

SCIENCE OLYMPIAD

Official Guide

GRADE 7
SET 2

 *International*
Olympiad
Foundation



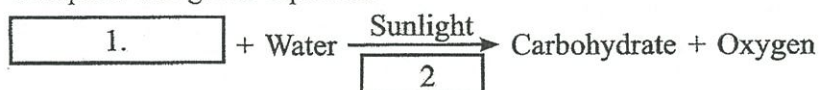
CONTENTS

Topic No.	Topic Name	Page No.
1	Nutrition in Plants	1
2	Nutrition of Animals	4
3	Fibre to Fabric	8
4	Heat	12
5	Acids, Bases and Salts	16
6	Physical and Chemical Changes	19
7	Weather, Climate and Adaptations of Animals to Climate	22
8	Winds, Storms and Cyclones	25
9	Soil	29
10	Respiration in Organisms	32
11	Transportation in Animals and Plants	35
12	Reproduction in Plants	38
13	Motion and Time	42
14	Electric Current and its Effects	46
15	Light	49
16	Water : A Precious Resource	52
17	Forests: Our Lifeline	55
18	Wastewater Story	58
19	Logical Reasoning	61
	MOCK TEST 1	65
	MOCK TEST 2	70
	ANSWERS	74

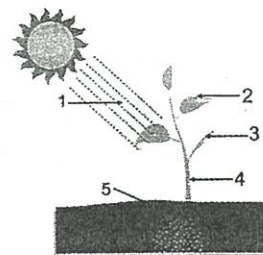
1. Nutrition in Plants

Multiple Choice Questions

1. The process of taking food, and its utilisation by an organism is known as
 - (A) engulfing of food
 - (B) preparation of food
 - (C) synthesis of food
 - (D) nutrition
2. The term 'heterotrophs' can be used for
 - (A) plants
 - (B) plants and animals both
 - (C) animals
 - (D) none of these
3. Identify the structure that is surrounded by guard cells in a leaf.
 - (A) Leaf
 - (B) Chlorophyll
 - (C) Stomata
 - (D) Photosynthesis
4. Which among the following helps the plant in trapping the sunlight?
 - (A) Chlorophyll
 - (B) Nutrients
 - (C) Photosynthesis
 - (D) Stomata
5. Complete the given equation:




- (A) 1. Oxygen, 2. Chlorophyll
 - (B) 1. Carbon dioxide, 2. Chlorophyll
 - (C) 1. Chlorophyll, 2. Glucose
 - (D) 1. Stomata, 2. Guard cells
6. Label the given figure according to the sequence:
 - (A) Sunlight, Carbon dioxide, Oxygen, Chlorophyll, Water.
 - (B) Oxygen, Water, Sunlight, Chlorophyll.
 - (C) Carbon dioxide, Oxygen, Sunlight, Water, Chlorophyll.
 - (D) Water, Sunlight, Oxygen, Carbon dioxide, Chlorophyll.



7. The green patches seen in stagnant water is
 (A) colour (B) algae
 (C) shadow (D) plants
8. The most vital component required by plants to make proteins is
 (A) carbon dioxide (B) air
 (C) oxygen (D) nitrogen
9. Which of the following plants are correctly arranged according to their mode of nutrition?

	Autotrophs	Heterotrophs	Insectivores
(A)	Fungi	Pitcher plant	Mustard plant
(B)	Mustard plant	Fungi	Pitcher plant
(C)	Fungi	Mustard plant	Pitcher plant
(D)	Mustard plant	Pitcher plant	Fungi

10. Which of the following plant has only heterotrophic mode of nutrition?
 (A) Pitcher plant (B) Venus flytrap
 (C) Cuscuta (D) Aloe vera
11. The organisms commonly seen during rains, and on decaying matter shows mode of nutrition.
 (A) Saprophytic (B) Heterotrophic
 (C) Autotrophic (D) Parasitic
12. Fungi secretes to convert food into solution and then absorbs from the matter.
 (A) fluids, simplified components (B) digestive juice, nutrients
 (C) simplified components, fluids (D) nutrients, digestive juice
13. Lichens are the best example to be associated to
 (A) autotrophic relationship (B) parasitic relationship
 (C) symbiotic relationship (D) all of these
14. Rather than adding fertilizers, what can farmers do to increase the fertility of their farm land?
 (A) By growing eucalyptus trees (B) Watering more frequently
 (C) By growing nitrogen fixing plants (D) By growing same crop every year
15. Choose the nutrients supplied by manures and fertilisers.
 (A) Oxygen (B) Nitrogen, Potassium, Phosphorus
 (C) Nitrogen, Potassium (D) Water, Oxygen, Nitrogen
16. Which of the following is useful to plants?
 (A) *Rhizobium* (B) Fungi
 (C) Lichen (D) Algae

17. The food synthesised by the plant is stored in the form of
 (A) glucose (B) starch
 (C) fat (D) protein
18. Pores responsible for the exchange of gases is
 (A) stomata (B) starch
 (C) guard cells (D) leaves do not have pores
19. The list given below represents the five steps required to do starch test, in random order.
 1. Boil the leaf in ethanol.
 2. Leave a potted plant out in the sun for a few hours.
 3. Wash the leaf and then add a few drops of Iodine solution over it.
 4. Soak the leaf in water.
 5. Pluck a leaf from the plant.
 Arrange the options in their correct sequence.
 (A) 5 → 1 → 2 → 4 → 3 (B) 2 → 5 → 1 → 4 → 3
 (C) 2 → 5 → 4 → 1 → 3 (D) 3 → 1 → 4 → 5 → 2
20. Which mode of nutrition is shown in the given image?
 (A) Organism X is being harmed by Y.
 (B) Symbiotic mode of nutrition because the organisms X and Y are being benefited in the process.
 (C) Predatory mode of nutrition as organism X is being eaten by the organism Y.
 (D) Heterotrophic mode of nutrition as the organism Y and X both are obtaining food for themselves.
- 
21. Which of the following association has great significance in farmland?
 (A) Association between fungi and algae. (B) Association between cactus and plant.
 (C) Association between legumes. (D) Association between legumes and rhizobium.
22. Riya has many croton plants at her home of different colours such as red, yellow, etc. What do you think, will they survive. If yes, then why?
 (A) Yes, but they will die soon. (B) No, they don't have chlorophyll.
 (C) Yes, they also perform photosynthesis. (D) Yes, they have stored food.

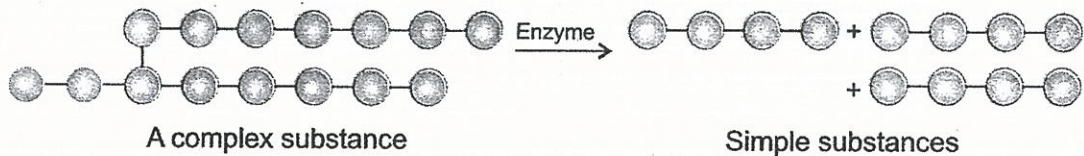
Darken your Choice with HB Pencil

1. (A) (B) (C) (D)	5. (A) (B) (C) (D)	9. (A) (B) (C) (D)	13. (A) (B) (C) (D)	17. (A) (B) (C) (D)	21. (A) (B) (C) (D)
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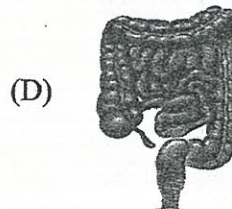
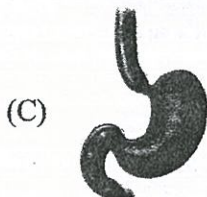
2. Nutrition in Animals

Multiple Choice Questions

1. What does the given diagram represents?



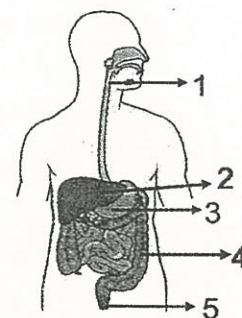
- | | |
|---------------|-----------------|
| (A) Nutrition | (B) Respiration |
| (C) Digestion | (D) Excretion |
2. Which of the following parts of the digestive system secretes Hydrochloric acid?



3. The correct sequence of main steps of digestion in human body is
- (A) digestion, ingestion, assimilation, absorption and egestion.
 (B) ingestion, digestion, absorption, assimilation and egestion.
 (C) absorption, egestion, assimilation, ingestion, digestion.
 (D) assimilation, egestion, digestion, absorption, digestion.

4. Label the given diagram of human digestive system.

	1	2	3	4	5
(A)	Oesophagus	Liver	Anus	Intestine	Stomach
(B)	Stomach	Anus	Oesophagus	Liver	Intestine
(C)	Intestine	Liver	Anus	Stomach	Oesophagus
(D)	Oesophagus	Liver	Stomach	Intestine	Anus







5. Recognise the alphabet that represents the human stomach's shape?
 (A) A (B) U
 (C) Z (D) O

6. Compare the columns and select the correct statement related to liver.

Column-A	Column-B
It is the largest gland of the body.	It is the largest gland of the body.
It does not secrete any juice.	It secretes bile juice.

- (A) Column A (B) Column B
 (C) Both columns A and B (D) None of these
7. Swati stated that 'stomach produces acid to digest the food'. If, it is incorrect or incomplete then restate the correct statement.
 (A) Acid kills the bacteria that enters along with food and makes an acidic medium in stomach.
 (B) The acid indirectly controls the bacteria.
 (C) Acid harms the inner wall of stomach.
 (D) Acid breaks down the proteins present in the food.
8. Humans cannot digest every food such as, cellulose. What could be the reason behind?
 (A) We don't have rumen.
 (B) We don't have cellulase enzyme.
 (C) We don't have digestive microbes in our gut.
 (D) HCl secreted by humans is not such acidic to break it.
9. The largest gland in the human body is
 (A) pancreas (B) liver
 (C) salivary (D) stomach
10. Select the correct term used for removal of the faeces from the body through anus.
 (A) Ingestion (B) Digestion
 (C) Egestion (D) Excretion

11. Which of the following fluid/juice converts complex carbohydrates and proteins into their simpler units in small intestine?
 (A) Bile juice (B) Pancreatic juice
 (C) Saliva (D) Digestive juice
12. Finger-like outgrowths present in the inner wall of small intestine are
 (A) cilia (B) villi
 (C) flagella (D) mucus
13. Which among the following is in the correct sequence?
 (A) Swallowing, mixing, chewing (B) Mixing, swallowing, chewing
 (C) Biting, chewing, mixing, swallowing (D) Biting, swallowing, chewing
14. Find the correct sequence of the end products of carbohydrates, proteins and fats in our small intestine.
 (A) Fatty acids and glycerol, amino acids, glucose
 (B) Glucose, fatty acid and glycerol, amino acids
 (C) Glucose, amino acids, fatty acids and glycerol
 (D) Fatty acids and glycerol, glucose, amino acids
15. Which of the following is not secreted in the stomach?
 (A) Saliva (B) Hydrochloric acid
 (C) Bile juice (D) Mucus
16. Which of the following diagram of tongue is correctly labelled?
 (A)  (B) 
 (C)  (D) 
17. What is the similarity among the following organs?
Liver, Salivary glands, Pancreas, Stomach, Small intestine
 (A) All are vital organs (B) All secretes digestive juices
 (C) All are big in size (D) All works in the breakdown of fat
18. The food trapped in a food vacuole of amoeba is digested
 (A) later when amoeba gets time (B) by digestive juices into the food vacuole
 (C) by rolling the vacuole slowly (D) ingestion process

19. The length of large and small intestine in our body is
 (A) 7.5 m, 1.5 m (B) 1.5 m, 7.5 m
 (C) 1.5 m, 1.5 m (D) 7.5 m, 7.5 m
20. Steps of digestion are listed below in random order. Arrange them in correct sequence.
 (i) Food is moistened; breakdown of starch begins
 (ii) Water and vitamins absorption begins
 (iii) Proteins, carbohydrates, and fats break down
 (iv) Food is liquified; breakdown of proteins begins
 (v) Undigested food stay in rectum.
 (A) iv → i → iii → v → ii (B) i → iv → iii → ii → v
 (C) v → ii → iii → iv → i (D) i → iv → ii → iii → v
21. Match the following

Column I	Column II
1. Fat is completely digested in large intestine.	(M) True
2. Digestion of starch starts in the stomach.	(N) False
3. The ruminants bring back swallowed food into their mouth and chew it for some time.	
4. The tongue helps in mixing of food with saliva.	

- (A) N, N, M, M (B) N, M, N, M
 (C) M, N, M, N (D) M, M, N, N
22. The secretion that plays role in digestion of fat is¹..... . It is secreted by²..... . It is³..... in colour situated in⁴..... part of the abdomen in⁵..... side.

	1	2	3	4	5
(A)	saliva	salivary gland	pink	top	left
(B)	digestive juice	stomach	pink	upper	right
(C)	saliva	salivary gland	white	lower	left
(D)	bile	liver	reddish brown	upper	right

Darken your Choice with HB Pencil

1. (A) (B) (C) (D)	5. (A) (B) (C) (D)	9. (A) (B) (C) (D)	13. (A) (B) (C) (D)	17. (A) (B) (C) (D)	21. (A) (B) (C) (D)
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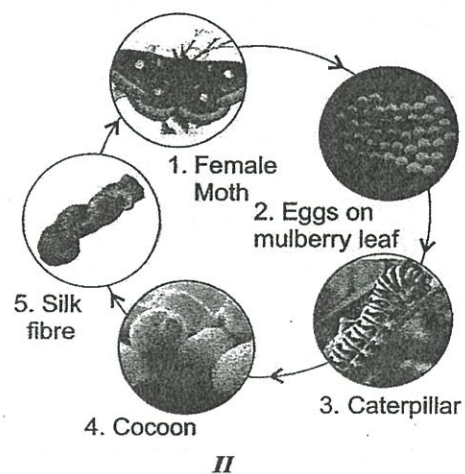
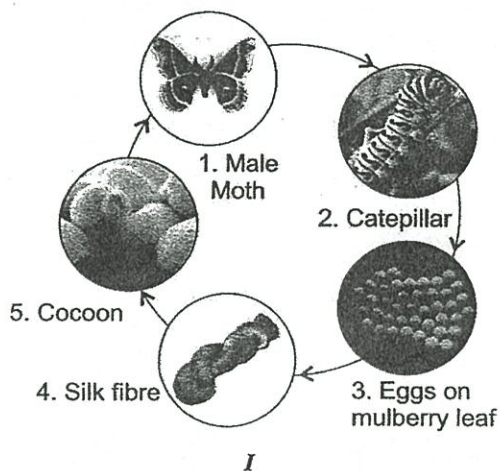
3.

Fibre to Fabric

Multiple Choice Questions

1. What is the use of woollen yarn?
(A) To make garments (B) To make woollen clothes like sweater
(C) To make cover (D) It is not important
2. Besides grazing by sheeps, the shephards feed their animals with
(A) roti, dal (B) milk, roti
(C) pulses, millets and oil cakes (D) grasses
3. The colour of natural fleece is
(A) white (B) black
(C) brown (D) all of these
4. The process of removing of hair of the sheep is called
(A) fleecing (B) shearing
(C) scouring (D) shorting
5. As long fibres are combed and rolled into yarn to make wool, similarly short fibres are spun and woven into
(A) sweaters (B) mufflers
(C) scarfs (D) woollen cloth
6. How can we seperate the silk fibre from cocoon?
(A) By keeping it under the sun (B) By boiling
(C) By giving steam (D) By any one of these

7. Choose from of the following statements that best describes the process of scouring.
- Removal of fleece from the sheep.
 - Thoroughly washing the sheared skin to remove dirt, grease and dust.
 - Washing the sheep before removing the fleece.
 - None of the above.
8. Sericulture is defined as
- growing silkworms on mulberry tree.
 - rearing of silkworms for obtaining silk.
 - growing of cocoons on mulberry tree.
 - feeding caterpillars on mulberry tree.
9. Which among the following diagrams exhibits the correct sequence of life cycle of silkworm? State your answer.



- I, catterpillar is at wrong place. It should be after eggs.
 - I, silk fibre is at wrong place. It should be after cocoon.
 - II, all steps are at correct places.
 - II, instead of female moth, male moth should be at 1st place.
10. Select is the correct sequence of processing fibres to wool.
- Sorting, scouring, fleecing, shearing.
 - Shearing, scouring, sorting, removing burrs, fibre-making, dying, yarn.
 - Removal of burrs, scouring, sorting, dying, shearing, yarn.
 - Both (A) and (B)
11. The silkworm is: (i) larva, (ii) caterpillar?
- (i)
 - (ii)
 - (i) and (ii)
 - neither (i) nor (ii)

12. The difference in texture, smoothness and shiny appearance of silk thread depends on

(A) the breed of silk moth	(B) length of silk yarn
(C) colour of silk yarn	(D) thickness of silk yarn
13. Yak and some other animals have thick hair. Choose the correct reason behind it.

(A) The hair traps a lot of air. It keeps them warm during winter.
(B) They cannot help it, it grows naturally.
(C) The hair looks beautiful on their body.
(D) The hair has no importance.
14. The correct categories/types of hair present on sheep are

(A) black and white	(B) coarse and fine
(C) fine and black	(D) black and coarse
15. The silkworm's caterpillar swings its head in the pattern of '8'. During this process, it secretes proteinaceous fibre to make a structure that covers its body. It is known as

(A) cocoon	(B) pupa
(C) moth	(D) silk
16. Certain breeds of sheep have thick coat of hair on their body. They yield good quality and quantity of wool. Shepherds breed sheeps by selecting at least one parent of this type. It is termed as

(A) rearing	(B) breeding
(C) reproducing	(D) selective breeding
17. Pick the odd one out.

(A) Sorting	(B) Fleecing
(C) Scouring	(D) Mulberry leaf
18. Fibres obtained from natural sources, such as plants and animals are known as natural fibres. is a fibre which is obtained as a secretion from the of a

(A) Sheep, wool, goat	(B) Fibre, wool, sheep
(C) Silk, coccon, silk worm	(D) Yarn, hair, sheep
19. The caterpillars eat fresh leaves for 20-25 days. Then they spin The structure is actually the of the developing silk moth.

(A) mango, pupa, silk	(B) neem, cocoon, pupa
(C) mulberry, cocoon, home	(D) guava, pupa, silk
20. Name the process that is used for obtaining threads from cocoon.

(A) Processing	(B) Rearing
(C) Washing	(D) Boiling

21. Find the correct answer after matching the column I and II.

Column I	Column II
1. Yak	(a) Food of caterpillar
2. Cocoon	(b) Yields silk fibres
3. Mulberry leaves	(c) Cleaning of sheared skin
4. Scouring	(d) A source of wool fibre

(A) 1-a, 2-b, 3-c, 4-d

(B) 1-d, 2-c, 3-a, 4-b

(C) 1-b, 2-c, 3-a, 4-a

(D) 1-d, 2-b, 3-a, 4-c

22. Select the correct match.

	Breed of sheep	States	Quality of wool
(A)	Rampur bushair	Andhra Pradesh	Carpet
(B)	Bakharwal	Jammu and Kashmir	For woollen shawls
(C)	Lohi	Bihar	For hosiery
(D)	Nali	Arunachal Pradesh	Brown fleece

23. Identify the fibre having following properties.

- It creases easily.
- It absorbs water quickly.
- It is obtained from plant.
- It can be washed and ironed easily.
- It is very porous.

✶ (A) Wool

(B) Silk

(C) Cotton

(D) Nylon

24. People working in the wool industry are always at risk of get infected by called, which leads to a fatal lung disease called

(A) bacterium, *Bacillus anthracis*, sorter's diseases

(B) bacterium, *Escherichia coli*, bronchitis

(C) fungus, *Salmonella typhimurium*, asthma

(D) virus, *Vibria anthracis*, sorter's disease

Darken your Choice with HB Pencil

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4.

Heat

Multiple Choice Questions

1. Normally, the human body temperature is almost fixed. It does not go below or above certain limit, and if it happens then it is an abnormal condition. The range of temperature marked on a clinical thermometer is

(A) 30°C to 35°C	(B) 35°C to 42°C
(C) 40°C to 45°C	(D) 45°C to 50°C

2. of boiling water cannot be measured by a ?

(A) Clinical thermometer, temperature	(B) Temperature, any instrument
(C) Temperature, clinical thermometer	(D) Hotness, any instrument

3. Identify the normal body temperature of human.

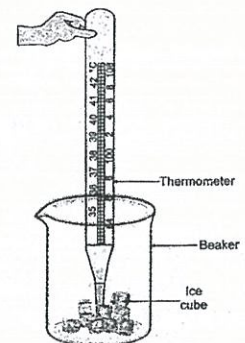
(A) 37°C	(B) 30°C
(C) 35°C	(D) 40°C

4. Which of the following substance is present in the bulb of thermometer?

(A) Iron	(B) Water
(C) Steel	(D) Mercury

5. Study the given diagram and find:
 - (i) Which type of instrument is shown to measure the temperature?
 - (ii) What is the temperature range of this instrument?

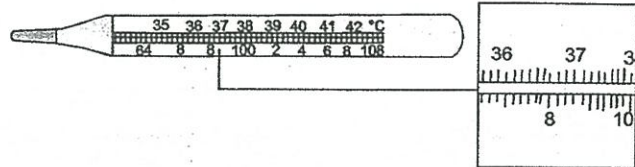
(A) (i) Clinical thermometer,	(ii) 35°C to 42°C
(B) (i) Clinical thermometer,	(ii) -10°C to 110°C
(C) (i) Laboratory thermometer,	(ii) 35°C to 42°C
(D) (i) Laboratory thermometer,	(ii) -10°C to 110°C



6. Which of the following best describes the sea breeze?
- (A) Rise of temperature of sea water during day time.
 (B) Rise of land temperature during day heats up the air above it and rises up. It is followed by cool air from sea.
 (C) Fall of land temperature during day cools the air above it and rises up. It is followed by hot air from sea.
 (D) Fall of land temperature.

7. The device shown in the given diagram is used to

- (A) read the temperature
 (B) measure the body temperature
 (C) calculate the temperature
 (D) locate the body temperature



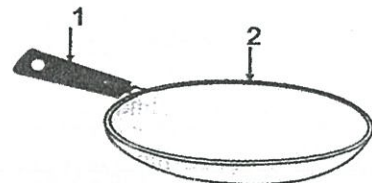
8. Which of the following option shows correct match of the columns?

Column I	Column II
(i) Sea breeze blows during	(a) summer
(ii) Dark-coloured clothes are worn in	(b) winter
(iii) Light-coloured clothes are liked in	(c) thermometer
(iv) Body temperature is measured by	(d) day

- (A) i-a, ii-b, iii-c, iv-d (B) i-a, ii-c, iii-b, iv-d
 (C) i-d, ii-b, iii-a, iv-c (D) i-c, ii-b, iii-a, iv-d

9. Choose the correct option to label the adjoining diagram.

- (A) 1-Insulator, 2-Insulator
 (B) 1-Conductor, 2-Conductor
 (C) 1-Conductor, 2-Insulator
 (D) 1-Insulator, 2-Conductor



10. When you heat the tip of a knife, kept in the fire/flames, the entire knife become hot. The mode of transfer of heat in it is

- (A) conduction (B) convection
 (C) radiation (D) gas flame

11. The spoon becomes hot if kept in glass of hot milk because of

- (A) radiation (B) conduction
 (C) convection (D) all of these

12. Which of the following is a set of conductors?

- (i) Glass, plastic, wood, paper.
 (ii) Iron rod, copper wire, water, knife.
 (A) (i) (B) (ii)
 (C) (i) and (ii) (D) None of these

13. Copper bottom of a steel pan helps in
 (A) heating faster (B) gives good colour to the pan
 (C) giving beauty to the pan (D) removing carbon of the pan
14. Which of the process of heat transfer is involved in heating the milk in the pot?
 (A) Convection (B) Conduction
 (C) Radiation (D) All of these
15. Select the the following modes of transfer of heat that does not need any medium.
 (A) Radiation (B) Convection
 (C) Conduction (D) Diffusion
16. While reading the temperature measured by the clinical thermometer, the mercury thread of the thermometer should lie
 (A) above the eye level (B) below the eye level
 (C) at the eye level (D) none of these
17. When you hold a handle of a hot pan kept on fire flame, the handle is not hot because it is made up of
 (A) conductor (B) insulator
 (C) semi-conductor (D) none of these
18. The wooden spoon of the ice-cream is
 (A) good conductor of heat (B) poor conductor of heat
 (C) good insulator of heat (D) both (B) and (C)
19. Swati took half bucket of hot water from the geyser. The temperature of water was 50°C . She added equal amount of cold water having 20°C temperature. The temperature of mixed water will be
 (A) $50^{\circ}\text{C} + 20^{\circ}\text{C} = 70^{\circ}\text{C}$ (B) 20°C
 (C) 50°C (D) between 20°C and 50°C
20. A body having temperature of 20°C is put in water having same temperature. In this case heat
 (A) will move from water to the body (B) will not flow
 (C) will move from body to water (D) none of these

21. (i) Shashi has wrapped an utensil with black paper.
 (ii) Swati has wrapped an utensil with white paper.
 They wanted to check, water kept in which utensil will get hot/warm faster when kept in sun. Can you state?
- (A) Utensil wrapped with black paper (B) Utensil wrapped with white paper
 (C) It depends on sunshine (D) It depends on water kept
22. When blocks of ice are pressed they get joined. This happens because
 (A) melting point rises with pressure (B) heat is rejected to outside
 (C) melting point falls with pressure (D) heat is absorbed from outside
23. Three siblings, Prisha, Disha and Aahan carry water bottles in the bags to their school.
- Prisha covers it with a bubble wrap.
 - Disha covers it with a plastic bag.
 - Aahan covers it with an aluminium foil.
- Whose water will remain cool for a longer period of time?
- (A) Prisha's (B) Disha's
 (C) Aahaan's (D) Both (A) and (B)
24. When a train passes by a station, what change occurs to the railway tracks?
 (A) The colour of track lightens (B) The colour track darkens
 (C) Tracks expands (D) Tracks shrinks

Darken your Choice with HB Pencil

1.	(A) (B) (C) (D)	5.	(A) (B) (C) (D)	9.	(A) (B) (C) (D)	13.	(A) (B) (C) (D)	17.	(A) (B) (C) (D)	21.	(A) (B) (C) (D)
2.	(A) (B) (C) (D)	6.	(A) (B) (C) (D)	10.	(A) (B) (C) (D)	14.	(A) (B) (C) (D)	18.	(A) (B) (C) (D)	22.	(A) (B) (C) (D)
3.	(A) (B) (C) (D)	7.	(A) (B) (C) (D)	11.	(A) (B) (C) (D)	15.	(A) (B) (C) (D)	19.	(A) (B) (C) (D)	23.	(A) (B) (C) (D)
4.	(A) (B) (C) (D)	8.	(A) (B) (C) (D)	12.	(A) (B) (C) (D)	16.	(A) (B) (C) (D)	20.	(A) (B) (C) (D)	24.	(A) (B) (C) (D)

5. Acids, Bases and Salts

Multiple Choice Questions

- Lichens are the natural source of
(A) acid (B) indicator
(C) base (D) basic indicator
- You dip a red and blue litmus paper in a solution, respectively and their colour do not change. Which type of solution is it?
(A) Neutral (B) Acidic
(C) Basic (D) Either acidic or basic
- 'Acere' in Latin stands for
(A) sweet (B) acid
(C) sour (D) base
- The dark pink colour obtained by the addition of china rose indicator states that solution is in nature.
(A) basic (B) neutral
(C) acidic (D) any of these
- China rose indicator turns basic solution to which of the following colour?
(A) Blue (B) Green
(C) Black (D) Red
- Fill in the blank:

Base	+		→	Pink colour solution
------	---	--	---	----------------------

(A) Turmeric (B) Phenolphthalein
(C) Litmus (D) Rose
- Our stomach has Hydrochloric acid (HCl). Excess of it causes 'acidity' which is harmful. It can be neutralised by using
(A) substance that neutralise acid (B) antacid
(C) milk of magnesia (D) any one of these

8. The common characteristic of acetic acid, citric acid, lactic acid and ascorbic acid is that they
 (A) occur naturally (B) occur in fruits
 (C) are sour to taste (D) both (A) and (C)
9. The chemical substance present in calamine solution, which is used to neutralise formic acid is
 (A) Zinc carbonate (B) Sodium hydrogen carbonate
 (C) Magnesium carbonate (D) Calcium carbonate
10. If the solution of baking soda is mixed with turmeric solution, the colour of turmeric solution will change into because baking soda is
 (A) blue, acid (B) blue, basic
 (C) red, acid (D) red, basic
11. Ant bite injects formic acid into the skin. This creates itching and sometimes swelling. To neutralise it, we can use
 (A) calamine solution (B) baking soda solution
 (C) both (A) and (B) (D) either (A) or (B)
12. 'Colin' is used as glass-cleaner, it has ammonia/ammonium hydroxide. When it is applied litmus paper turns blue. This means that colin is
 (A) acidic in nature (B) basic in nature
 (C) neutral in nature (D) can not determine
13. The given reaction is an example of reaction.
- $$\boxed{\text{Acid}} + \boxed{\text{Base}} \longrightarrow \boxed{\text{Salt}} + \boxed{\text{Water}}$$
- (A) acidic (B) basic
 (C) neutralisation (D) all of these
14. The basic difference between acid and base is that
 (A) acids are sour and bases are bitter (B) acids are bitter and bases are sour
 (C) acids are sweet and bases are bitter (D) acids are bitter and bases are sweet
15. Why does the excessive use of chemical fertilisers make the soil unsuitable for cultivation? It is because fertilizers
 (A) makes soil acidic or basic (B) enhance the quality of soil
 (C) degrades the quality of soil (D) all of these
16. A natural indicator obtained from a flower, when put in acidic solution turns into colour, and when added to basic solution turns to
 (A) turmeric, red, blue (B) lichen, blue, red
 (C) china rose, blue, red (D) lichen, magenda, red
17. Mrs. Renu Srivastav, the science teacher asked Shashank to write a neutralisation reaction. He wrote: Hydrochloic acid + Sodium hydroxide \rightarrow Sodium chloride + Water + Heat. What do you think of this reaction?
 (A) Correct (B) Partly correct
 (C) Partly incorrect (D) Do not know

18. Match the following:

Column I	Column II
1. Caustic potsh	(M) disinfectant
2. Calcium hydroxide	(N) Tomato
3. Oxalic acid	(O) Antacid
4. Magnesium hydroxide	(P) Soap

(A) 1-P, 2-O, 3-N, 4-M

(B) 1-M, 2-O, 3-N, 4-P

(C) 1-M, 2-N, 3-O, 4-P

(D) 1-P, 2-N, 3-O, 4-M

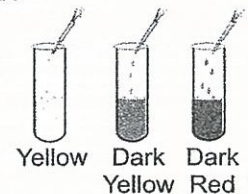
19. The given figure shows the colour changes in test tubes I, II and III, when turmeric indicator is added to them. The respective solutions in test tubes I, II and III are

(A) orange juice, lime water, lemon juice

(B) lime water, orange juice, lemon juice

(C) lemon juice, orange juice, lime water

(D) orange juice, lemon juice, lime water



20. Which of the following shows the correct colour change?

Sample	Blue litmus to red	Red litmus to blue
(i) Colin	x	✓
(ii) Shampoo	x	✓
(iii) Baking soda	✓	x
(iv) Glucose	✓	x

(A) (i) and (ii)

(B) (iii) and (iv)

(C) (i) and (iv)

(D) (ii) and (iii)

21. **Statement 1:** Acids are sour while bases are bitter in taste.

Statement 2: Caustic soda is lathery.

(A) Both statements are correct and statement 2 is correct explanation of statement 1.

(B) Both statements are correct and statement 2 is incorrect explanation of statement 1.

(C) Statement 1 is correct and statement 2 is incorrect.

(D) Both statement 1 and 2 are incorrect.

Darken your Choice with HB Pencil

1. (A) (B) (C) (D)	5. (A) (B) (C) (D)	9. (A) (B) (C) (D)	13. (A) (B) (C) (D)	17. (A) (B) (C) (D)	21. (A) (B) (C) (D)
2. (A) (B) (C) (D)	6. (A) (B) (C) (D)	10. (A) (B) (C) (D)	14. (A) (B) (C) (D)	18. (A) (B) (C) (D)	
3. (A) (B) (C) (D)	7. (A) (B) (C) (D)	11. (A) (B) (C) (D)	15. (A) (B) (C) (D)	19. (A) (B) (C) (D)	
4. (A) (B) (C) (D)	8. (A) (B) (C) (D)	12. (A) (B) (C) (D)	16. (A) (B) (C) (D)	20. (A) (B) (C) (D)	

6. Physical and Chemical Changes

Multiple Choice Questions

1. A blacksmith uses an iron rod to heat it in the fire. The iron rod turns orange in colour when kept in fire but when it is removed out from fire, it loses its orange colour. This is a
(A) chemical change (B) physical change
(C) both (A) and (B) (D) none of these
2. Swati added few ice cubes in a tumbler having water. After 10 minutes, the ice cubes disappeared and water drops appeared on the outer surface of the tumbler. List out both the changes.
(A) Both are chemical changes (B) First is physical and second is chemical
(C) First is chemical and second is physical (D) Both are physical change
3. Which of the following can be observed in a chemical change?
(A) Evolving of heat, light and sound (B) Production of smell and smoke or gas
(C) New colour may be formed (D) All of these
4. Burning of incense stick gives fumes, ash and pleasant smell. What would you call it?
(A) Physical change (B) Chemical change
(C) Both (A) and (B) (D) Cannot determine
5. The process of formation of crystals is called
(A) crystallisation (B) chemical reaction
(C) physical change (D) both (A) and (B)
6. Rusting of iron can be best represented by
(A) $\text{Fe} \longrightarrow \text{Fe}_2\text{O}_3$ (B) $\text{Fe} + \text{O}_2 \longrightarrow \text{Fe}_2\text{O}_3$
(C) $\text{O}_2 \longrightarrow \text{Fe}_2\text{O}_3$ (D) $\text{Fe} + \text{O}_2 + \text{H}_2\text{O} \longrightarrow \text{Fe}_2\text{O}_3$
7. Sakshi was boiling water in a vessel. She observed that water-vapour was arising from water. She covered the vessel with a lid. What did she notice?
(A) Vapours stopped by the lid (B) Vapours won't stop by the lid
(C) Vapours gets changed to water-drops (D) None of these

8. Most of the iron-articles get rusted when kept open. It is a
 (A) formation of new product (B) rust formation
 (C) chemical change (D) all of these
9. The ash obtained after burning the magnesium ribbon when mixed with water forms a solution of magnesium hydroxide. How can you say that it is basic in nature?
 (A) Red litmus paper turns blue when dipped in it.
 (B) Blue litmus paper turns red when dipped in it.
 (C) Colour remained same when dipped in it.
 (D) This doesn't happens.
10. The correct reason for the formation of a blue solution on mixing copper sulphate and few drops of sulphuric acid is
 (A) chemical change (B) no reaction
 (C) physical change (D) none of these
11. The process of depositing a layer of a metal on another metal is called
 (A) rusting (B) galvanisation
 (C) painting (D) depositing
12. When sea water evaporates, salt is formed. It is a
 (A) physical change (B) chemical change
 (C) no change (D) I don't know
13. Rusting of an iron article can be prevented by
 (A) reducing its contact with air (B) applying paint on it
 (C) applying a layer of chromium (D) all of these
14. Complete the following reaction:

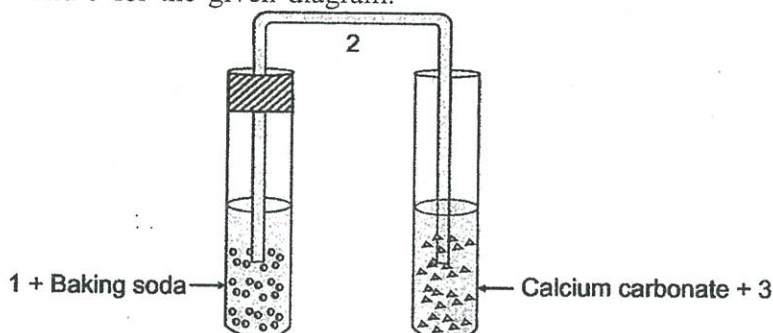
$$\text{Magnesium oxide} + \text{Water} \longrightarrow ?$$

 (A) Magnesium hydroxide (B) Oxygen
 (C) Both (A) and (B) (D) No reaction
15. The burning of magnesium ribbon can be represented by an equation:
 (A) $\text{Mg} \xrightarrow{\text{Air}} \text{MgO}$ (B) $\text{Mg} + \text{O}_2 \longrightarrow \text{MgO}$
 (C) Both (A) and (B) (D) Neither (A) nor (B)
16. The new products formed in given reaction are
 i. $\text{CaO} + \text{H}_2\text{O} \longrightarrow \text{Ca(OH)}_2$ ii. $\text{Mg} + \text{O}_2 \longrightarrow \text{MgO}$
 iii. $\text{CuSO}_4 + \text{Fe} \longrightarrow \text{FeSO}_4 + \text{Cu}$
 (A) H_2O , MgO , Cu (B) Ca(OH)_2 , MgO , FeSO_4
 (C) Ca(OH)_2 , MgO , FeSO_4 , Cu (D) H_2O , MgO , Cu
17. Analyse the following reaction as physical or chemical change.

$$\text{Copper sulphate solution} + \text{Iron} \longrightarrow \text{Iron sulphate solution} + \text{Copper deposit.}$$

 (Blue colour) (Green) (Brown)
 (A) Physical change (B) Chemical change
 (C) Both physical and chemical changes (D) No changes

18. One day when dodo's mother was boiling milk, it suddenly got spoiled. She observed that small clots from milk were formed. These clots are of paneer/cottage cheese. This represents.
- (A) Chemical reaction took place (B) Physical change took place
(C) Clots are of cottage cheese (D) None of these
19. Bursting of fire crackers everywhere produces – light, sound, fumes and smell. Fumes pollute the atmosphere. Which part shows chemical and physical changes?
- (A) The whole activity is physical change.
(B) The whole activity is chemical change.
(C) The production of light, sound, fumes and smell is chemical change. Pollution of atmosphere is physical change.
(D) The production of sound is physical change and air-pollution is chemical change.
20. Digestion of food in stomach and intestine is a
- (A) physical change (B) biological change
(C) chemical change (D) no change
21. Identify 1, 2 and 3 for the given diagram.



- (A) 1. Calcium, 2. Lime, 3. Carbon dioxide
(B) 1. Lime water, 2. Vinegar, 3. Carbon dioxide
(C) 1. Carbon dioxide, 2. Lime water, 3. Vinegar
(D) 1. Vinegar, 2. Carbon dioxide, 3. Lime water

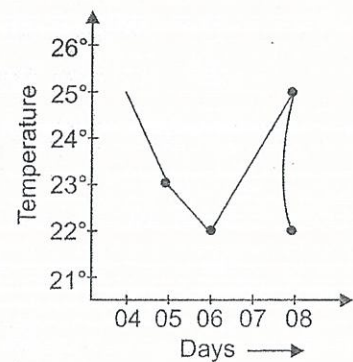
Darken your Choice with HB Pencil

1.	(A)(B)(C)(D)	5.	(A)(B)(C)(D)	9.	(A)(B)(C)(D)	13.	(A)(B)(C)(D)	17.	(A)(B)(C)(D)	21.	(A)(B)(C)(D)
2.	(A)(B)(C)(D)	6.	(A)(B)(C)(D)	10.	(A)(B)(C)(D)	14.	(A)(B)(C)(D)	18.	(A)(B)(C)(D)		
3.	(A)(B)(C)(D)	7.	(A)(B)(C)(D)	11.	(A)(B)(C)(D)	15.	(A)(B)(C)(D)	19.	(A)(B)(C)(D)		
4.	(A)(B)(C)(D)	8.	(A)(B)(C)(D)	12.	(A)(B)(C)(D)	16.	(A)(B)(C)(D)	20.	(A)(B)(C)(D)		

7. Weather, Climate and Adaptations of Animals to Climate

Multiple Choice Questions

- The weather report of a day gives report on
 (A) temperature (B) rainfall
 (C) humidity (D) all of these
- The given graph represents temperature recorded for five consecutive days of a month. The graph shows that the temperature
 (A) is fixed for five days
 (B) varies for five days
 (C) can not predict
 (D) all of these
- Calculation of the average temperature of a place is done by
 (A) the average temperature of the month. (B) the average temperature of many years.
 (C) the average temperature of one year. (D) the temperature of a day.
- Monkeys of tropical rainforests usually have
 (A) no tail (B) short tail
 (C) long tail (D) all of these
- List out the features that helps polar bear to live in extreme cold climate conditions.
 (A) Thin skin, large eyes and fur (B) Thick skin, fat layers and white fur
 (C) White fur, paws and tail (D) White fur, tail and fat
- Desert climate is
 (A) cold and wet (B) hot and wet
 (C) wet and dry (D) hot and dry



7.has helped the organisms to develop habits and features to themselves to their surroundings for survival?
 (A) Evolve, adapt (B) Evolution, adaptation
 (C) Adapt, evolve (D) Evolution, adapt
8. A person from Delhi wanted to visit Bengaluru. Which parameters he should check to know the weather condition of that place?
 (A) Rainfall and humidity (B) Wind speed
 (C) Temperature (D) All of these
9. North-east part of India is most of the time in a year.
 (A) dry (B) hot
 (C) wet (D) cold.
10. Many animals of tropical rainforests are adapted to live in
 (A) water (B) land
 (C) both water and land (D) tree
11. Which of the following types of climate applies to tropical region?
 (A) Hot and humid (B) Hot and dry
 (C) Cold and humid (D) Cold and dry
12. Which of the following is incorrect for polar bear?
 (A) They can climb tree (B) They can swim in water
 (C) They can walk on snow (D) They can live in extreme cold
13. The average weather pattern of the place recorded for long time for about 10–25 years is of the place.
 (A) weather (B) daily report
 (C) annual report (D) climate
14. Persons who predict and report about weather are called
 (A) reporters (B) news readers
 (C) weatherist (D) meteorologist
15. Place receives very less rainfall and has high temperature through the year. The climate of this region is For example,
 (A) wet and hot, Haryana (B) dry and hot, Chennai
 (C) dry and hot, Rajasthan (D) wet and hot, Rajasthan
16. Which of the following instrument is used to measure rainfall?
 (A) Barometer (B) Seismometer
 (C) Raingauge (D) Thermometer

17. Temperature in polar regions can be
 (A) 0°C (B) 30°C
 (C) 100°C (D) -37°C
18. Huddling of penguins helps them to
 (A) get food (B) keep them warm
 (C) walk easily (D) run freely
19. The weather of a place
 (A) changes frequently even in a day (B) remains constant for a day
 (C) cannot be predicted even in years (D) can be predicted but sometimes only
20. Hundreds of birds come to different places in India because they
 (A) like beautiful places of India (B) like to eat food made in India
 (C) get proper food, climate and shelter (D) none of these
21. Huge populations of plants and animals are found in the tropical rainforests. Justify it.
 (A) Climate is best for their survival (B) Well protected in thick forests
 (C) They are safe there (D) None of the above
22. The maximum temperature of the day occurs generally after 12.00 noon, while the minimum temperature occurs at 5.00 p.m.
 The above statement
 (A) is not true. (B) is partly true.
 (C) has no significance. (D) is correct.
23. Which of the following best describes the characteristics of tropical animals?
 (A) Sensitive hearing, sharp eye-sight (B) Thick skin and skin colour
 (C) Can do camouflage. (D) All of these
24. The animals in the tropical rainforests are adapted to eat different kinds of food
 (A) to beat the competition for survival (B) to meet the availability of food
 (C) for their protection from others (D) none of these

Darken your Choice with HB Pencil

1.	(A) (B) (C) (D)	5.	(A) (B) (C) (D)	9.	(A) (B) (C) (D)	13.	(A) (B) (C) (D)	17.	(A) (B) (C) (D)	21.	(A) (B) (C) (D)
2.	(A) (B) (C) (D)	6.	(A) (B) (C) (D)	10.	(A) (B) (C) (D)	14.	(A) (B) (C) (D)	18.	(A) (B) (C) (D)	22.	(A) (B) (C) (D)
3.	(A) (B) (C) (D)	7.	(A) (B) (C) (D)	11.	(A) (B) (C) (D)	15.	(A) (B) (C) (D)	19.	(A) (B) (C) (D)	23.	(A) (B) (C) (D)
4.	(A) (B) (C) (D)	8.	(A) (B) (C) (D)	12.	(A) (B) (C) (D)	16.	(A) (B) (C) (D)	20.	(A) (B) (C) (D)	24.	(A) (B) (C) (D)

8. Winds, Storms and Cyclones

Multiple Choice Questions

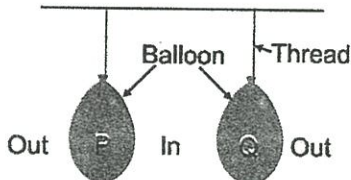
1. Recall the characteristic of air that helps the balloon to inflate.

(A) Wind	(B) Weight
(C) Pressure	(D) All of these

2. Thunderstorm is identified by

(A) rain	(B) swift falling of rain
(C) raising air creates lightning and sound	(D) Both (B) and (C)

3. In the given diagram, if you blow air between balloon P and balloon Q, then

(A) both balloons will go away from each other.	
(B) balloon P will only go away and Q will remain their.	
(C) balloon Q will only go away and P will remain their	
(D) both balloons will come closer.	

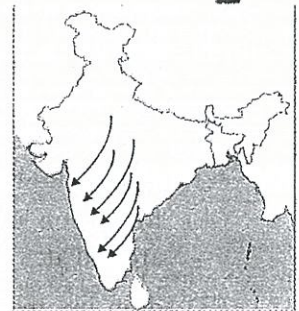
4. Cyclone is due to the

(A) formation of a very low pressure system with very high speed winds revolving around it.	(B) drop in pressure in the centre and tends to rise of atmospheric air.
(C) rushing of air to centre of the storm.	(D) all of these

5. The push of water on shore, before the arrival of cyclone, can be felt even if it is

(A) 1 km away	(B) 10 kms away
(C) 100 kms away	(D) 10,000 kms away

6. During summers, when the days are hot due to high temperature, the air
 (A) becomes light and rises up (B) becomes light
 (C) rises up (D) remains still
7. The movement of air takes place from
 (A) low pressure $\xrightarrow{\text{air}}$ high pressure (B) high pressure $\xrightarrow{\text{air}}$ low pressure
 (C) low pressure $\xrightarrow{\text{air}}$ low pressure (D) high pressure $\xrightarrow{\text{air}}$ high pressure
8. Development of a cyclone is due to
 (A) wind speed and direction (B) temperature and humidity
 (C) sound and lightning (D) both (A) and (B).
9. The indication of a cyclone at sea shore is by
 (A) fast winds (B) pushing of waters to shore
 (C) weather report (D) none of these
10. Wind currents are created on the Earth. It is because
 (A) of flow of air (B) of heating of surface
 (C) of uneven heating of the Earth (D) it is a natural phenomeon
11. Why do the fumes from burning incense sticks go up?
 (A) Because sticks are in the standing position
 (B) Because fumes always go up only
 (C) Because the fumes are warm and light
 (D) Because air always go up
12. The given map of India, shows south west direction of winds. This causes
 (A) rains as the winds come from sea towards the land.
 (B) rains as the winds come from land towards the sea.
 (C) no rains.
 (D) none of these
13. Which coastline of India is prone to cyclone?
 (A) Eastern coastline (B) Western coastline
 (C) Both (A) and (B) (D) None of these
14. When the air is warm it becomes light, rises up and creates vacuum at a place. The air from sides will
 (A) also go away (B) move away
 (C) rush towards the vacuum (D) none of these



15. Which of the following is not frequent in India?
(A) Tornado (B) Rain
(C) Cyclone (D) Flood
16. Air-conditioner must be fitted on the top part of the room or wall because
(A) it looks good (B) it should be away from children's hand
(C) cool air is heavier and settles down (D) it must be hidden up
17. A dark funnel-shape cloud that reaches the ground is called
(A) storm (B) cyclone
(C) tornado (D) flood
18. Science teacher demonstrated following activity in the classroom.
She poured hot water in a bottle and tightened the lid, then she poured cold water over the bottle. The bottle got distorted.
The teacher wanted to know the reason. What could be the reason behind it?
(A) We should not pour cold water on bottle.
(B) We should not fill bottle with hot water.
(C) The hot water in bottle exerts pressure on the bottle wall. When cold water is poured on it, it suddenly contracts because the pressure is reduced.
(D) All of these
19. What could be the possible reason behind keeping holes in big banners and hoardings?
(A) Holes helps the winds to pass through them
(B) Holes provide safety from damage due to wind
(C) Both (A) and (B)
(D) Neither (A) nor (B)
20. During a stormy day, it is seen that roof of sheds fly off. It happens so because
(A) roof sheds are loose
(B) roof sheds are light weight
(C) wind creates low pressure under the roof
(D) all of these
21. What happens to heat when water vapour changes back to liquid in the form of rain drops?
(A) heat get released (B) heat get absorbed
(C) first heat get absorbed then released (D) nothing happens to heat

22. Below is the list of events happen during thunderstorm, but in random order. Arrange them in correct sequence.

- (i) Forming water droplets, raising air moving vigorously.
 - (ii) Warm air rises, cools and the water-vapours condense to form clouds.
 - (iii) Sets convection in air.
 - (iv) Cool air cover the low-pressure area.
 - (v) Warm air rises, creating a low-pressure area.
 - (vi) Difference in temperature between two places.
 - (vii) Bigger water drops fall on ground as rain, hail or snow.
- (A) (i)→(ii)→(iii)→(iv)→(v)→(vi)→(vii) (B) (vi)→(iii)→(v)→(iv)→(ii)→(vii)→ (i)
 (C) (v)→(iv)→(vi)→(vii)→(iii)→(ii)→(i) (D) (ii)→(i)→(iii)→(vii)→(iv)→(vi)→(v)

23. Match the following.

Column I	Column II
(P) Moving air	(i) Thunderstorms
(Q) Develop in hot, humid tropical area	(ii) Monsoon
(R) Dark funnel shaped cloud	(iii) Wind
(S) Wind carrying water	(iv) Tornado

- (A) P-(ii), Q-(i), R-(iv), S-(ii) (B) P-(iii), Q-(i), R-(iv), S-(ii)
 (C) P-(iii), Q-(i), R-(ii), S-(iv) (D) P-(ii), Q-(iii), R-(i), S-(iv)

Darken your Choice with HB Pencil

1. (A) (B) (C) (D)	5. (A) (B) (C) (D)	9. (A) (B) (C) (D)	13. (A) (B) (C) (D)	17. (A) (B) (C) (D)	21. (A) (B) (C) (D)
2. (A) (B) (C) (D)	6. (A) (B) (C) (D)	10. (A) (B) (C) (D)	14. (A) (B) (C) (D)	18. (A) (B) (C) (D)	22. (A) (B) (C) (D)
3. (A) (B) (C) (D)	7. (A) (B) (C) (D)	11. (A) (B) (C) (D)	15. (A) (B) (C) (D)	19. (A) (B) (C) (D)	23. (A) (B) (C) (D)
4. (A) (B) (C) (D)	8. (A) (B) (C) (D)	12. (A) (B) (C) (D)	16. (A) (B) (C) (D)	20. (A) (B) (C) (D)	

9.

Soil

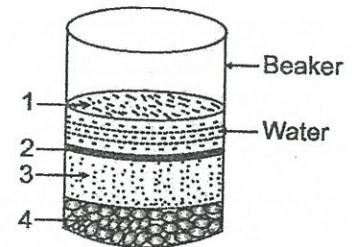
Multiple Choice Questions

1. The process of breaking down of rocks to form soil is called
(A) soil (B) weathering
(C) humus (D) gravel
2. Different layers of soil shows different
(A) texture (B) colour
(C) depth and chemical composition (D) all of these
3. Sandy loam soil is good for
(A) cotton cultivation (B) wheat cultivation
(C) pulse cultivation (D) rice cultivation
4. Clayey soil is identified by
(A) its fine particles (B) no air spaces in it
(C) water retention capacity (D) all of these
5. Paddy crops grow well in
(A) clayey soil (B) water retaining soil
(C) sandy soil (D) both (A) and (C)
6. Loamy soil has
(A) large particles (B) fine particles
(C) both (A) and (B) in equal proportion (D) all of these
7. Water holding capacity is highest in
(A) sandy soil (B) loamy soil
(C) clayey soil (D) all of these
8. Factors that decide the nature of soil is
(A) the type of vegetation that grows in it (B) rocks from soil is formed
(C) both (A) and (B) (D) none of these

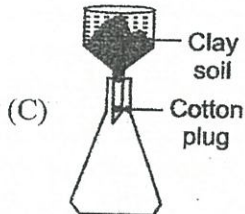
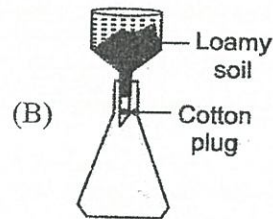
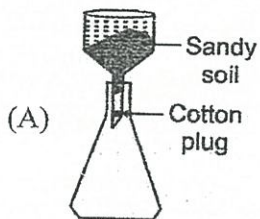
9. Sneha took a soft drink bottle of 200 ml and filled it with water. She poured the water in a flower pot. It took 10 minutes for water to percolate in it. The percolation rate of the soil is
 (A) 0.03 ml/sec (B) 0.033 ml/sec
 (C) 0.20 ml/sec (D) 2.0 ml/sec
10. Size of slit lies between
 (A) humus and sand (B) sand and clay
 (C) gravel and sand (D) clay and gravel
11. Which of the following agents helps in the formation of soil?
 (A) Winds (B) Rain
 (C) Climate (D) All of these
12. Pulses grow in loamy soil as they
 (A) keep soil dry (B) drain water easily
 (C) keep soil moist (D) none of these
13. Organisms such as insects, worms, rodents etc, and roots of the plants are found in
 (A) bed rock (B) C-horizon
 (C) B-horizon (D) A-horizon
14. Which one of the following is not associated with top soil?
 (A) Rich in minerals and humus (B) Below B-horizons
 (C) Fertile and nutritive for plants (D) Soft, porous and retains water
15. The soil layer that is compact, harder, richer in minerals and less in humus is
 (A) A-horizon (B) B-horizon
 (C) C-horizon (D) all of these
16. The percolation rate of water in soil can be calculated by
 (A) $\frac{\text{Amount of water (ml)}}{\text{Percolation time}}$
 (B) Percolation time (min) \times Amount of water (ml)
 (C) Percolation time (min) + Amount of water (ml)
 (D) $\frac{\text{Percolation time (min)}}{\text{Amount of water(ml)}}$
17. "Soil is important for life on earth." The correct justification of this statement is, it provides
 (A) nutrients to plants (B) shelter to small animals
 (C) medium for cultivation of food (D) All of these
18. Different types of crops are cultivated in different soils because every crop
 (A) requires different minerals and water (B) requires climatic condition
 (C) requires different type of soils (D) all of these
19. Sandy soil does not retain water, because it is made up of particles.
 (A) very small (B) very big
 (C) big (D) of equal size

20. Arrange the soil components from 1 to 4 as shown in the given diagram.

	1	2	3	4
(A)	Gravel	Sand	Clay	Humus
(B)	Humus	Clay	Sand	Gravel
(C)	Clay	Humus	Sand	Gravel
(D)	Sand	Gravel	Humus	Clay



21. An experiment is conducted between sandy, loamy and clay soil to check the retention of water. Which sample of soil will retain more water?



(D) All have same retention rate.

22. Match the following

Column I	Column II
(M) Sandy soil	(i) any kind of soil
(N) Earthworms	(ii) dark in colour
(O) Upper layer of soil	(iii) lesser amount of humus
(P) Middle layer of soil	(iv) packed tightly
(Q) Clayey soil	(v) large particles

(A) M-(iv), N-(v), O-(iii), P-(i), Q-(ii) (B) M-(v), N-(i), O-(ii), P-(iii), Q-(iv)

(C) M-(iv), N-(v), O-(ii), P-(i), Q-(iii) (D) M-(v), N-(iv), O-(iii), P-(ii), Q-(i)

Darken your Choice with HB Pencil

1. (A B C D)	5. (A B C D)	9. (A B C D)	13. (A B C D)	17. (A B C D)	21. (A B C D)
2. (A B C D)	6. (A B C D)	10. (A B C D)	14. (A B C D)	18. (A B C D)	22. (A B C D)
3. (A B C D)	7. (A B C D)	11. (A B C D)	15. (A B C D)	19. (A B C D)	
4. (A B C D)	8. (A B C D)	12. (A B C D)	16. (A B C D)	20. (A B C D)	

10. Respiration in Organisms

Multiple Choice Questions

- The process inhalation is
 - flow of air into an organism
 - flow of oxygen in an organism
 - flow of air out of an organism
 - flow of carbon dioxide out of an organism
- The given reaction states

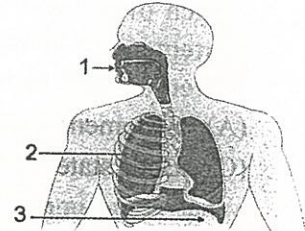
$$\boxed{\text{Glucose}} + \boxed{\text{Carbon dioxide}} \xrightarrow{\text{without oxygen}} \boxed{\text{Alcohol}} + \boxed{\text{Carbon dioxide}} + \boxed{\text{Energy}}$$
 - making of food
 - breakdown of food to release energy
 - formation of Carbon dioxide
 - formation of energy
- We experience muscular cramps after heavy exercise due to
 - anaerobic respiration
 - partial break down of glucose
 - formation of lactic acid
 - all of these
- Which of the following is arranged in the order of lowest to highest breathing rate?
 - Walking, Running, Reading
 - Reading, Walking, Running
 - Running, Reading, Walking
 - Walking, Reading, Running
- Which of the following represents anaerobic reaction in human muscle cells?
 - Glucose $\xrightarrow{\text{without oxygen}}$ Alcohol + Carbon dioxide + Energy
 - Glucose $\xrightarrow{\text{without oxygen}}$ Lactic acid + Energy
 - Glucose $\xrightarrow{\text{with oxygen}}$ Carbon dioxide + Water + Energy
 - None of these
- $$\boxed{\text{Food}} + \boxed{\text{Oxygen}} \longrightarrow \boxed{\text{Carbon dioxide}} + \boxed{\text{Energy}}$$

The reaction given above is called

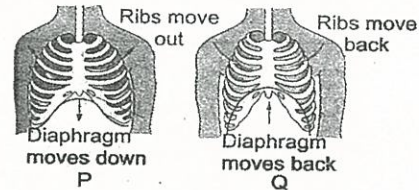
 - breakdown reaction
 - aerobic reaction
 - aerobic respiration
 - anaerobic respiration

7. Label the given diagram.

	1.	2.	3.
(A)	Nostrils	Diaphragm	Lungs
(B)	Diaphragm	Nostrils	Lungs
(C)	Nostrils	Lungs	Diaphragm
(D)	Lungs	Diaphragm	Nostrils



8. The amount of carbon dioxide in exhaled air is more than in inhaled air. The intake and output of this gas in percentage is
 (A) 20%, 10% (B) 4.4%, 0.04%
 (C) 5%, 20% (D) 1.5%, 10%
9. Roots of plants that are in soil get air from
 (A) water (B) soil
 (C) air packed between soil particles (D) doesn't require air
10. Which of the following happens during exhalation?
 (A) Ribs move up and outwards, diaphragm moves down
 (B) Ribs move down and inwards, diaphragm moves up
 (C) Ribs move up and inwards, diaphragm moves down
 (D) Ribs move down and outwards, diaphragm moves up
11. Plants take in and give out during respiration.
 (A) carbon dioxide, oxygen (B) carbon dioxide, carbon dioxide
 (C) oxygen, carbon dioxide (D) oxygen, oxygen
12. Which of the following diagram represents inhalation?
 (A) P
 (B) Both P and Q
 (C) Q
 (D) None of these



13. Cellular respiration takes place in
 (A) cells of human body (B) cells of plant body
 (C) cells of micro-organism (D) cells of all organism
14. The average breathing rate of adult human is
 (A) 10–15 breaths/minute (B) 15–20 breaths/minute
 (C) 20–25 breaths/minute (D) 25–30 breaths/minute
15. Which cell of our body can respire anaerobically for a short time?
 (A) Skin cell (B) Blood cell
 (C) Muscle cell (D) Nerve cell
16. Breathing rate is defined as
 (A) numbers of breaths per day (B) number of breaths per minute
 (C) number of respire per min (D) number of inhales per min

17. Which of the following statements is/are correct?
Statement 1: Plant produces CO_2 during respiration.
Statement 2: Only plants can produce CO_2 .
 (A) Statement 1 (B) Statement 2
 (C) Both statement 1 and 2 (D) None of these
18. What is the immediate solution to muscle cramps?
 (A) Should visit hospital (B) Take hot massage to the area of cramps
 (C) Take ice cold massage (D) Apply ointment or any pain reliever
19. Sometimes gardeners dig the soil near the root, just after watering the plants. They do it to
 (A) help water to go in soil (B) help air to go in soil for roots to breathe
 (C) help plants to take food (D) help plants to take water
20. Shalabh is blowing into a beaker containing lime water through a straw. What will he observe?
 (A) Lime water turns transparent (B) Lime water turn yellow
 (C) Lime water turns violet (D) Lime water turns milky
21. Match the following

Column I	Column II
(P) Cockroach	(i) Pulmonary respiration
(Q) Earthworm	(ii) Cutaneous respiration
(R) Human	(iii) Branchial respiration
(S) Fish	(iv) Tracheal respiration

- (A) P-(ii), Q-(iv), R-(i), S-(iii) (B) P-(iii), Q-(ii), R-(i), S-(iv)
 (C) P-(iv), Q-(ii), R-(i), S-(iii) (D) P-(ii), Q-(iv), R-(iii), S-(i)
22. What happens to the rib cage and diaphragm, when a person breaths in?

	Rib cage	Diaphragm
(A)	Moves outwards and upwards	Becomes more curved
(B)	Moves outwards and upwards	Becomes flatten
(C)	Moves downwards and inwards	Becomes more curved
(D)	Moves downwards and inwards	Becomes flatten

Darken your Choice with HB Pencil

1. (A) (B) (C) (D)	5. (A) (B) (C) (D)	9. (A) (B) (C) (D)	13. (A) (B) (C) (D)	17. (A) (B) (C) (D)	21. (A) (B) (C) (D)
2. (A) (B) (C) (D)	6. (A) (B) (C) (D)	10. (A) (B) (C) (D)	14. (A) (B) (C) (D)	18. (A) (B) (C) (D)	22. (A) (B) (C) (D)
3. (A) (B) (C) (D)	7. (A) (B) (C) (D)	11. (A) (B) (C) (D)	15. (A) (B) (C) (D)	19. (A) (B) (C) (D)	
4. (A) (B) (C) (D)	8. (A) (B) (C) (D)	12. (A) (B) (C) (D)	16. (A) (B) (C) (D)	20. (A) (B) (C) (D)	

11. Transportation in Animals and Plants

Multiple Choice Questions

- The liquid part of blood is called
(A) cell (B) haemoglobin
(C) plasma (D) red blood cell
- The pulse rate of a normal resting person is
(A) 10–50 beats/min (B) 40–80 beats/min
(C) 80–120 beats/min (D) 60–100 beats/min
- A cut in body oozes blood, but after sometime the blood stops and cut is plugged by
(A) WBC's (B) RBC's
(C) plasma (D) platelets
- Arteries carry rich blood from to all body
(A) CO₂, lungs, parts (B) H₂O, lungs, cells
(C) O₂, hearts, parts (D) O₂, lungs, liver
- Leaves of plants help them in
(A) transpiration (B) respiration
(C) photosynthesis (D) all of these
- Which of the following is representing correct flow of blood in body?
(A) Right atrium → Right ventricle → Lungs → Left atrium → Left ventricle → body
(B) Right ventricle → Right auricle → Left atrium → Lungs → Left ventricle → body
(C) Both are correct
(D) None of these
- Which of the following vascular tissue transports food in plants?
(A) Leaf (B) Xylem
(C) Stem (D) Phloem

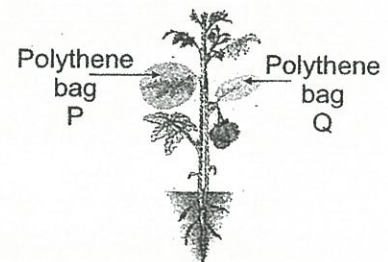
8. WBC stands for
(A) White Blood Capillaries (B) White Blood Cells
(C) World Bone Centre (D) White Bone Cell
9. Transpiration process in plants
(A) removes excess of water from plants (B) cools the plants during summers
(C) both (A) and (B) (D) does not do anything
10. The oxygen inhaled binds with and is transported to all the parts of body and ultimately to
- (A) blood, heart (B) blood, lung
(C) haemoglobin, heart (D) haemoglobin, lung
11. Which of the following blood components keeps you healthy by fighting from germs in your body?
(A) Red blood cells (B) Plasma
(C) Platelets (D) White blood cells
12. All the body parts receive oxygen-rich blood through
(A) veins (B) haemoglobin
(C) RBC's (D) none of these
13. Human heart has partition/walls between the chambers. It is to.....
(A) separate oxygenated and deoxygenated blood
(B) keep blood in different locations
(C) use blood at different time
(D) pump the blood easily
14. The flow of blood in is at a high
- (A) veins, speed (B) arteries, speed
(C) arteries, pressure (D) veins, pressure
15. Where does the 'cleaning' of blood takes place?
(A) In kidney (B) In heart
(C) In stomach (D) In lung
16. The blood vessels that have thick elastic walls are
(A) veins (B) capillaries
(C) arteries (D) all of these
17. How are the wastes formed in our body?
(A) Reactions that take place in cells produces waste
(B) The undigested food becomes the waste
(C) Excess of water turns out as a waste material
(D) All of these

18. What is the function of xylem tissue in plants?
 (A) It transports minerals (B) It transports water and minerals
 (C) It transports food (D) It makes food
19. Arteries and veins are joined by a network of
 (A) heart (B) capillaries
 (C) blood (D) veins
20. Plants absorb water and minerals from soil through
 (A) roots (B) root hair
 (C) stem (D) leaves

21. Find the correct match

	Phloem	Xylem
(A)	Transport water and minerals	Transport gases and provide support to the plant
(B)	Provide support to the plant	Transport food, water and minerals
(C)	Transport food	Transport water and minerals, and provides support to the plant
(D)	Transport food	Transport gases and provide support to the plant

22. Riya performs an experiment on well watered plant as shown in the given diagram. Which of the following option is correct, if experiment was done for few hours in sunlight?



- (A) Water droplets are visible in polythene bag P as photosynthesis occurs in leaves.
 (B) Water droplets are visible in polythene bag P as respiration occurs in leaves.
 (C) Water droplets are visible in polythene bag Q as photosynthesis occurs in stem.
 (D) Water droplets are visible in polythene bag Q as respiration occurs in stem.
23. A person who was bitten by a poisonous snake. What action we should take immediately?
 (A) Leaves that as person it is
 (B) Call people for help
 (C) Tie piece of cloth just above the snake bite and call an ambulance
 (D) Rub area of snake bite by coin and then call an ambulance

Darken your Choice with HB Pencil

1. (A) (B) (C) (D)	5. (A) (B) (C) (D)	9. (A) (B) (C) (D)	13. (A) (B) (C) (D)	17. (A) (B) (C) (D)	21. (A) (B) (C) (D)
2. (A) (B) (C) (D)	6. (A) (B) (C) (D)	10. (A) (B) (C) (D)	14. (A) (B) (C) (D)	18. (A) (B) (C) (D)	22. (A) (B) (C) (D)
3. (A) (B) (C) (D)	7. (A) (B) (C) (D)	11. (A) (B) (C) (D)	15. (A) (B) (C) (D)	19. (A) (B) (C) (D)	23. (A) (B) (C) (D)
4. (A) (B) (C) (D)	8. (A) (B) (C) (D)	12. (A) (B) (C) (D)	16. (A) (B) (C) (D)	20. (A) (B) (C) (D)	

12. Reproduction in Plants

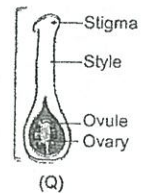
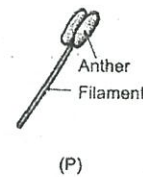
Multiple Choice Questions

- How many new young ones are produced in binary fission?
 (A) Four (B) Two
 (C) Three (D) Variable
- Which of the following parts of flower contains female gametes?
 (A) Anther (B) Filament
 (C) Stigma (D) Ovule
- Pollination by birds is called
 (A) entomophily (B) ornithophily
 (C) anenophily (D) hydrophily
- Match the following

Column - I	Column - II
(P) Fertilisation can occur after pollination	(i) True
(Q) For pollination two flowers are always required	(ii) False
(R) Only flying organisms are agents of pollination	
(S) Every flower has either male or female gamete at least	

- (A) (P)–(ii), (Q)–(i), (R)–(i), (S)–(ii) (B) (P)–(i), (Q)–(ii), (R)–(ii), (S)–(i)
 (C) (P)–(ii), (Q)–(ii), (R)–(i), (S)–(i) (D) (P)–(i), (Q)–(i), R–(ii), (S)–(ii)
- Last week, Danu could see through the lake's water. Today, he saw that the lake's water has turned green due to algae formation. What mode of reproduction has caused rapid change?
 (A) Sexual reproduction (B) Budding
 (C) Spore formation (D) Fragmentation

6. Cross-pollination is the.....
- (A) transfer of pollen from the anther to stigma
 (B) transfer of pollen from the anther to stigma of same flower
 (C) transfer of pollen from the anther to stigma of different flower of same type of plant
 (D) transfer of pollen from the anther to stigma of different flower of different type of plant
7. Scattering of seeds over a wide area is called
- (A) pollination (B) germination
 (C) fertilisation (D) dispersal
8. Two chickpeas; P and Q were soaked until they were soft, 'P' underwent the process of germination, while Q did not. Both were kept on damp cotton and left aside for a few days. What was observed?
- (A) Nothing happened to both P and Q.
 (B) P remained same while Q wrinkled up.
 (C) A large seedlings grew from P than from Q.
 (D) A seedling emerged from P but Q remained unchanged.
9. Which of the following statement is correct for the given diagrams.
- (A) Both are reproductive part of flower.
 (B) 'P' is stamen, the male reproductive part of a flower.
 (C) 'Q' is pistil, the female reproductive part of a flower.
 (D) All of these



10. Male gamete + Female gamete \longrightarrow ?
- (A) Seed (B) Fruit
 (C) Flower (D) Zygote

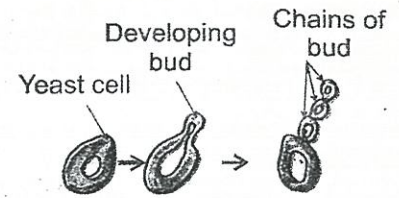
11. Match the following

Column-I	Column II
(a) Eyes	(i) Fern
(b) Spores	(ii) Potato
(c) Sori	(iii) Bread mould
(d) Budding	(iv) Yeast

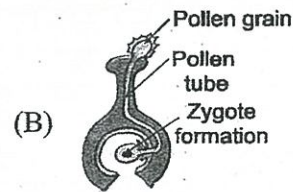
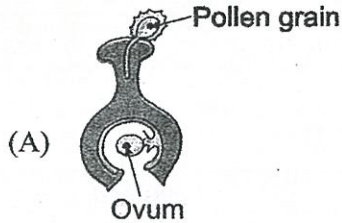
- (A) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv) (B) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)
 (C) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i) (D) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

12. Identify the method of reproduction in the given diagram?

- (A) Sexual
- (B) Budding
- (C) Flowering
- (D) Fragmentation



13. Identify the figure that depicts fertilisation?



(C) Both (A) and (B)

(D) None of these

14. Which is the reproductive part of the plant?

- (A) Stem
- (B) Leaf
- (C) Root
- (D) Flower

15. An organism divides into two or more parts and every single part generates new individual. Which kind of reproductions is it?

- (A) Budding
- (B) Stem cutting
- (C) Spore formation
- (D) Fragmentation

16. The flowering plant that can be reproduced by stem cutting method.

- (A) Rose
- (B) Jasmine
- (C) Rose and Jasmine
- (D) None of these

17. Pollination refers to the

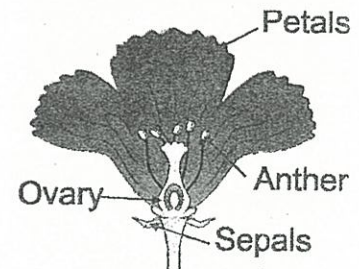
- (A) transfer of male gametes from anther to stigma.
- (B) transfer of female gametes from embryos to ovule.
- (C) transfer of pollen grain from anther to stigma.
- (D) transfer of pollen grain from anther to ovule.

18. Which of the following is/are in correct sequence?

- (A) Fertilisation, zygote formation, pollination
- (B) Pollination, fertilisation, zygote formation
- (C) Zygote formation, pollination, fertilisation
- (D) Zygote formation, fertilisation, pollination

19. The statement (i) to (vii) describes the events that lead to maturation of a plant, in random order. Arrange them in correct order.
- (i) The seedling develops its leaves and start making food.
 - (ii) More leaves develops as the plant grows.
 - (iii) The root grows.
 - (iv) The seedling obtains the food it needs from the cotyledons.
 - (v) The seed leaves no longer needed, wither and fall off.
 - (vi) The part that comes out next is the shoot.
 - (vii) It grows downwards because of gravity.
- (A) (i)→(iii)→(ii)→(vii)→(vi)→(iv)→(v) (B) (iii)→(vii)→(vi)→(iv)→(i)→(v)→(ii)
 (C) (i)→(iii)→(vii)→(ii)→(v)→(vi)→(iv) (D) (iii)→(vii)→(vi)→(i)→(iv)→(v)→(ii)

20. Which on of the following parts of the flower would you like to remove, in order to stop the formation of new seed?
- (A) Petals (B) Sepals
 (C) One anther (D) Ovary



21. Select from one of the following the correct sequence of the way of development of new individual.
- (A) Male gametes + Female gametes → Zygote → Fertilisation → Embryo → New individual.
 (B) Male gametes + Female gametes → Embryo → Fertilisation → Zygote → New Individual.
 (C) Male gametes + Female gametes → Fertilisation → Zygote → Embryo → New Individual.
 (D) Male gametes + Female gametes → Fertilisation → Embryo → Zygote → New Individual.

Darken your Choice with HB Pencil

1. (A) (B) (C) (D)	5. (A) (B) (C) (D)	9. (A) (B) (C) (D)	13. (A) (B) (C) (D)	17. (A) (B) (C) (D)	21. (A) (B) (C) (D)
2. (A) (B) (C) (D)	6. (A) (B) (C) (D)	10. (A) (B) (C) (D)	14. (A) (B) (C) (D)	18. (A) (B) (C) (D)	
3. (A) (B) (C) (D)	7. (A) (B) (C) (D)	11. (A) (B) (C) (D)	15. (A) (B) (C) (D)	19. (A) (B) (C) (D)	
4. (A) (B) (C) (D)	8. (A) (B) (C) (D)	12. (A) (B) (C) (D)	16. (A) (B) (C) (D)	20. (A) (B) (C) (D)	

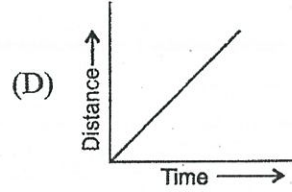
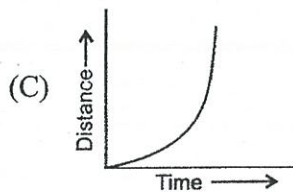
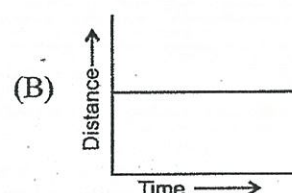
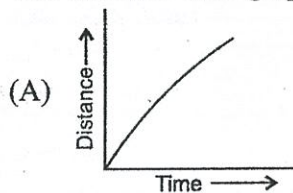
13. Motion and Time

Multiple Choice Questions

1. Movement of a train on its railway track is an example of

(A) circular motion	(B) straight line motion
(C) periodic motion	(D) all of these

2. The distance time graph for a car at rest will be

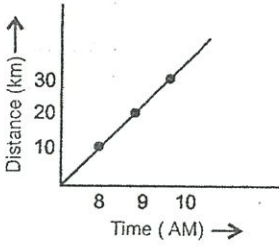


3. Which of the following activities show circular motion?

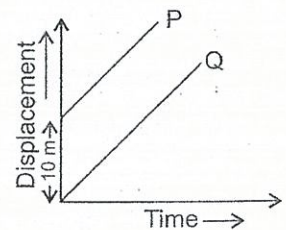
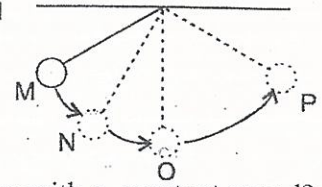
(A) Motion of hands while walking	(B) Motion of see-saw
(C) Motion of round about	(D) Motion of train on track
4. The moved by an object in a time is called its

(A) unit, distance, speed	(B) distance, speed, unit
(C) speed, unit, distance	(D) distance, unit, speed
5. If a car takes 60 mins to cover a distance of 80 kms, then car is moving with a speed of

(A) 10 km/min	(B) 5 km/min
(C) 1.3 km/min	(D) 13 km/min

6. A simple pendulum takes 32 seconds to complete 20 oscillations. The time-period of this pendulum is
 (A) 32×20 sec (B) $32 \div 20$ sec
 (C) $32 + 20$ sec (D) $32 - 20$ sec
7. If the bob of a pendulum is lifted to one point say 'A' and left, it swings to point 'B' on opposite side and again comes back to position 'A'. This is called.
 (A) motion (B) oscillation
 (C) period (D) time
8. The given graph represents
 (A) non-uniform speed
 (B) uniform speed
 (C) non-uniform acceleration
 (D) uniform acceleration
- 
9. Which of the following statements is incorrect?
 (A) The time-period of a simple pendulum is not constant.
 (B) The speed of train is uniform.
 (C) The basic unit of time is second.
 (D) None of these
10. An aeroplane travels with a speed of 100 km h^{-1} . What will be its speed in m s^{-1} ?
 (A) $\frac{100 \times 60 \times 60}{1 \times 1000}$ (B) $\frac{100 \times 1000}{60}$
 (C) $\frac{100 \times 60}{1000}$ (D) $\frac{100 \times 1000}{60 \times 60}$
11. The type of motion shown by hammer of an electric bell, when the switch is on?
 (A) Periodic (B) Circular
 (C) Oscillatory (D) Both (A) & (C)
12. A scooterist has taken a round of a circular path of radius 7 km in 7 minutes. What is its displacement?
 (A) 7 km (B) 44 km
 (C) 0 km (D) 1 km
13. Which of the following can not be used for measurement of time?
 (A) Blinking of eyes (B) Simple pendulum
 (C) Shadow of an object in closed room (D) Shadow of an object during the day

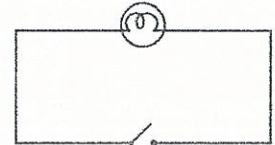
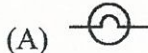
14. If time taken by the bob to move from M to N is t_1 and from N to O is t_2 , then the time period of this simple pendulum is
- (A) $(t_1 + t_2)$ (B) $(2t_1 + t_2)$
 (C) $2(t_1 + t_2)$ (D) $4(t_1 + t_2)$
15. Which of the following statement is correct for a vehicle moving with a constant speed?
- (A) It covers equal distance in unequal time interval.
 (B) It's acceleration is zero.
 (C) It's position remains same with change in time.
 (D) Its direction of motion will remain same.
16. Pick the odd one out.
- (A) meter/sec (B) kilometer/hour
 (C) meter/min (D) kilometer/sec²
17. Which of the following can never be obtained from distance-time graph?
- (A) Time (B) Weight
 (C) Speed (D) Position
18. Speedometer measure speed in
- (A) m/s (B) km/s
 (C) m/hr (D) km/hr
19. I was used as a clock in ancient time and I am still used in Jantar-mantar. Who am I?
- (A) Watch (B) Sundial
 (C) Water clock (D) Sand clock
20. Movement of a body with respect to time is
- (A) acceleration (B) displacement
 (C) speed (D) motion
21. A faster moving object covers
- (A) less distance in lesser time (B) less distance in more time.
 (C) more distance in lesser time (D) more distance in more time
22. Which of the following statements is correct for two bodies P and Q as shown in displacement-time graph?
- (A) P is moving faster than Q
 (B) P is always 10 m behind Q
 (C) Q is moving faster than P
 (D) Q is always 10 m behind P



14. Electric Current and its Effects

Multiple Choice Questions

1. Which of the components is missing in the given circuit diagram?



2. Electric heaters have a coiled wire made up of

(A) tungsten

(B) nichrome

(C) nickel

(D) element

3. The amount of heat produced by a wire when electricity is passed through it depends on

(A) the material used

(B) thickness of wire

(C) the length of wire

(D) all of these

4. Name the safety device used in electric circuit at home.

(A) Bulb

(B) Battery

(C) Wire

(D) Fuse

5. To make a battery of 2 cells we need to connect

(A) +ve end to +ve end

(B) +ve end to -ve end

(C) -ve end to -ve end

(D) any of these

6. Fuse wire must have which of the following properties?

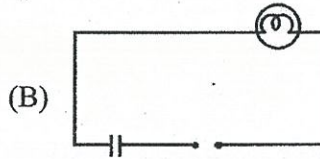
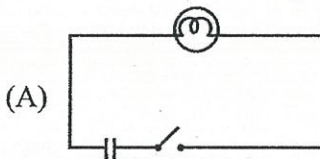
(A) Insulator with high melting point

(B) Conductor with high melting point

(C) Insulator with low melting point


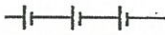


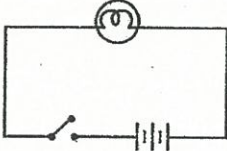
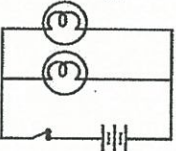
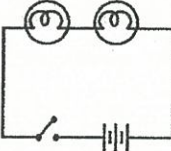
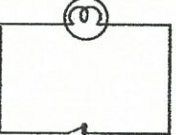
(D) Conductor with low melting point

7. Which of the following is representing an open electric circuit?



(C) Both (A) and (B)

(D) None of these

8. Identify the following symbols you will take for representing battery while drawing an electric circuit diagram.
- (A)  (B) 
- (C)  (D) 
9. Which of the following electrical device was invented by Thomas Elva Edision.
- (A) Electric bulb (B) Electric heater
(C) Electric fuse (D) All of these
10. Wire used in electric fuse breaks the circuit on
- (A) overheating (B) overloading
(C) melting (D) both (A) and (B)
11. In which of the following circuit diagram the bulb will glow?
- (A) 
- (B) 
- (C) 
- (D) 
12. Choose one of these that is not a circuit element.
- (A) Voltmeter (B) Potential difference
(C) Resistor (D) Battery
13. Select from one of the following the best conductor of electricity.
- (A) Silver (B) Aluminium
(C) Copper (D) Gold
14. The electric fuse works on which of the following phenomenon?
- (A) Magnetic effect of current (B) Electric effect of current
(C) Both (A) and (B) (D) None of these
15. What happens when a magnetic compass is brought near a current carrying wire?
- (A) It deflects fast in East-West direction. (B) No effect on the compass.
(C) It deflects the magnetic needle. (D) It will lose its magnetism.
16. Which material we prefer to take for making electrical appliances?
- (A) Insulator (B) Conductor
(C) Semi-conductor (D) Any of these
17. Longer line in the symbol of a cell represents
- (A) +ve terminal (B) -ve terminal
(C) switch (D) battery

18. Combination of many cells in a torch forms a
 (A) bulb (B) battery
 (C) fuse (D) switch
19. An electromagnet does not work when
 (A) no magnet is there (B) no electricity is passed through it
 (C) no wire is there (D) all of these
20. Electromagnets can be created by using wire coil around
 (A) an iron bar (B) metal
 (C) magnet (D) an electric fuse
21. Which of the following statements are correct for switch in OFF position.
 (i) No current flows through it.
 (ii) Circuit is close.
 (iii) Current stops immediately.
 (iv) Circuit starting from the positive terminal of the cell stops at the switch.
 (A) (i) and (ii) (B) (iii) and (iv)
 (C) (i) and (iii) (D) (ii) and (iv)
22. Four bulb of 100W each are connected in series to a battery of 220V. If two of the bulbs are replaced by 60W bulbs then the brightness of the remaining bulbs will
 (A) remain same (B) get dimmer
 (C) stop illuminating (D) glow brighter
23. Find the precaution we do not require to follow while working on electrical appliances?
 (A) Never experiment with electric supply from the mains.
 (B) Never touch a glowing bulb connected to the mains.
 (C) Never turns the switch pointing ON position.
 (D) Never use any wire instead of a fuse.
24. What happens to an electric bell, when it's electromagnet/switch is pushed?
 (A) Current decrease in it (B) Voltage increase in it
 (C) Flow of current stops through it (D) Direction of flow of current reversed

Darken your Choice with HB Pencil

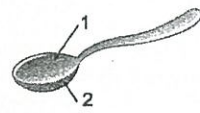
1.	(A) (B) (C) (D)	5.	(A) (B) (C) (D)	9.	(A) (B) (C) (D)	13.	(A) (B) (C) (D)	17.	(A) (B) (C) (D)	21.	(A) (B) (C) (D)
2.	(A) (B) (C) (D)	6.	(A) (B) (C) (D)	10.	(A) (B) (C) (D)	14.	(A) (B) (C) (D)	18.	(A) (B) (C) (D)	22.	(A) (B) (C) (D)
3.	(A) (B) (C) (D)	7.	(A) (B) (C) (D)	11.	(A) (B) (C) (D)	15.	(A) (B) (C) (D)	19.	(A) (B) (C) (D)	23.	(A) (B) (C) (D)
4.	(A) (B) (C) (D)	8.	(A) (B) (C) (D)	12.	(A) (B) (C) (D)	16.	(A) (B) (C) (D)	20.	(A) (B) (C) (D)	24.	(A) (B) (C) (D)

15.

Light

Multiple Choice Questions

1. Label the given diagram.

(A) 1. Convex, 2. Concave	(B) 1. Concave, 2. Convex
(C) Both are concave	(D) Both are convex
- 
2. The image of an object formed by a plane mirror can
 - (A) be formed on screen
 - (B) not be formed on screen
 - (C) not be formed on screen and it is enlarged
 - (D) not be formed on screen and it is small
 3. Concave lens forms,, and, image than the object.



(A) inverted, virtual, bigger	(B) erect, virtual, smaller
(C) erect, real, bigger	(D) inverted, real, smaller
 4. Identify the image that can never be formed on the screen?

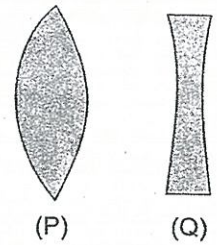
(A) Virtual	(B) Real
(C) Enlarged	(D) Diminished
 5. Rainbow colours can be viewed by keeping

(A) a CD in sunlight	(B) different colour in sunlight
(C) light bulb in sunlight	(D) all of these
 6. Image obtained by the concave lens is always

(A) erect	(B) virtual
(C) diminished	(D) all of the above
 7. A Newton's disc has

(A) 5 colours	(B) 7 colours
(C) 3 colours	(D) 9 colours

8. Choose from the following the image of concave lens.
 (A) Image of P
 (B) Image of Q
 (C) Both (A) and (B)
 (D) None of these
9. Identify what you observe, while viewing yourself in a plane mirror?
 (A) Left side of body is on right side
 (B) Clear image
 (C) Diminished image
 (D) Enlarge image
10. Which of the following can be used as rear mirror in a vehicle?
 (A) Plane mirror
 (B) Concave mirror
 (C) Convex mirror
 (D) None of these
11. The image of an object formed by the inner surface of the spoon is
 (A) erect
 (B) enlarged
 (C) both (A) & (B)
 (D) inverted
12. A polished surface of an object acts as a
 (A) lens
 (B) source of light
 (C) mirror
 (D) none of these
13. The term used for apperant reversal of images is
 (A) vertical inversion
 (B) lateral inversion
 (C) virtual
 (D) erect
14. In which cases/conditions, the image formed by the convex lens will be virtual, erect and magnified?
 (A) When object is placed closed to it
 (B) When object is placed far from it
 (C) When object is placed very far from it
 (D) When object is placed very close to it
15. The diminished image of big objects can be formed by using mirror.
 (A) convex
 (B) concave
 (C) plane
 (D) none of these
16. Which of the following represents a convex mirror?
 (A)  (B) 
 (C) Both (A) & (B)
 (D) None of these



17. A source of light is kept on one side of a s-shaped solid pipe, and you look through the other side. What do you see?
 (A) Beam (B) Enlarged view of light source
 (C) Light concentrated at one point (D) No change in the vision
18. Why AMBULANCE is written as ƆMΛIΛIUBMΛ?
 (A) To arise confusion.
 (B) So that people looking in back/rear view mirror can read AMBULANCE.
 (C) To get attention from people on road.
 (D) No, it is always written as 'AMBULANCE'.
19. Richa used a concave mirror to get an image of the sun on a paper. What kind of image will she get?
 (A) Virtual (B) Real
 (C) Enlarged (D) Real and enlarged
20. A dental magnifying glass is a lens that is used to produce a image, whereas lens are used on flashlights tothe light produced by bulbs.
 (A) convex, diminished, concave, magnified
 (B) concave, diminished, convex, magnified
 (C) convex, magnified, concave, magnified
 (D) convex, magnified, convex, magnified
21. Shadow of an object is formed, when it is kept in the path of light, because
 (A) speed of light is very high.
 (B) light propagates in all directions.
 (C) light contains minute material particles.
 (D) light rays travel in straight line.

Darken your Choice with HB Pencil

1. (A) (B) (C) (D)	5. (A) (B) (C) (D)	9. (A) (B) (C) (D)	13. (A) (B) (C) (D)	17. (A) (B) (C) (D)	21. (A) (B) (C) (D)
2. (A) (B) (C) (D)	6. (A) (B) (C) (D)	10. (A) (B) (C) (D)	14. (A) (B) (C) (D)	18. (A) (B) (C) (D)	
3. (A) (B) (C) (D)	7. (A) (B) (C) (D)	11. (A) (B) (C) (D)	15. (A) (B) (C) (D)	19. (A) (B) (C) (D)	
4. (A) (B) (C) (D)	8. (A) (B) (C) (D)	12. (A) (B) (C) (D)	16. (A) (B) (C) (D)	20. (A) (B) (C) (D)	

16. Water: A Precious Resource

Multiple Choice Questions

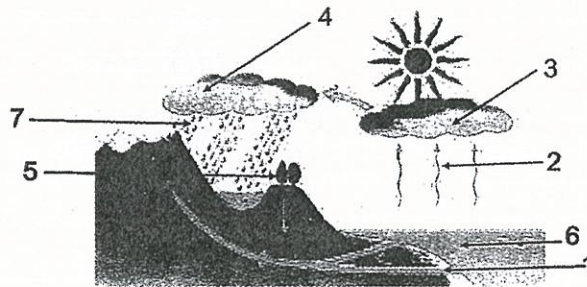
- Which of the following statement is correct?
Statement 1 : River is the only source of freshwater on Earth.
Statement 2 : Saline water can be obtained only from oceans.
(A) Statement 1 (B) Statement 2
(C) Both statement are correct (D) Both statements are incorrect
- What amount of fresh water present on Earth?
(A) 70% (B) 50%
(C) 25% (D) 2.5%
- Choose from the following is the primary source of water.
(A) Ground water (B) Surface water
(C) Rain water (D) All of these
- Aquifers are
(A) ground water holding rocks (B) container to keep aquatic organisms
(C) salt water intrusions (D) natural lake
- Water-table is
(A) water at sea level (B) water in rivers
(C) upper limit of ground water (D) lower limit of ground water
- Water is also present in as moisture.
(A) lakes (B) oceans
(C) air (D) liquid

7. The process of seeping of water into the ground is
 (A) evaporation (B) filtration
 (C) precipitation (D) infiltration
8. The ground water that is stored between or below the permeable rocks is
 (A) infiltration (B) rain water
 (C) water level (D) aquifer
9. The best method of recharging the water table is
 (A) seepage (B) infiltration
 (C) rain water harvesting (D) all of these
10. Find the correct statement.
 (A) Oceans are the main source of water
 (B) Drip irrigation helps in saving water
 (C) Rivers are the only source of fresh water
 (D) Sun has no role in water cycle
11. The problem of water is arising because of
 (A) increasing use of water (B) increasing population
 (C) increasing industries (D) all the above
12. In the regions, that do not have enough rainfall, the water table will be
 (A) high (B) low
 (C) unpredictable (D) none of these
13. Covering the ground surface by constructions, roads, and concrete surface
 (A) affects the ground water (B) does not allow seepage of rain water
 (C) keeps the area clean (D) both (A) and (B)
14. The depletion of ground water is because of
 (A) agricultural use (B) industrial use
 (C) urbanisation (D) all of these
15. Drip irrigation helps in
 (A) use of water (B) watering of plants
 (C) judicial use of water (D) all of these
16. Which of the following is not the source of drinkable water?
 (A) River (B) Well
 (C) Ocean (D) Ice caps
17. We can not drink ocean water because it can
 (A) cause sever dehydration (B) damage kidney
 (C) no, we can drink ocean water (D) both (A) and (B)

18. Drip irrigation method saves

- (A) water (B) fertilizer
(C) both (A) and (B) (D) none of these

Refer the given diagram of water cycle and answer question number 19 and 20.



19. Which of the following represents the process of evaporation and process of salt water intrusion?

- (A) 1 and 2 (B) 2 and 1
(C) 6 and 2 (D) 2 and 6

20. If (3) represents the cloud formation, then what does (7) represents?

- (A) Evaporation (B) Condensation
(C) Precipitation (D) Transpiration

21. Match the following

Column -I	Column -II
(i) Glaciers are the source of fresh water.	(P) True
(ii) Sun does not play any role in water cycle.	(Q) False
(iii) Most of the water present on Earth is unfit for drinking purpose.	

- (A) (i)-P, (ii)-P, (iii)-P (B) (i)-Q, (ii)-Q, (iii)-Q
(C) (i)-P, (ii)-Q, (iii)-P (D) (i)-P, (ii)-P, (iii)-Q

Darken your Choice with HB Pencil

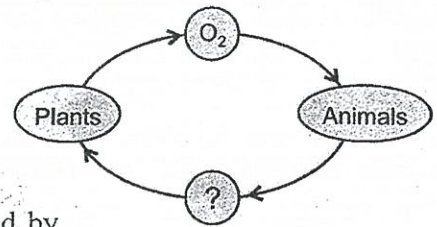
1. (A) (B) (C) (D)	5. (A) (B) (C) (D)	9. (A) (B) (C) (D)	13. (A) (B) (C) (D)	17. (A) (B) (C) (D)	21. (A) (B) (C) (D)
2. (A) (B) (C) (D)	6. (A) (B) (C) (D)	10. (A) (B) (C) (D)	14. (A) (B) (C) (D)	18. (A) (B) (C) (D)	
3. (A) (B) (C) (D)	7. (A) (B) (C) (D)	11. (A) (B) (C) (D)	15. (A) (B) (C) (D)	19. (A) (B) (C) (D)	
4. (A) (B) (C) (D)	8. (A) (B) (C) (D)	12. (A) (B) (C) (D)	16. (A) (B) (C) (D)	20. (A) (B) (C) (D)	

17. Forests: Our Lifeline

Multiple Choice Questions

1. It is quite dark inside a thick forest because
 - (A) forests are in dark regions.
 - (B) leaves do not allow sunrays to enter inside.
 - (C) there are many trees.
 - (D) both (B) & (C)
2. Canopy is formed by
 - (A) branches of tall trees
 - (B) leaves of trees
 - (C) plants in forests
 - (D) grasses in forests
3. Forest is a 'dynamic living entity'. It means forest is
 - (A) full of life
 - (B) full of vitality
 - (C) both (A) and (B)
 - (D) none of these
4. Micro-organisms help in the formation of
 - (A) humus
 - (B) decomposers
 - (C) grass
 - (D) insects
5. Forest products are
 - (A) timber
 - (B) gum and resins
 - (C) oils and spices
 - (D) all of these
6. Forest are the of tribals.
 - (A) property
 - (B) lifeline
 - (C) home
 - (D) all of these

7. What does the adjoining figure represent? What is missing?
 (A) Chain, Water
 (B) Cycle, Nitrogen
 (C) Cycle, Carbon dioxide
 (D) Chain, Oxygen



8. Decay of dead plants and animals into humus is caused by
 (A) producers (B) plants
 (C) consumers (D) decomposers
9. Cutting of trees on a large scale is called
 (A) cutting (B) deforestation
 (C) aforestation (D) forestation
10. The given diagram represents



- (A) food web (B) plants and animals
 (C) food-chain (D) living organisms
11. Lower layer of vegetation in a forest is formed by
 (A) trees (B) shrubs
 (C) herbs (D) all of these
12. Spongy carpet of leaves and dry twigs is useful
 (A) to soil (B) to insects and worms
 (C) as it decays to form humus (D) all of these
13. Growing trees on roads sides helps to reduce
 (A) air-pollution (B) noise-pollution
 (C) both (A) and (B) (D) none of these
14. If you kill frog in the following food-chain, what will be the result?



- (A) It will not affect the food chain (B) It will affect insects
 (C) It will affect snake and eagle (D) It will affect all
15. Larger number of herbivores means
 (A) more food for carnivores (B) unbalanced food chain
 (C) less plants and grasses (D) none of these

16. What will happen, if all carnivores removed from the food web?
 (A) Count of herbivore will increase
 (B) Population of insects will rise
 (C) Size of forest will decrease
 (D) Food web will disturb that will harm all
17. Ultimate source of energy is
 (A) plants (B) sun
 (C) water (D) all of these
18. Forests are called “lungs of Earth” because forests
 (A) are green (B) exchange gases
 (C) maintain the balance of O₂ and CO₂ (D) none of these
19. Statement 1 : Trees helps in preventing soil erosion.
 Statement 2 : All organisms are important in balancing food web.
 (A) Statement 1 is correct (B) Statement 2 is correct
 (C) Both statement are correct (D) Neither statement 1 is correct nor 2
20. Which of the following is the primary consumer in food web?
 (A) Plants (B) Deer
 (C) Tiger (D) Vulture
21. The process performed by plants that helps in rainfall is
 (A) photosynthesis (B) respiration
 (C) transpiration (D) withering

Darken your Choice with HB Pencil

1.	(A) (B) (C) (D)	5.	(A) (B) (C) (D)	9.	(A) (B) (C) (D)	13.	(A) (B) (C) (D)	17.	(A) (B) (C) (D)	21.	(A) (B) (C) (D)
2.	(A) (B) (C) (D)	6.	(A) (B) (C) (D)	10.	(A) (B) (C) (D)	14.	(A) (B) (C) (D)	18.	(A) (B) (C) (D)		
3.	(A) (B) (C) (D)	7.	(A) (B) (C) (D)	11.	(A) (B) (C) (D)	15.	(A) (B) (C) (D)	19.	(A) (B) (C) (D)		
4.	(A) (B) (C) (D)	8.	(A) (B) (C) (D)	12.	(A) (B) (C) (D)	16.	(A) (B) (C) (D)	20.	(A) (B) (C) (D)		

18. Wastewater Story

Multiple Choice Questions

1. International decade for action on “water for life” is
(A) 2010–2020 (B) 2005–2015
(C) 2015–2025 (D) 2002–2012
2. Chemicals used to disinfect water is
(A) chlorine (B) ozone
(C) both (A) & (B) (D) none of these
3. The process of cleaning of water before its disposal is called
(A) wastewater (B) sewage treatment
(C) wastewater treatment (D) none of these
4. Impurities dissolved in wastewater is called
(A) dirt (B) dust
(C) contaminants (D) all of these
5. Sludge can be used to produce
(A) recycled water (B) treatment plant
(C) biogas (D) all of these
6. Wastewater treatment does not involve
(A) mathematical processes (B) physical process
(C) chemical process (D) biological process.
7. WWTP reduces the pollutant in waste water to the level
(A) nature can further clean it (B) we can further use it
(C) both (A) and (B) (D) neither (A) nor (B)

8. Defecation in open causes

(A) air pollution	(B) soil pollution
(C) water pollution	(D) Both (B) and (C)
9. Diseases caused due to contaminated water is

(A) cholera and dysentery	(B) typhoid
(C) malaria	(D) both (A) and (B)
10. Bar screen in WWTP is used for

(A) removing dirt	(B) removing large objects
(C) removing small object	(D) removing dust
11. Sludge is decomposed by

(A) any microorganism	(B) aerobic bacteria
(C) anaerobic bacteria	(D) can never decompose
12. Septic tanks are alternatives of

(A) water tanks	(B) sewage disposal systems
(C) storage tanks	(D) none of these
13. Dried sludge can be used as

(A) manure	(B) fuel
(C) soil	(D) all of these
14. Activated sludge has about water.

(A) 100%	(B) 97%
(C) 95%	(D) 92%
15. Which of the following nutrient is/are present in sewage?

(A) Phosphorous	(B) Chlorine
(C) Nitrogen	(D) Both (A) and (B)
16. Biogas is also called 'clean fuel' because it

(A) does not pollute the air	(B) generates harmful gases
(C) burns easily	(D) all the above
17. Which of the following is caused by bacteria?

(A) Typhoid	(B) Cholera
(C) Both (A) and (B)	(D) None of these
18. Which of the following is not water borne disease?

(A) Dengue	(B) Polio
(C) Dysentery	(D) Typhoid

19. Many of the water born diseases can be
 (A) caused by defecating in open
 (B) caused by water pollution
 (C) avoided if proper disposal of waste is done
 (D) all of these
20. Name the organic and inorganic impurity present in sewage, in the same order?
 (A) Metals, vegetables waste (B) Vegetable waste, urine
 (C) Plastic, animal waste (D) Urine, metal
21. Statement 1 : Disease like malaria has water-related vectors.
 Statement 2 : Polio is a waterborne disease.
 (A) Statement 1 is correct
 (B) Statement 2 is correct
 (C) Both statement are correct
 (D) Neither Statement 1 is correct nor statement 2.
22. Sludge extracted from Sewage treatment plant can be utilised in making
 (A) electricity (B) manure
 (C) biogas (D) all of these

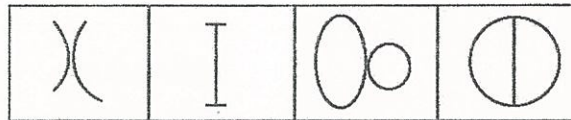
Darken your Choice with HB Pencil

1.	(A) (B) (C) (D)	5.	(A) (B) (C) (D)	9.	(A) (B) (C) (D)	13.	(A) (B) (C) (D)	17.	(A) (B) (C) (D)	21.	(A) (B) (C) (D)
2.	(A) (B) (C) (D)	6.	(A) (B) (C) (D)	10.	(A) (B) (C) (D)	14.	(A) (B) (C) (D)	18.	(A) (B) (C) (D)	22.	(A) (B) (C) (D)
3.	(A) (B) (C) (D)	7.	(A) (B) (C) (D)	11.	(A) (B) (C) (D)	15.	(A) (B) (C) (D)	19.	(A) (B) (C) (D)		
4.	(A) (B) (C) (D)	8.	(A) (B) (C) (D)	12.	(A) (B) (C) (D)	16.	(A) (B) (C) (D)	20.	(A) (B) (C) (D)		

19. Logical Reasoning

Multiple Choice Questions

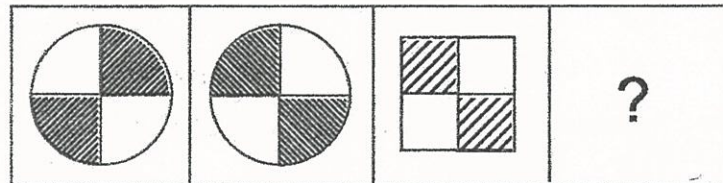
1. Choose the figure which is different



(1) (2) (3) (4)

- | | |
|-------|-------|
| (A) 1 | (B) 2 |
| (C) 3 | (D) 4 |

2. Select one of the answer choices that will fit in the place of (?)



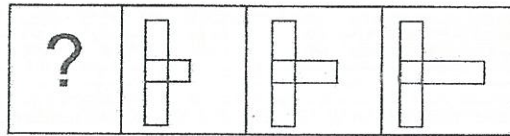
(1) (2) (3) (4)

- | | |
|-------------------------|-------------------------|
| <p>(A) </p> <p>(C) </p> | <p>(B) </p> <p>(D) </p> |
|-------------------------|-------------------------|

3. If BAD is written as YZW and SAME as HZNV, then LOVE will be written as

- | | |
|----------|----------|
| (A) ROWN | (B) OJUC |
| (C) OLEV | (D) NOPL |

4. Select one of the answer choices that will fit in the place of (?)



- (A)  (B) 
- (C)  (D) 

5. Find the missing term in the following series.

DCXW, HGTS, , POLK, TSHG

- (A) KLOP (B) LKOP
(C) KLPO (D) LKPO
6. B, D, G, I, L, ...?...
- (A) M (B) N
(C) O (D) P
7. A, E, I, O, ...?...
- (A) T (B) P
(C) S (D) U
8. If SYSTEM is written as SYSMET and NEARER is written as AENRER, then FRACTION will be written as
- (A) CARFNOIT (B) NOITFRAC
(C) CARFTION (D) FRACNOIT
9. The words in the bottom row are related in the same way as the words in the top row. For each item, find the word that completes the bottom row of words.

Apples	Fruit	Supermarket
Novel	Book	?

- (A) Bookstore (B) Vegetable
(C) Shopping (D) Magazine
10. Here are some words translated from an artificial language.

dionot means oak tree.

blynnot means oak leaf.

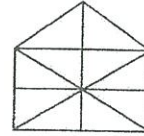
blycrin means maple leaf.

Which word could mean "maple syrup"?

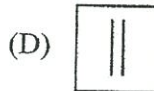
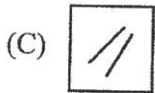
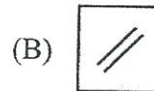
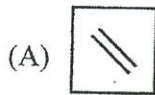
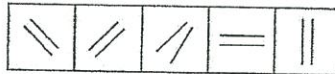
- (A) blyweel (B) hupponot
(C) patricrin (D) blyonot

11. Insert the missing number. 4, -8, 16, -32, 64, ...?...
- (A) 128 (B) 192
(C) -128 (D) -192

12. Find the number of triangles in the given figure
- (A) 10 (B) 19
(C) 21 (D) 23



13. Choose the figure which is different from the rest.



14. Find the odd one out

- (A) door: bang (B) piano: play
(C) drum: beat (D) rain: platter

15. In a certain code, TRIPPLE is written as SQHOOKD. How is DISPOSE written in that code?

- (A) ESJTPTF (B) ESOPSID
(C) DSOESPI (D) CHRONRD

16. Look carefully for the pattern, and then choose which pair of numbers comes next.

75 65 85 55 45 85 35

- (A) 25 15 (B) 25 85
(C) 35 25 (D) 85 35

17. Look at this series: J14, L16, ...?..., P20, R22. What number should fill the blank?

- (A) S24 (B) N18
(C) M18 (D) T24

18. Which word does NOT belong with the others?

- (A) Two (B) Three
(C) Six (D) Eight

In question 19 and 20, find out which of the answer choices completes the same relationship with the third word.

19. Window is to pane as Book is to

- (A) novel (B) glass
(C) cover (D) page

20. Sponge is to porous as Rubber is to
 (A) massive (B) solid
 (C) elastic (D) inflexible
21. In the below mentioned question a statement is followed by two conclusions, numbered (i) and (ii). You have to assume everything in the statement to be true, then consider the two conclusions together and decide which of them logically follows beyond a reasonable doubt from the information given in the statement.

Statements:

- Some boys are adult.
- All adults are intelligent.

Conclusions:

- (i) All boys are intelligent.
 - (ii) All adults are boys.
- (A) Only conclusion (i) follows (B) Only conclusion (ii) follows
 (C) Either (i) and (ii) follows (D) Neither (i) and (ii) follows
22. If you write all numbers from 0 to 109, which digit will you write most often?
 (A) 0 (B) 1
 (C) 9 (D) 3
23. What is the smallest integer that is 4 times the sum of its digits?
 (A) 12 (B) 11
 (C) 24 (D) 18
24. Four friends tried to guess the number of sheep in a flock.
 Akash guessed 21,
 Bobby guessed 26,
 Chris guessed 20, and
 Daniel guessed 21.
 Two were wrong by 2, and two were wrong by 3.
 How many sheep were in the flock?
 (A) 22 (B) 23
 (C) 24 (D) 19

Darken your Choice with HB Pencil

1.	A B C D	5.	A B C D	9.	A B C D	13.	A B C D	17.	A B C D	21.	A B C D
2.	A B C D	6.	A B C D	10.	A B C D	14.	A B C D	18.	A B C D	22.	A B C D
3.	A B C D	7.	A B C D	11.	A B C D	15.	A B C D	19.	A B C D	23.	A B C D
4.	A B C D	8.	A B C D	12.	A B C D	16.	A B C D	20.	A B C D	24.	A B C D

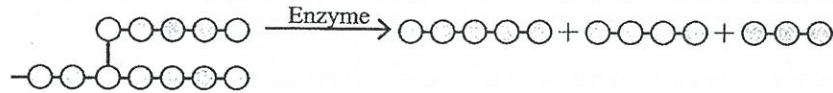
1. Mock Test

This section contains 30 multiple choice questions. Each questions has four options (A), (B), (C) and (D), out of which only ONE is corect.

- Mushroom are commonly seen during light rains, warm weather and growing on decaying matter. Generally, these are called
(A) saprophytes (B) autotrophs
(C) parasites (D) insectivorous
- The process of removing of fleece of the sheep is called
(A) fleecing (B) shearing
(C) scouring (D) shorting
- Which of the following best describes the sea breeze?
(A) Rise of sea water temperature during the day.
(B) Rise of land temperature during the day, heats up the air above it and rises up. It is followed by cool air from sea.
(C) Fall of land temperature during the day, cools the air above it and rises up. It is followed by hot air from sea.
(D) Fall of land temperature.
- The given equation is an example of reaction.
$$\boxed{\text{Acid}} + \boxed{\text{Base}} \longrightarrow \boxed{\text{Salt}} + \boxed{\text{Water}}$$

(A) acidic (B) basic
(C) neutralisation (D) all of these
- Choose the best representation of rust of an iron article.
(A) $\text{Fe} \longrightarrow \text{Fe}_2\text{O}_3$ (B) $\text{Fe} + \text{O}_2 \longrightarrow \text{Fe}_2\text{O}_3$
(C) $\text{O}_2 \longrightarrow \text{Fe}_2\text{O}_3$ (D) $\text{Fe} + \text{O}_2 + \text{H}_2\text{O} \longrightarrow \text{Fe}_2\text{O}_3$

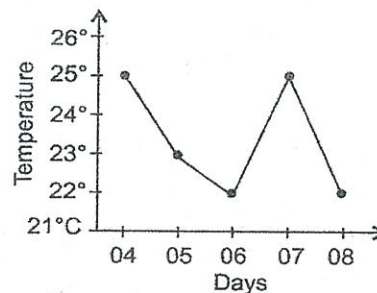
6. Which of the following best describes the given diagram?




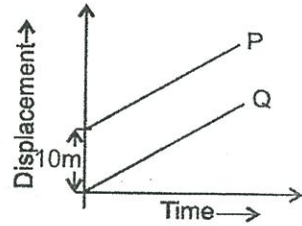



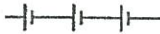
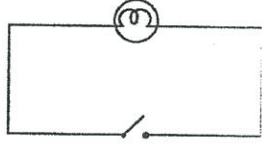
- (A) It represents nutrition (B) It represents digestion
 (C) It represents respiration (D) It represents transcription
7. During summers, when the days are hot due to high temperature the air becomes
 (A) light and rises up creating vacuum (B) light
 (C) rises up (D) does not rise
8. Match the following:

Column -I	Column -II
(M) Sandy soil	(i) any kind of soil
(N) Earthworm	(ii) dark in colour
(O) Upper layer of soil	(iii) lesser amount of humus
(P) Middle layer of soil	(iv) packed tightly
(Q) Clayey soil	(v) large particle

- (A) (M)–(iv), (N)–(v), (O)–(iii), (P)–(i), (Q)–(ii)
 (B) (M)–(v), (N)–(i), (O)–(ii), (P)–(iii), (Q)–(iv)
 (C) (M)–(iv), (N)–(v), (O)–(ii), (P)–(i), (Q)–(iii)
 (D) (M)–(v), (N)–(iv), (O)–(iii), (P)–(ii), (Q)–(i)
9. What happens to the rib cage and diaphragm during the process of inhalation?
 (A) Ribs moves up and outward, diaphragm moves down
 (B) Ribs moves down and inward, diaphragm moves up
 (C) Ribs moves up and inward, diaphragm moves up
 (D) Ribs moves down and outward, diaphragm moves up
10. The given temperature days graph represents temperature

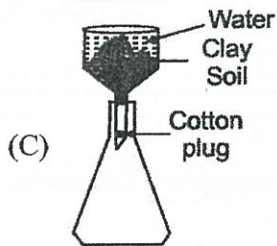
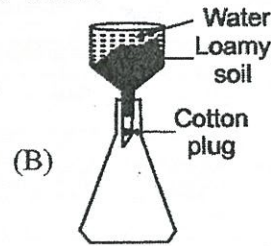
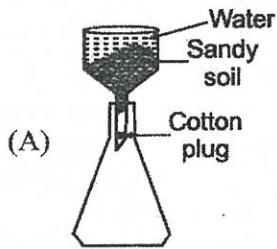


- (A) is fixed for five days (B) varies for five days
 (C) can not predict (D) none of these

11. All body parts of our body receives oxygen through
 (A) veins (B) haemoglobin
 (C) RBCs (D) WBCs.
12. The given diagram represents

 (A) food web (B) plants and animals
 (C) a food chain (D) organisms
13. Which of the following statements is correct for two bodies 'P' and 'Q', for given displacement-time graph?
 (A) 'P' is moving faster than 'Q'
 (B) 'P' is always 10 m behind 'Q'
 (C) 'Q' is moving faster than 'P'
 (D) 'Q' is always 10 m behind 'P'
- 
14. Which of the following component should be added to complete the given circuit diagram?
 (A)  (B) 
 (C)  (D) 
- 
15. Drip irrigation method saves
 (A) water (B) fertilizer
 (C) both (A) and (B) (D) none of these
16. A polished or shiny surface of an object acts as a
 (A) lens (B) source of light
 (C) mirror (D) none of these
17. When you dip a red litmus and blue litmus in a solution then the colour of litmus paper does not change. It means that solution is
 (A) acidic (B) neutral
 (C) basic (D) any of these
18. Making a paper fan by using a piece of paper is a
 (A) physical change (B) chemical change
 (C) both (A) & (B) (D) none of these



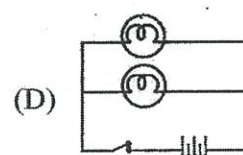
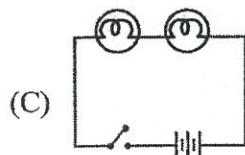
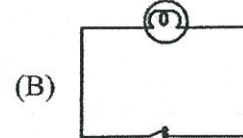
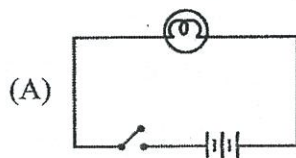
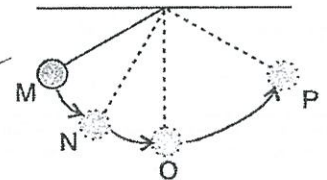
19. Why does the fumes from a burning incense sticks go up?
 (A) Because sticks are in the standing position.
 (B) Because fumes always go up.
 (C) Because fumes are warm and light.
 (D) Because it is the nature of fumes.
20. An experiment is conducted between Sandy, Loamy and Clay soil to check the retention of water, which sample of soil retain more water?



(D) All have same retention rate

21. Which of the following statement/s is/are correct.
 Statement 1 : Disease like malaria has water related vectors.
 Statement 2 : Polio is a water borne disease.

- (A) Statement 1
 (B) Statement 2
 (C) Both statements are correct
 (D) Neither statement 1 nor 2
22. If time taken by the bob to move from M to N is t_1 , and from N to O is t_2 , then the time period of this simple pendulum is



24. Which of the following mirror is used to view the rear of the vehicle?
 (A) Plane (B) Concave
 (C) Convex (D) None of these
25. Which of the following reaction represents anaerobic respiration in muscle cells?
 (A) Glucose $\xrightarrow{\text{without oxygen}}$ alcohol + carbondioxide + energy
 (B) Glucose $\xrightarrow{\text{without oxygen}}$ lactic acid + energy
 (C) Glucose $\xrightarrow{\text{without oxygen}}$ carbondioxide + water + energy
 (D) All of these
26. Which of the following nutrients are present in sewage?
 (A) Phosphorous (B) Chlorine
 (C) Nitrogen (D) Fluorine
27. The reasons behind making holes in big banners and hoardings is/are
 (A) holes allow the winds to pass through them.
 (B) holes provide safety from damage due to wind.
 (C) holes provide space to tie it to the wall.
 (D) holes make it easy to handle.
28. Swati wanted to grow a money plant in her home. She used stem of the plant. It is a mode of reproduction.
 (A) asexual (B) vegetative propagation
 (C) sexua (D) grafting
29. The image formed by the inner surface of the spoon, when kept close to an object is
 (A) erect (B) enlarged
 (C) inverted (D) virtual
30. Tounge in our mouth helps us in
 (A) speaking (B) mixing of saliva with food
 (C) digesting food (D) biting of food



Darken your Choice with HB Pencil

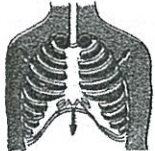
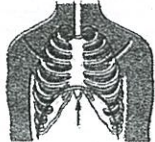
1. (A) (B) (C) (D)	8. (A) (B) (C) (D)	15. (A) (B) (C) (D)	22. (A) (B) (C) (D)	29. (A) (B) (C) (D)
2. (A) (B) (C) (D)	9. (A) (B) (C) (D)	16. (A) (B) (C) (D)	23. (A) (B) (C) (D)	30. (A) (B) (C) (D)
3. (A) (B) (C) (D)	10. (A) (B) (C) (D)	17. (A) (B) (C) (D)	24. (A) (B) (C) (D)	
4. (A) (B) (C) (D)	11. (A) (B) (C) (D)	18. (A) (B) (C) (D)	25. (A) (B) (C) (D)	
5. (A) (B) (C) (D)	12. (A) (B) (C) (D)	19. (A) (B) (C) (D)	26. (A) (B) (C) (D)	
6. (A) (B) (C) (D)	13. (A) (B) (C) (D)	20. (A) (B) (C) (D)	27. (A) (B) (C) (D)	
7. (A) (B) (C) (D)	14. (A) (B) (C) (D)	21. (A) (B) (C) (D)	28. (A) (B) (C) (D)	

2.

Mock Test

This section contains 30 multiple choice questions. Each question has four options (A), (B), (C) and (D), out of which only ONE is correct.

- Lichens are best examples to be associated to
(A) autotrophic relationship (B) symbiotic relationship
(C) parasitic relationship (D) all of these
- Humans can not digest every food such as, cellulose. What could be the reason behind?
(A) We don't have rumen.
(B) We don't have cellulase emzyme.
(C) We don't have digestive microbes in our gut.
(D) HCl secreted by humans is not such acidic to break it.
- How can we separate the silk fibre from cocoon?
(A) By keeping it under the sun (B) By boiling it
(C) By giving steam (D) Any one of these
- When you mix sugar in a glass of hot milk, the spoon become hot. It happens because of
(A) radiation (B) conduction
(C) convention (D) hot milk
- China rose indicator turns, basic solution to which colour?
(A) Blue (B) Green
(C) Black (D) Red
- Persons who predict and report about weather are called
(A) reporters (B) news reader
(C) weatherist (D) meteorologist

16. **Statement 1:** Trees helps in preventing soil erosion.
Statement 2: All organisms are important in balancing food web.
 (A) Statement 1 is correct (B) Statement 2 is correct
 (C) Both statements are correct (D) Neither statement 1 is correct nor 2
17. Which type of hair we get from sheep?
 (A) black, white (B) coarse, fine
 (C) fine, black (D) black, coarse
18. Indicators used to indicate the acidic/basic nature of a substance is because
 (A) indicators are sour (B) indicators are bitter
 (C) indicators are available (D) they change their colour
19. The burning of magnesium ribbon can be represented by an equation.
 (A) $\text{Mg} \longrightarrow \text{MgO}$ (B) $\text{Mg} + \text{O}_2 \longrightarrow \text{MgO}$
 (C) Both (A) and (B) (D) Neither (A) nor (B)
20. Cyclone can never hit
 (A) Delhi (B) Puri
 (C) Chennai (D) Mumbai
21. Which of the following figure is representing inhalation?
 (A)  (B) 
 (C) Both (A) and (B) (D) None of these
22. Choose the following representing correct flow of blood in our body?
 (A) Right atrium \rightarrow Right ventricle \rightarrow lungs \rightarrow left atrium \rightarrow left ventricle \rightarrow body
 (B) Right ventricle \rightarrow Right atrium \rightarrow left atrium \rightarrow lungs \rightarrow left ventricle \rightarrow body
 (C) Both (A) and (B)
 (D) None of these
23. If the bob of a pendulum is lifted on one side say 'A' and left, it swings to a point on opposite side say 'B' and again come back to position 'A', this is called
 (A) motion (B) oscillation
 (C) time period (D) none of these
24. The term used for apperant reversal of image is
 (A) vertical inversion (B) lateral inversion
 (C) virtual (D) erect

25. Name the organic and inorganic impurity present in sewage, in the same order.
 (A) Metals, vegetable waste (B) Vegetable waste, urine
 (C) Plastic, animal waste (D) Urine, metal
26. Three siblings, Prisha, Disha and Aahan carry waterbottles in their school bag.
 • Prisha covers it with a bubble wrap.
 • Disha covers it with a plastic bag.
 • Aahan covers it with an aluminium foil.
27. Whose water will not remain cool for long?
 (A) Prisha's (B) Disha's
 (C) Aahan's (D) Will remain cool for equal timings
28. Which of the following are the primary consumer in food web?
 (A) Cow (B) Grass
 (C) Tree (D) Deer
- A spoon acts as
 (A) concave mirror (B) convex lens
 (C) convex mirror (D) concave lens
29. Which of the following are reproductive organ of a flower?
 (A) Sepal (B) Pistil
 (C) Stamen (D) Petals
30. Which of the following uses the heating effect of current?
 (A) CFL bulb (B) Microwave oven
 (C) Electrical iron (D) Hair dryer.



Darken your Choice with HB Pencil

1. (A) (B) (C) (D)	8. (A) (B) (C) (D)	15. (A) (B) (C) (D)	22. (A) (B) (C) (D)	29. (A) (B) (C) (D)
2. (A) (B) (C) (D)	9. (A) (B) (C) (D)	16. (A) (B) (C) (D)	23. (A) (B) (C) (D)	30. (A) (B) (C) (D)
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7. (A) (B) (C) (D)	14. (A) (B) (C) (D)	21. (A) (B) (C) (D)	28. (A) (B) (C) (D)	

Answers

Chapter-1: Nutrition in Plants									
1. D	2. D	3. B	4. C	5. B	6. A	7. B	8. D	9. C	10. C
11. A	12. B	13. C	14. B	15. B	16. A	17. B	18. A	19. C	20. B
21. D	22. C								

Chapter-2: Nutrition in Animals									
1. C	2. D	3. B	4. D	5. B	6. C	7. A	8. B	9. B	10. C
11. B	12. B	13. C	14. C	15. A	16. D	17. B	18. B	19. B	20. B
21. D	22. D								

Chapter-3: Fibre to Fabric									
1. B	2. C	3. D	4. A	5. A	6. D	7. B	8. B	9. A	10. B
11. A	12. A	13. A	14. B	15. A	16. D	17. D	18. C	19. C	20. B
21. D	22. B	23. C	24. A						

Chapter-4: Heat									
1. B	2. C	3. A	4. D	5. D	6. B	7. B	8. C	9. D	10. A
11. A	12. B	13. A	14. D	15. A	16. C	17. B	18. D	19. D	20. B
21. A	22. C	23. A	24. C						

Chapter-5: Acids, Bases and Salts									
1. B	2. A	3. C	4. C	5. B	6. B	7. D	8. D	9. A	10. D
11. D	12. B	13. C	14. A	15. C	16. C	17. A	18. B	19. C	20. A
21. B									

Chapter-6: Physical and Chemical Changes									
1. B	2. D	3. D	4. B	5. D	6. D	7. C	8. D	9. B	10. A
11. B	12. A	13. D	14. A	15. C	16. C	17. B	18. A	19. B	20. C
21. D									

Chapter-7: Weather, Climate and Adaptations of Animals to Climate									
1. D	2. B	3. B	4. C	5. B	6. D	7. D	8. D	9. C	10. D
11. B	12. A	13. D	14. D	15. C	16. C	17. D	18. B	19. A	20. C
21. A	22. D	23. D	24. A						

Chapter-8: Winds, Storms and Cyclones

1. C	2. D	3. D	4. A	5. C	6. A	7. B	8. D	9. B	10. C
11. C	12. A	13. A	14. C	15. A	16. C	17. C	18. C	19. C	20. C
21. A	22. B	23. B							

Chapter-9: Soil

1. B	2. D	3. A	4. D	5. D	6. C	7. C	8. C	9. B	10. B
11. D	12. B	13. D	14. D	15. D	16. A	17. D	18. D	19. C	20. B
21. C	22. B								

Chapter-10: Respiration in organisms

1. A	2. B	3. D	4. B	5. B	6. C	7. C	8. B	9. C	10. B
11. A	12. A	13. D	14. B	15. C	16. B	17. A	18. B	19. B	20. D
21. C	22. B								

Chapter-11: Transportation in Animals and Plants

1. C	2. D	3. D	4. C	5. D	6. A	7. D	8. B	9. C	10. C
11. D	12. B	13. A	14. C	15. A	16. C	17. D	18. B	19. B	20. D
21. C	22. B								

Chapter-12: Reproduction in Plants

1. B	2. D	3. B	4. B	5. D	6. C	7. D	8. D	9. D	10. D
11. B	12. B	13. B	14. D	15. D	16. C	17. C	18. B	19. B	20. D
21. C									

Chapter-13: Motion and Time

1. B	2. B	3. C	4. D	5. C	6. B	7. B	8. B	9. C	10. D
11. D	12. C	13. C	14. D	15. B	16. D	17. B	18. D	19. B	20. D
21. C	22. D	23. C	24. C						

Chapter-14: Electric Current and its Effects

1. D	2. B	3. D	4. D	5. B	6. D	7. C	8. B	9. A	10. D
11. B	12. B	13. A	14. B	15. C	16. B	17. A	18. B	19. D	20. A
21. C	22. B	23. C	24. C						

Chapter-15: Light

1. B	2. A	3. B	4. A	5. A	6. D	7. B	8. B	9. A	10. C
11. C	12. C	13. B	14. D	15. A	16. C	17. A	18. B	19. B	20. C
21. D									

Chapter-16: Water: A Precious Resource																			
1.	D	2.	D	3.	C	4.	A	5.	C	6.	C	7.	D	8.	C	9.	D	10.	B
11.	D	12.	B	13.	D	14.	D	15.	D	16.	C	17.	D	18.	C	19.	B	20.	C
21.	C																		

Chapter-17: Forests: Our Lifeline																			
1.	D	2.	A	3.	C	4.	A	5.	D	6.	C	7.	C	8.	D	9.	B	10.	C
11.	C	12.	D	13.	C	14.	D	15.	B	16.	D	17.	B	18.	C	19.	C	20.	B
21.	C																		

Chapter-18: Wastewater Story																			
1.	B	2.	C	3.	C	4.	C	5.	C	6.	A	7.	A	8.	D	9.	A	10.	B
11.	C	12.	B	13.	D	14.	B	15.	D	16.	A	17.	C	18.	B	19.	D	20.	D
21.	A	22.	D																

Chapter-19: Logical Reasoning																			
1.	C	2.	C	3.	C	4.	C	5.	D	6.	B	7.	D	8.	A	9.	A	10.	C
11.	C	12.	C	13.	C	14.	B	15.	D	16.	B	17.	B	18.	B	19.	D	20.	C
21.	D	22.	B	23.	A	24.	B												

Mock Test-1																			
1.	A	2.	A	3.	B	4.	C	5.	D	6.	B	7.	A	8.	B	9.	A	10.	B
11.	B	12.	C	13.	D	14.	D	15.	C	16.	C	17.	B	18.	A	19.	C	20.	C
21.	A	22.	D	23.	D	24.	C	25.	B	26.	A,C	27.	A,B	28.	A,B	29.	A,B	30.	A,B

Mock Test-2																			
1.	B	2.	B	3.	D	4.	B	5.	B	6.	D	7.	A	8.	D	9.	D	10.	D
11.	B	12.	B	13.	B	14.	A	15.	A	16.	C	17.	B	18.	D	19.	B	20.	A
21.	A	22.	A	23.	B	24.	B	25.	D	26.	B,C	27.	A,D	28.	A,C	29.	B,C	30.	C,D



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