

## 1. Nutrition in Plants

### A. Objective Type Questions

#### I. Multiple Choice Questions (MCQs)

1. (a) 2. (a) 3. (a) 4. (a) 5. (d) 6. (d) 7. (d) 8. (b) 9. (b) 10. (c) 11. (a)  
12. (a) 13. (b) 14. (c) 15. (b) 16. (c) 17. (d)

#### II. Matching the Columns Type Questions

1. (l) 2. (d) 3. (i) 4. (h) 5. (b) 6. (c) 7. (i) 8. (e) 9. (k) 10. (f) 11. (g)  
12. (a)

#### III. Fill in the Blanks Type Questions

1. parasite 2. parasites 3. *Cuscuta* 4. nitrogen 5. Robert Hill 6. Dark  
7. insectivorous 8. *Agaricus* 9. carbohydrates

#### IV. True or False Type Questions

1. False 2. True 3. False 4. True 5. True 6. True 7. True 8. True 9. False  
10. True

### B. Very Short Answer Type Questions

1. CO<sub>2</sub>, water, nitrogen, etc. 2. Green plants 3. Animals, fungi and *Cuscuta*  
4. *Cuscuta* 5. *Loranthus* or *Viscum* 6. Lichen is a plant which is composed of an alga (autotroph) and a fungus (saprotroph) which co-exist for their mutual benefit  
7. chloroplast 8. Iodine test 9. H<sub>2</sub>O, CO<sub>2</sub>. 10. Oxygen 11. Humans 12. Green plants such as neem and wheat.

C. Students should attempt on their own.

D. Students should attempt on their own.

(H.O.T.S. Students should attempt on their own.)

## 2. Nutrition in Animals

### A. Objective Type Questions

#### I. Multiple Choice Questions (MCQs)

1. (c) 2. (a) 3. (d) 4. (b) 5. (b) 6. (a) 7. (a) 8. (a) 9. (a) 10. (a) 11. (b)  
12. (d) 13. (b) 14. (b)

#### II. Matching the Columns Type Questions

1. (i) 2. (b) 3. (j) 4. (k) 5. (c) 6. (d) 7. (e) 8. (f) 9. (g) 10. (h) 11. (l)  
12. (a)

#### III. Fill in the Blanks Type Questions

1. bile 2. Teeth 3. pseudopodia 4. phagocytosis 5. omnivorous 6. fluid  
7. frugivorous 8. intestine 9. holozoic

#### IV. True or False Type Questions

1. False 2. False 3. True 4. True 5. True 6. False 7. False 8. True  
9. True

#### B. Very Short Answer Type Questions

1. Nutrition of protozoans and animals involving engulfment of the whole or part of a plant or an animal, either in solid or liquid state, is called animal-like or holozoic nutrition. 2. A herbivore is an animal who eats an algae (including phytoplankton) or plant materials, e.g., rabbit, goat, sheep, deer, horse, donkey, yak, cattle (cow, buffalo), camel, elephant, grasshopper, caterpillar. 3. Tiger 4. Frog 5. Rat 6. Peristalsis is the waves of muscular contraction that move food along the gut of human beings and other animals. (Also study Appendix A) 7. Assimilation is the incorporation or conversion of nutrients into the cytoplasm. In animals, assimilation follows digestion and absorption and in higher plants it involves both photosynthesis and root absorption. 8. *Amoeba* is a unicellular organism (*i.e.*, animal). In it, the digestion of food is intracellular, *i.e.*, its food is digested in food vacuole by the digestive enzymes. These enzymes enter in the food vacuoles due to fusion of lysosomes and food vacuoles. Inside the food vacuole of *Amoeba*, the food is broken down into small and soluble molecules by chemical reactions. 9. A human being has four types of teeth, namely— (i) Incisors, (ii) Canines, (iii) Premolars and (iv) Molars, 10. Oesophagus 11. Chyle is the digested food present in small intestine of human beings. It is a milky fluid. 12. Lipase is a digestive enzyme (*i.e.*, catalytic functional protein) which converts fats (lipids) into fatty acids and glycerol. Lipase is secreted by stomach (gastric lipase) and pancreas (pancreatic lipase or steapsin). 13. Membrane enzymes are those digestive enzymes which are embedded in the surface membrane of ileum (a part of small intestine). 14. Cow, buffalo, sheep, goat, deer, antelope, camel, bison and giraffe. 15. 8.5 16. food pipe 17. saliva 18. small intestine 19. small intestine
- C. Students should attempt on their own.
- D. Students should attempt on their own.

(*H.O.T.S. Students should attempt on their own.*)

#### Appendix A

##### Physiology of Peristalsis

The alimentary canal of human beings is a muscular tube that runs from mouth to anus. Its muscle layer (Fig.1) consists of two layers of muscles running in different *directions*.

The inner *circular muscle* has fibres arranged in rings.

The outer *longitudinal muscle* has fibres running lengthwise.

Both muscle layers are made up of smooth involuntary muscle and are responsible for the waves of muscular contraction that move food along the gut. This is called *peristalsis*.

Behind the ball of food, the circular muscle contracts and the longitudinal muscle relaxes (Fig. 2). This helps move the food along. In front of the ball of food, the longitudinal muscle contracts and the circular muscle relaxes. This causes the gut to widen and shorten, so that it can receive the food as it is pushed forward.

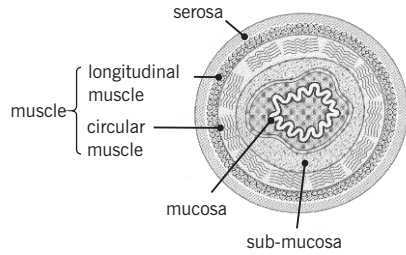


Fig. 1. General structure of gut wall in section

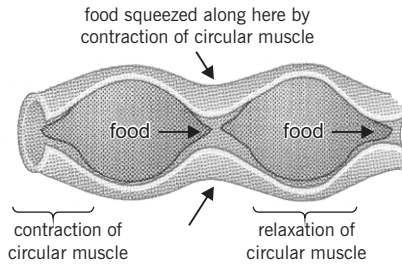


Fig. 2. The activity of peristalsis

### 3. Fibre to Fabrics

#### A. Objective Type Questions

##### I. Multiple Choice Questions (MCQs)

1. (b) 2. (c) 3. (d) 4. (b) 5. (c) 6. (a) 7. (d) 8. (d) 9. (b) 10. (b) 11. (c) 12. (c) 13. (b) 14. (d) 15. (c)

##### II. Fill in the Blanks Type Questions

1. Australia, New Zealand 2. fine 3. carbonising 4. carding  
5. unshrinkable 6. felting 7. Karnataka, Jammu and Kashmir  
8. Tussore, Muga and Eri or Endi 9. hydrogen peroxide, sulphur dioxide  
10. original or pure.

##### III. Matching the Columns Type Questions

1. (h) 2. (a) 3. (b) 4. (j) 5. (c) 6. (d) 7. (e) 8. (g) 9. (f) 10. (i)

##### IV True or False Type Questions

1. False 2. True 3. True 4. False 5. True 6. True 7. True 8. True 9. True  
10. True

#### B. Very Short Answer Type Questions

1. Wool and silk 2. wool 3. Mesopotamia 4. Fine, medium, long and carpet wool 5. Merino sheep, Hampshire. 6. The hair of Angora goat is commonly named as Mohair. 7. Wool in which the tendency of wool to creep is prevented. It is done by chlorine or with papain enzyme. 8. C-50%, H-16-17%, O-20-25%, S-3-4% 9. Assam is the largest

producer of Eri or Endi type of silk. **10.** Cultivated silk is produced by silk worms which live on mulberry trees.

**11.**

Reeled silk	Spun Silk
Filament is long with length varies from 300 to 1800 metres	Filament is short

C. Students should attempt on their own.

D. Students should attempt on their own.

*(H.O.T.S. Students should attempt on their own.)*

#### 4. Acids, Bases and Salts

A. **Objective Type Questions**

I. **Multiple Choice Questions (MCQs)**

1. (a) 2. (a) 3. (c) 4. (d) 5. (d) 6. (b) 7. (a) 8. (b) 9. (c) 10. (c) 11. (d) 12. (a) 13. (d)

II. **Fill in the Blanks Type Questions**

1. smelling salt  $(\text{NH}_4)_2\text{CO}_3$  2. baking soda 3. mineral acids  
4. hydrogen 5. concentrated nitric acid  $(\text{HNO}_3)$  6. epsom salt  
7. neutralisation 8. indicator 9. strong acid with strong base  
10. deliquescent

III. **Matching the Columns Type Questions**

1. (j) 2. (d) 3. (a) 4. (i) 5. (c) 6. (e) 7. (f) 8. (b) 9. (g) 10. (h)

IV. **True or False Type Questions**

1. False 2. True 3. True 4. True 5. True 6. True 7. True 8. True 9. False 10. False

B. **Very Short Answer Type Questions**

1. Mineral acid

2.

Acid	Base
(i) Acids have sour taste.	(i) These have bitter taste.
(ii) They turn blue litmus red.	(ii) They turn red litmus blue.

3. Citric acid and acetic acid 4. Calcium chloride  $\text{CaCl}_2$  and magnesium chloride  $\text{MgCl}_2$  5.  $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$  6. Preservation of food, anti acid tablets. 7.  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ ,  $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ ,  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$  8. Indicator is a substance which helps us to find out whether a substance is acidic or basic. An indicator has different colours in acidic and basic medium. For example, phenolphthalein.

C. Students should attempt on their own.

D. Students should attempt on their own.

*(H.O.T.S. Students should attempt on their own.)*

## 5. Physical and Chemical Changes

### A. Objective Type Questions

#### I. Multiple Choice Type Questions (MCQs)

1. (a) 2. (b) 3. (d) 4. (c) 5. (a) 6. (a) 7. (d) 8. (a) 9. (b) 10. (a)

#### II. Fill in the Blanks Type Questions

1. new substance 2. residue 3. dissociation 4. Oxidising agent  
5. household acid 6. Crystallisation 7. tannin 8.  $2\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$   
9. oxidation 10. common salt and ice

#### III. Matching the Columns Type Questions

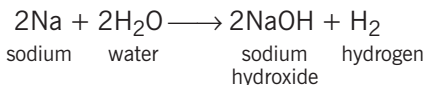
1. (c) 2. (a) 3. (e) 4. (b) 5. (d) 6. (j) 7. (f) 8. (i) 9. (g) 10. (h)

#### IV. True or false Type Questions

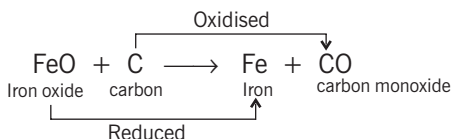
1. True 2. False 3. False 4. False 5. True 6. False 7. False 8. True  
9. True

### B. Very Short Answer Type Questions

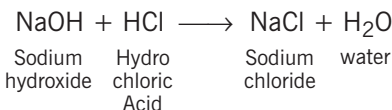
1. Lower temperature slows down the rancidity. 2. The chemical change is permanent, not reversible and identity of a substance is changed.



3. Combination and double decomposition. 4. Oxidation and reduction occur simultaneously, when a compound or element is reduced in a reaction and another at the same time is oxidised. Such type of reactions are known as redox reaction.



5. When an acid reacts with a base to form salt and water, such reactions are known as neutralisation reaction. Mostly neutralisation reactions are exothermic.



6. The articles made up of iron get covered with a reddish brown coating, that can easily be detached and is known as rust and the process as rusting. Its formula is  $2\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$ . 7. The following

conditions promote rusting. (i) As the percentage of impurity in iron increases, rusting also increases. (ii) Presence of moisture in air. (iii) Presence of weakly acidic atmosphere. **8.** A homogeneous solid body formed when a certain liquid substance passes into solid state. The most of compound possess a definite crystalline form. The process is said to be crystallisation and solid body as crystal. **9.** Silver bromide, silver chloride and silver iodide decompose in presence of light to grey because silver metal is formed. Such reactions are termed as photochemical decomposition. **10.** The substance of which crystals is to be formed is dissolved in suitable solvent. The solution is heated and filtered. The hot filtered solution is then allowed to cool undisturbed in a beaker. The crystals of pure substance separate out. These crystals are separated from the mother liquor by filtration and are then dried in vacuum desiccator. **11.** When brinjals are cut, their exposed surface changes to black colour. This blackening of cut surface is due to reaction between tannin in the brinjals and air (oxidation process)

C. Students should attempt on their own.

D. Students should attempt on their own.

*(H.O.T.S. Students should attempt on their own.)*

## 6. Heat and Temperature

A. **Objective Type Questions** 

I. **Multiple Choice Questions (MCQs)**

1. (c) 2. (b) 3. (c) 4. (d) 5. (c) 6. (c) 7. (c) 8. (b) 9. (b) 10. (c)

II. **Fill in the Blanks Type Questions**

1. temperature 2. conduction 3. radiation 4. poor 5. dark, light  
6. good 7. black 8. heat conduction 9. poor 10. mercury

III. **True or False Type Questions**

1. True 2. False 3. True 4. False 5. True 6. False 7. True 8. False  
9. True 10. True

IV. **Matching the Columns Type Questions**



1. (c) 2. (a) 3. (e) 4. (f) 5. (b) 6. (g) 7. (d)

B. **Very Short Answer Type Questions** 



1. The degree of hotness or coldness of a body 2. Heat is a form of energy that gives us a sensation of hotness or coldness. 3. Joule  
4. Conduction, convection and radiation 5. Transfer of heat from a hotter body to a colder one 6. Materials which conduct heat readily  
7. The mode of heat transfer without medium 8. To hold the handle with bare hand as wood is bad conductor of heat 9. 1 calorie = 4.186 Joule  
10. Radiation

- C. Students should attempt on their own.
  - D. Students should attempt on their own.
- (H.O.T.S. Students should attempt on their own.)*

## 7. Weather, Climate and Adaptations of Animals to Climate

- A. Objective Type Questions** 
- I. Multiple Choice Questions (MCQs)**
1. (d) 2. (c) 3. (c) 4. (d) 5. (a) 6. (d) 7. (c) 8. (c) 9. (c)
- II. Matching the Columns Type Questions**
1. (d) 2. (e) 3. (b) 4. (a) 5. (f) 6. (c)
- III. Fill in the Blanks Type Questions**
1. latitude, altitude; 2. temperature and precipitation 3. tropical  
4. tropical 5. white 6. temperature
- IV. True or False Type Questions**
1. True 2. False 3. True 4. False 5. True
- B. Very Short Answer Type Questions** 
1. Weather 2. Polar region 3. Vertical 4. Nocturnal 5. Camel 6. Tropical rainforests
- C. Students should attempt on their own.
  - D. Students should attempt on their own.
- (H.O.T.S. Students should attempt on their own.)*

## 8. Soil

- A. Objective Type Questions** 
- I. Multiple Choice Questions (MCQs)**
1. (c) 2. (c) 3. (b) 4. (c) 5. (c) 6. (c) 7. (c) 8. (c) 9. (d) 10. (b)
- II. Matching the Columns Type Questions**
1. (c) 2. (d) 3. (b) 4. (a)
- III. Fill in the Blanks Type Questions**
1. size 2. weathering 3. minerals, water 4. soil erosion 5. wind 6. soil profile 7. Sandy 8. Clayey or black.
- IV. True or False Type Questions**
1. True 2. False 3. True 4. False 5. False 6. True 7. False 8. True  
9. False 10. True
- B. Very Short Answer Type Questions** 
1. A horizon 2. Clayey 3. O horizon 4. Transported soil 5. C horizon  
6. Loam 7. Clayey or black 8. Leaching
- C. Students should attempt on their own.

- D. Students should attempt on their own.  
(*H.O.T.S. Students should attempt on their own.*)

## Summative Assessment—1

### 1. Multiple Choice Questions (MCQs)

- a. (ii) b. (i) c. (ii) d. (iii) e. (i)

### 2. Fill in the Blanks Type Questions

- a. frugivorous; b. Australia, New Zealand c. carbohydrates d. bones  
(Note: Please read Plaster of Paris in place of Gypsum) e. baking soda

### 3. True or False Type Questions

- a. False b. False c. False d. True e. True

### 4. Matching the Columns Type Questions

1. (d) 2. (e) 3. (a) 4. (b) 5. (c)

### 5. Very Short Answer Type Questions

- a. 8.5 b. Cockroach, rat c. Fine wool and medium wool d. Citric acid and acetic acid e. Mistletoe (*Loranthus*) f. Camel g. It is a method adopted by some animals for avoiding harsh climatic conditions. h. Joule i.  $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$  j. Oxidation and reduction occur simultaneously when a compound or element is reduced in a reaction and another at the same time is oxidised, such type of reactions are known as redox reaction.

6. Students should attempt on their own.  
7. Students should attempt on their own.  
8. Students should attempt on their own.

## 9. Respiration in Organisms

### A. Objective Type Questions

#### I. Multiple Choice Questions (MCQs)

1. (c) 2. (c) 3. (b) 4. (a) 5. (c) 6. (d) 7. (b) 8. (d) 9. (c) 10. (c) 11. (c)  
12. (a) 13. (c) 14. (b) 15. (c) 16. (b) 17. No option is correct (Note: breathing rate of adult human is 14 breaths/minute). 18. (b) 19. (c)  
20. (a)

#### II. Matching the Columns Type Questions

1. (h) 2. (i) 3. (b) 4. (d) 5. (e) 6. (f) 7. (g) 8. (c) 9. (j) 10. (k) 11. (a)

#### III. Fill in the Blanks Type Questions

1. expiration 2. inspiration 3. aquatic 4. Pulmonary sac 5. tracheole  
6. red 7. alveoli 8. surfactant 9. circulation 10. fungus 11. fermentation, lactic acid, ethyl alcohol 12. pulmonary



#### IV. True or False Type Questions

1. False 2. True 3. False 4. True 5. False 6. True 7. True

#### B. Very Short Answer Type Questions

1. Alveoli 2. Haemoglobin 3. No 4. Diaphragm 5. Ethyl alcohol  
6. Lactic acid

C. Students should attempt on their own.

D. Students should attempt on their own.

*(H.O.T.S. Students should attempt on their own.)*

### 10. Transportation in Animals and Plants

#### A. Objective Type Questions

##### I. Multiple Choice Questions (MCQs)

1. (c) 2. (b) 3. (b) 4. (a) 5. (a) 6. (b) 7. (c) 8. (c) 9. (d) 10. (d) 11. (a)  
12. (c) 13. (c) 14. (d)

##### II. Matching the Columns Type Questions

1. (i) 2. (h) 3. (a) 4. (b) 5. (c) 6. (j) 7. (g) 8. (d) 9. (e) 10. (f)

##### III. Fill in the Blanks Type Questions

1. nephridium 2. ammonia 3. Blood 4. clotting 5. lungs 6. 70-72  
7. Uric acid 8. urea 9. urine 10. transpiration

#### IV. True or False Type Questions

1. False 2. False 3. False 4. True 5. False 6. False 7. True

#### B. Very Short Answer Type Questions

1. Diffusion is movement of molecules or ions from a region of high concentration to a region of lower concentration until they are spread out evenly. 2. Osmosis is the diffusion of water molecules from a region of high concentration to a region of lower concentration through a partially permeable membrane. 3. Plasma membrane is made up of molecules of lipids and proteins and it separates the cell contents from the surrounding environment. This membrane allows some molecules to pass through but not others. Such a membrane is called partially permeable membrane. 4. Clotting of blood will not occur. 5. Root hairs are outgrowths of outermost cells (epidermal cells) of roots. They are meant for absorption of water and nutrients (minerals) from the soil. 6. Blood transports life giving substances such as food, water and oxygen to all parts of the body. It is the main transport medium. 7. Presence of haemoglobin makes the blood look red.

C. Students should attempt on their own.

D. Students should attempt on their own.

*(H.O.T.S. Students should attempt on their own.)*

## 11. Reproduction in Plants

### A. Objective Type Questions

#### I. Multiple Choice Questions (MCQs)

1. (d) 2. (c) 3. (c) 4. (b) 5. (d) 6. (d) 7. (b) 8. (d) 9. (a) 10. (b) 11. (a)  
12. (a) 13. (b) 14. (d) 15. (c) 16. (d)

#### II. Matching the Columns Type Questions

1. (k) 2. (i) 3. (l) 4. (Insect pollination) 5. (carpel) 6. (c) 7. (d)  
8. (stamen) 9. (ovary) 10. (j) 11. (e) 12. (g)

#### III. Fill in the Blanks Type Questions

1. reproduce 2. sexual 3. Corms 4. cutting 5. unedible 6. germination  
7. Air 8. spore 9. Self, anther and stigma 10. unisexual

#### IV. True or False Type Questions

1. True 2. False 3. False 4. True 5. False 6. False 7. True 8. True

### B. Very Short Answer Type Questions

1. A mode of reproduction which is not involving sex is called asexual reproduction. In asexual reproduction, the new individuals are produced by a single parent. 2. Reproduction involving the paired union of special cells (gametes) from two individuals is called sexual reproduction. In this type of reproduction, two parents (male and female) are often needed to produce new individuals. 3. Fission 4. Ginger 5. Onion and garlic 6. Radicle = tiny root; plumule = small shoot; cotyledons = embryonic leaves; these are parts of an embryo of a dicot seed. 7. Mangoes 8. Cutting, layering, grafting, tissue culture 9. Insects, birds, bats, snails and any animal. 10. Pollen tube grows from the pollen grain on stigma and carries male gamete up to female gamete present in ovule of ovary. Both gametes fuse in fertilization to form a zygote.

C. Students should attempt on their own.

D. Students should attempt on their own.

*(H.O.T.S. Students should attempt on their own.)*

## 12. Moving Things and Time Measurement

### A. Objective Type Questions

#### I. Multiple Choice Questions (MCQs)

1. (b) 2. (c) 3. (c) 4. (c) 5. (c) 6. (a) 7. (b)

#### II. Matching the Columns Type Questions

1. (g) 2. (i) 3. (a) 4. (j) 5. (b) 6. (c) 7. (h) 8. (d) 9. (e) 10. (f)

### III. Fill in the Blanks Type Questions

1. time
2. moving
3. speed
4. periodic
5. Christian Huygens
6. Speed
7. uniform speed
8. Speedometer
9. sundial
10. a solar
11. stop clocks, stop watches

### IV. True or False Type Questions

1. False
2. False
3. False
4. True
5. False
6. True
7. False

### B. Very Short Answer Type Questions

1. second
2. metre/second
3. kilometre/hour
4. 10,000 millisecond
5. Pendulum clock
6. Sundial
7. Periodic motion
8. A bike
9. Speed
10. instantaneous speed

C. Students should attempt on their own.

D. Students should attempt on their own.

*(H.O.T.S. Students should attempt on their own.)*

## 13. Electric Current, Circuits and Electromagnetism

### A. Objective Type Questions

#### I. Multiple Choice Questions (MCQs)

1. (b)
2. (a)
3. (b)
4. (c)
5. (b)
6. (a)
7. (b)
8. (d)
9. (a)
10. (a)

#### II. Fill in the Blanks Type Questions

1. charge
2. one
3. ampere, volt, coulomb
4. tin, lead
5. charge
6. series
7. parallel
8. parallel
9. watt
10. motion

#### III. Matching the Columns Type Questions

1. (g)
2. (h)
3. (i)
4. (j)
5. (a)
6. (c)
7. (d)
8. (e)
9. (f)
10. (b)

#### IV. True or False Type Questions

1. False
2. True
3. False
4. True
5. True
6. False
7. False
8. True
9. False
10. True

### B. Very Short Answer Type Questions

1. The rate of flow of electric charge through a conductor
2. Ampere
3. Any closed path along which electric charge can flow through, is an electric circuit
4. From positive to negative terminal of the battery
5. An electric circuit with only one path for the electric current to flow, is a series circuit
6. An electric current flowing through the filament of an electric bulb
7. Electric bulb, electric iron and room heater
8. A piece of conducting wire of low melting point
9. Moving charges
10. H.C Oersted

C. Students should attempt on their own.

D. Students should attempt on their own.

*(H.O.T.S. Students should attempt on their own.)*

## 14. Natural Phenomena

### A. Objective Type Questions

#### I. Multiple Choice Questions (MCQs)

1. (c) 2. (a) 3. (c) 4. (b) 5. (b) 6. (c) 7. (a) 8. (b) 9. (a) 10. (b)

#### II. Fill in the Blanks Type Questions

1. direction, speed 2. wind-vane 3. lightning, thunder 4. Angle of reflection 5. virtual 6. screen 7. far behind 8. seven 9. convex 10. concave 11. virtual 12. optical centre

#### III. Matching the Columns Type Questions

1. (e) 2. (g) 3. (a) 4. (f) 5. (i) 6. (b) 7. (j) 8. (c) 9. (d) 10. (h)

#### IV. True or False Type Questions

1. True 2. True 3. False 4. True 5. False 6. False 7. True 8. True 9. True 10. False

### B. Very Short Answer Type Questions

1. Wind vane/Weather-cock 2. To measure the speed of wind 3. Admiral Sir Francis Beaufort in 1805. 4. Light travels in a straight line as long as it remains in the same medium 5. Concave mirror 6. An image which cannot be obtained on a screen. 7. Seven colours 8. The medium which allows most of the light falling on it to pass through. 9. 3,00,000 km/sec 10. Yes 11. The bending of light rays when they pass from one optical medium to another is called refraction of light.

#### C. Students should attempt on their own.

#### D. Students should attempt on their own.

(H.O.T.S. Students should attempt on their own.)

## 15. Water: A Precious Resource

### A. Objective Type Questions

#### I. Multiple Choice Questions(MCQs)

1. (b) 2. (d) 3. (c) 4. (d) 5. (d) 6. (a) 7. (d) 8. (b) 9. (d) 10. (d) 11. (c) 12. (c) 13. (d) 14. (d) 15. (a)

#### II. Fill in the Blanks Type Questions

1. underground water 2. solid (ice), liquid (water) and gas (vapours of water) 3. essential mineral salts. 4. Flowing water 5. basic 6. Ganga and Brahmaputra rivers 7. Drought 8. water 9. exchange, water 10. Southwest monsoon 11. Goa, Kerala

#### III. Matching the Columns Type Questions

1. (c) 2. (d) 3. (a) 4. (b) 5. (g) 6. (e) 7. (f) 8. (j) 9. (h) 10. (i)

#### IV. True or False Type Questions

1. True
2. True
3. True
4. True
5. False
6. False
7. True
8. True
9. False
10. True

#### B. Very Short Answer Type Questions

1. Basic and secondary resources
2. Agriculture and hydropower
3. Flowing water
4. Rainwater and River water
5. Arctic and Antarctic oceans.
6. (a) Spring water (medicinal in nature) (b) Potable water (c) Rainwater and well water.
7. Rain, well and river water
8. Stunted growth, withering and dying
9. Nitrogen Cycle
10. Water Cycle.
11. (i) Southwest Monsoon (ii) Northeast Monsoon (iii) Cyclonic depressions (iv) Local violent storms.

C. Students should attempt on their own.

D. Students should attempt on their own.

(H.O.T.S. Students should attempt on their own.)

### 16. Forests

#### A. Objective Type Questions

##### I. Multiple Choice Questions (MCQs)

1. (d)
2. (d)
3. (b)
4. (c)
5. (b)
6. (b)
7. (b)
8. (c)
9. (d)
10. (a)
11. (d)

##### II. Matching the Columns Type Questions

1. (f)
2. (g)
3. (a)
4. (b)
5. (c)
6. (d)
7. (e)

##### III. Fill in the Blanks Type Questions

1. tropical
2. nutrient
3. coniferous
4. Temperate
5. 5300
6. environment, influences

#### IV. True or False Type Questions

1. True
2. True
3. False
4. True
5. True

#### B. Very Short Answer Type Questions

1. Tiger
2. Orchids (*Vanilla*).
3. *Shorea robusta* (shal or saal) and *Delbergia sisso* (shisham).
4. Tropical rainforests
5. Yes
6. The permanent clear-felling of forested or wooded land is called deforestation.
7. Felling of forest trees for obtaining timber is called logging.

C. Students should attempt on their own.

D. Students should attempt on their own.

(H.O.T.S. Students should attempt on their own.)

### 17. Wastewater Management

#### A. Objective Type Questions

##### I. Multiple Choice Questions (MCQs)

1. (b)
2. (c)
3. (a)
4. (b)
5. (b)
6. (c)
7. (a)
8. (d)
9. (a)
10. (b)
11. (b)
12. (c)

## II. Matching the Columns Type Questions

1. (c) 2. (e) 3. (a) 4. (d) 5. (f) 6. (g) 7. (b)

## III. Fill in the Blanks Type Questions

1. disinfection 2. point 3. primary 4. three 5. anaerobic 6. ammonia, hydrogen sulphide 7. Tertiary treatment 8. pollutants 9. domestic wastewater 10. sludge 11. cooking oil, fats

## IV. True or False Type Questions

1. False 2. True 3. True 4. True 5. True

## B. Very Short Answer Type Questions

1. Domestic wastewater and industrial wastewater. 2. Sewage is the water-borne waste derived from home, animal or food processing plants and includes human excreta, soaps, detergents, paper and cloth. 3. MLD = Million Litres per Day, DO = Dissolved Oxygen (in water), BOD = Biochemical Oxygen Demand. 4. Good quality water contains about 9 parts per million (ppm) dissolved oxygen. 5. Eutrophication is the process in which dissolved oxygen in water is reduced due to excessive growth of algae as a result of extra loading of nutrients in the water body (pond, lake, river, etc.). 6. Excessive growth of phytoplankton due to eutrophication is called algal bloom. 7. Following the algal bloom, the algae subsequently die and aerobic decomposers become active. They consume rapidly the dissolved oxygen of the water during decomposition of dead algae. In the absence of dissolved oxygen, all the aquatic life (including zooplankton and fishes) die in the water bodies. This is a sort of death of a given aquatic ecosystem. 8. Sewer system is the system of underground pipes, pumps and sewage treatment plants that collect liquid waste from buildings and houses and process it. 9. Point pollution means point sources of water pollution. These sources have a specific location for the discharge of water pollutants directly into water bodies, e.g., sewer, factories, power plants, breweries, underground coal mines and oil wells. 10. Sewage contains human excreta, soaps, detergents, oils, paints, toxic biocides, paper and cloth. They are the largest group of water pollutants and may pollute the water bodies if it is not properly treated before its dumping into the river.

C. Students should attempt on their own.

D. Students should attempt on their own.

*(H.O.T.S. Students should attempt on their own.)*

## Summative Assessment—2

### 1. Multiple Choice Questions (MCQs)

- a. (iii) b. (i) c. (iii) d. (iv) e. (iii)

**2. Fill in the Blanks Type Questions**

a. weathering b. expiration c. Uric acid d. reproduce e. stop clocks, stop watches

**3. True or False Type Questions**

a. False b. True c. True d. False e. True

**4. Matching the Columns Type Questions**

1. (c) 2. (e) 3. (d) 4. (a) 5. (b)

**5. Very Short Answer Type Questions**

a. Clayey or black. b. No c. Root hairs are outgrowths of outermost cells (epidermal cell) of roots. They are meant for absorption of water and nutrients from the soil. d. Tungsten e. second f. Admiral Sir Francis Beaufort g. Rainwater and river water h. Permanent clear-felling of trees of a forest or woodland is called deforestation. i. Sewage is water-borne waste derived from home. It mainly contains human excreta (stool + urine). j. Pollen tube has a role in the fertilization of ovule of flowering plant. It germinates from a pollen grain on stigma and carries male gamete.

6. Students should attempt on their own.

7. Students should attempt on their own.

8. Students should attempt on their own.