size of particles in a soil has an influence on its properties

- 2) Assertion: Humus makes the soil fertile.
Reason: Humus is rich in organic matter.

PARAGRAPH BASED QUESTIONS

You probably know that soil is formed by the breaking down of rocks by the action of wind, water and climate. This process is called weathering. The nature of any soil depends upon the rocks from which it has been formed and the type of vegetation that grows in it. A vertical section through different layers of soil is called soil profile. Each layer differs in texture, colour, depth and chemical composition. These layers are referred to as horizons.

- 1) The uppermost horizon is generally dark in colour as it is rich in humus and minerals. The humus makes the soil fertile and provides nutrients to the growing plants. This layer is soft porous and retain more water. It is called the topsoil or the A horizon
- 2) Which are the factors that affect the weathering of rocks?
- 3) . Paheli added handful of soil to a glass of water. What do you think she must have observed. (Write in points)
- 4) Why is the texture of topsoil very important for a farmer.

SHORT ANSWER TYPE QUESTIONS:

- 1) Which soil is considered to be the most fertile and used for growing crops?
- 2) Give the formula to calculate the absorption percentage.
- 3) What is weathering?
- 4) Soil has particles of different sizes. Arrange the words given below in decreasing order of their particle size. Rock, clay, sand, gravel, silt

- 5) There are two components of soil one that comes from living thing and other from non-living thing. What are these two components?
- 6) It is necessary to ban the use of polythene bags and plastics. Do you agree? If yes, why?
- 7) A special kind of soil is used for making matkas and surahis. Name it.
- 8) Explain the term humus that is generally found in the uppermost layer of soil.
- 9) What is percolation rate of soil? The percolation rate varies from soil to other soil. Which soil would have the highest and least percolation rate?
- 10) How can a farmer convert acidic soil into neutral soil?

LONG ANSWER TYPE QUESTIONS:

- 1) Draw a diagram to show the different layers of soil. Explain soil profile.
 - 2) List the substances which pollute the soil.
 - 3) What is soil erosion, what are reasons for soil erosion? How it can be prevented?
 - 4) How soil is formed ?
 - 5) Suppose certain sample takes 120 min for 960 mL water to percolate into the soil. Calculate the rate of percolation of water.
-