COMPETENCY BASED QUESTIONS

CHAPTER 1 NUTRITION IN PLANTS

1. Which of the following statements is not true about nutrition?
   a. Nutrition enables living organism to grow
   b. Nutrition breaks the glucose molecule in presence of oxygen to give energy.
   c. Nutrition breaks complex food to simpler form
   d. None of the above
2. Why animal body cannot make food from Carbon dioxide, water and minerals like plants do?
   a. Due to the absence of chlorophyll
   b. Less availability of sunlight
   c. Due to the presence of chlorophyll
   d. Animals cannot absorb sunlight.
3. Green plants synthesize food in the form of _____ and store in the form of _____
   a. Starch, Protein
   b. Starch, Carbohydrate
   c. Protein, Carbohydrate
   d. Carbohydrate, Starch
4. The presence of _____ in leaves indicate the occurrence of Photosynthesis.
   a. Chlorophyll
   b. Iodine
   c. Starch
   d. Carbohydrate
5. The ultimate source of energy for all living organism is _____
   a. Plants b. Micro Organism c. Carbohydrate d. Sun
6. Analyse the following sentences and state which of the sentences are true.
   i. Besides leaves, photosynthesis also takes place in other green parts of the plants.
   ii. Only green leaves can photosynthesize
   iii. In desert plants spine like leaves carry out photosynthesis
   a. i, ii and iii
   b. i and ii only
   c. i only
   d. ii only
7. Identify the type of nutrition by the following organism



   a. Mushroom, Pitcher plant, green plants
   b. Parasitic, Insectivorous, autotrophic
   c. Saprophytic, insectivorous, autotrophic
   d. Heterotrophic, Saprotrophic, autotrophic.

8. What helps the Stomata to open and close?
   a. Leaves
   b. Carbon dioxide and Oxygen
   c. Guard cells
   d. Transpiration.
9. Which of the following organism is of the same type as mushroom?
   a. Pitcher plant
   b. Bread mould
   c. Leguminous plant
   d. None of the above.
10. Which of the following statement is true about fungi?
   a. Some fungi are useful like mushroom and yeast
   b. Some fungi cause disease in animals, plants and humans
   c. Some fungi are also used in making medicine
   d. All of the above.

CASE BASED QUESTION (Read the following and answer the question no 11-13)

Crops require a lot of Nitrogen to make protein. After the harvest the soil become deficient in nitrogen. Nitrogen gas is available in plenty in the air but plants cannot use. They need Nitrogen in soluble form.

11. How do green plants take Nitrogen?
   a. From air through Stomata
   b. From Soil through roots.
   c. From atmosphere through chlorophyll
   d. All of the above.
12. The roots of leguminous plant have a type of organism that helps in taking in Nitrogen. Name the organism
   a. Rhizobium bacteria
   b. Micro organism
   c. Earthworm
   d. None of the above.
13. _____ shows the same type of nutrition as shown by leguminous plant and bacteria.
   a. Cuscutta
   b. Lichens
   c. Earthworm
   d. Mushroom
14. Fungi is a
   (a) parasite
   (b) autotroph
   c) saprotroph
   d) insectivore
15. Parasites obtain their food from
   (a) insects (b) plants (c) animals (d) all of these
16. Which part of plant is called food factory?
   (a) Fruits (b) Seeds (c) Leaves (d) Flowers
17. Which of the following statement is correct –
   a) Carbondioxide is produced during the process of photosynthesis
   b) Oxygen is produced during the process of photosynthesis
   c) Solar energy is converted into electrical energy during photosynthesis
   d) Algae cannot produce food by photosynthesis

18. The plants continuously take nutrients from the soil. So the amount of nutrients in the soil i)_____ _with time. So Nutrients are replenished in the soil by adding ii)_____and iii)_____ .It can also be replenished by growing iv) _____crops.

a) i) increases ii) manures iii) fertilisers iv) leguminous
b) i) decreases ii) manures iii) fertilisers iv) leguminous
c) i) decreases ii) manures iii) fertilisers iv) wheat
d) i) decreases ii) manures iii) solutions iv) leguminous

19. Look at the image below and choose the correct option with correct matching of column I with column II :

Column I	Column II
(a) Mango tree	(i) Insectivorous plant
(b) Mushroom	(ii) Heterotroph
(c) Pitcher plant	(iii) Autotroph
(d) Cuscuta	(iv) Saprophyte
(e) Elephant	(v) Parasitic

a) a) -iii , b) -iv , c) - ii , d) - v , e) - I
b) a) -iii , b) -iv , c) - i , d) - v , e) - ii
c) a) -iv , b) -iii , c) - i , d) - v , e) - ii
d) a) -iii , b) -i, c) - iv , d) - v , e) - ii

20. In a cactus plant food is made by:
a) Branches b) Reduced leaves c) spines d) Stem

21. The mineral needed by plants to make protein is:
a. minerals b) nitrogen c) Iodine d) phosphorus

22. Why fungi appear suddenly during rainy season?
a) Spores are present every where c) Both a and b
b) due to favourable condition d) None of the above

ANSWER KEY

1. b	2. a	3. d	4. b	5. d	6. c
7. c	8. c	9. b	10. d	11. b	12. a
13. b	14. c	15. d	16. c	17. b	18. b
19. b	20. d	21. b	22. c		

CHAPTER 2: NUTRITION IN ANIMALS

1. Which of the following shows the correct order of nutrition in animals?
   a. Ingestion → egestion → digestion→absorption→ assimilation
   b. Ingestion→ absorption → digestion→ assimilation→ egestion
   c. Ingestion → digestion→ assimilation→ absorption→ egestion
   d. Ingestion → digestion → absorption→ assimilation→ egestion
2. When we try to crack a nut which type of teeth we use?
   a. Incisors b. Canine c. Molars d. Premolars
3. Which of the following statement is not true about villi?
   a. Villi is located in the inner walls of small and large intestine
   b. Villi helps in the digestion of proteins
   c. Villi has network of blood vessel close to its surface
   d. Villi increases the surface area for absorption.
4. Read the following assertion and reason statement and choose the correct option.
   Assertion (A): When we chew plain rice for a long time in the mouth it tastes sweet
   Reason (R): Enzymes of saliva in the mouth turns starch to sugar.
   a. Both A and R are true and R is the correct reason for A
   b. Both A and R are true but R is not the correct reason for A
   c. Both A and R are false
   d. A is True but R is false.
5. Why do we vomit?
   a. When we feel like
   b. When there is more acid in stomach
   c. When the food is not partially digested.
   d. None of the above.
6. Under severe conditions diarrhoea can be fatal due to
   a. Indigestion
   b. More digestion
   c. Excessive loss of salt and water
   d. Not taking ORS
7. If humans have to digest cellulose which of the following should they possess
   a. Four chambered stomach
   b. Caecum
   c. Both a and b
   d. None of the above.
8. Which of the following statement about Amoeba is not true
   a. Amoeba is microscopic single celled Organism
   b. Amoeba constantly changes its shape and position
   c. Amoeba takes in food through the cell membrane
   d. Amoeba has autotrophic mode of nutrition
9. The digested food which goes into the blood stream through villi are
   a. Glucose, fattyacid and aminoacid c. Carbohydrate, fats and proteins
   b. Starch, fattyacid and proteins. d. Glucose only.

10. In which of the following organs digestion does not occur in the human alimentary canal.

i) Mouth ii) Oesophagus iii) Stomach iv)large intestine

a. i and iii b. ii and iv c. i, ii and iv d. Only ii

11. Enzymes present in saliva converts
    (a) starch into simple sugars
    (b) proteins into amino acids
    (c) complex sugars into simple sugars
    (d) fats into fatty acids and glycerol
12. The teeth of the first set that grew during infancy are called
    (a) permanent teeth (c) starting teeth
    (b) milk teeth (d) all of these
13. The glands of mouth which secrete saliva are
    (a) salivary glands (b) pancreas (c) lungs (d) liver
14. The bile plays an important role in the digestion of
    (a) carbohydrates (b) fats (c) sugar (d) starch
15. Water from the undigested food is absorbed mainly in the
    a) Stomach b) Food pipe c) Small intestine d) Large intestine
16. Which of the following paths show the correct order that describes the process of nutrition in ruminants:
    a) chewing of cud □ swallowing□ mixing with digestive juices □ digestion
    b) swallowing □ chewing and mixing□ partial digestion □ complete digestion
    c) swallowing□ partial digestion□ chewing of cud □ complete digestion
    d) chewing of cud □ swallowing□ partial digestion □ complete digestion
17. The acid present in the stomach:
    a) kills the harmful bacteria that may enter along with the food
    b) protects the stomach lining from harmful substances
    c) digests starch into simpler sugars
    d) makes the medium alkaline.
18. Crushed boiled rice, water and saliva mixture is warmed in a test tube for about 15 to 20 minutes andtwo or three drops of dilute iodine solution are added. The colour produced will be:

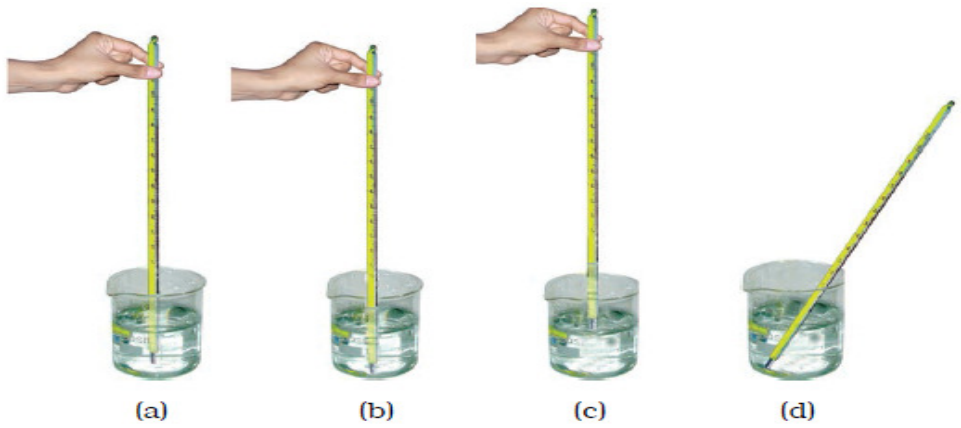
a. Bluish black b) yellow c) Green d) none of these

ANSWER KEY

1. d	2. d	3. b	4. a	5. c
6. c	7. c	8. d	9. a	10. b
11. a	12. b	13. a	14. b	15. d
16. c	17. a	18. b		

CHAPTER 4: HEAT

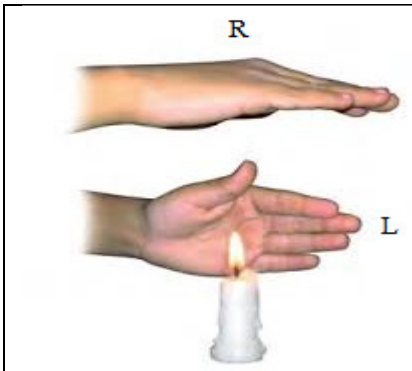
1. Which of the following statement is not true about Clinical thermometer?
   a. Mercury is used in the clinical thermometer
   b. It has a kink for holding the mercury and prevents it from immediate dropping down
   c. It can be used to measure temperature of boiling milk
   d. It ranges from 35°C to 42°C
2. Which of the following precautions should be followed while reading a laboratory thermometer?
   i) Should be kept upright not tilted
   ii) Hold it firmly and give it a few jerk to bring down the mercury
   iii) Wash it with antiseptic solution.
   iv) The bulb should not touch the surface of the container.
   a. All of the above b. i and iv only c. i, ii and iv d. i, iii, and iv
3. Temperature of the day is measured using a
   a. Clinical thermometer c. Digital thermometer
   b. Laboratory thermometer d. Maximum – Minimum thermometer
4. Identify the correct Posture of measuring the temperature using laboratory thermometer.



5. Identify X, Y and Z in the correct order

   a. Kink, Bulb and Capillary c. Capillary, Kink and Bulb
   b. Bulb Kink and Capillary d. None of the above
6. Identify the object in which you will not feel the heat on the other end when immersed in hot water.
   i)Steel spoon ii) woody stem iii) Copper wire iv)Plastic scale
   a. i and iii b. iii and iv c. ii and iv d. i and ii

7. On which hand you will feel more heat



a. More on Left Hand
b. More on Right Hand
c. Equally on both the hands
d. None of the above

8. Which of the following statement is not true about land and sea breeze?
   a. During the day the air over the land becomes hotter and rises up
   b. During the night the air over the sea is Cooler and moves towards the land
   c. Land looses heat faster than the sea
   d. Land gets heated up faster than the sea
9. Arun wants to design a special container which will absorb more heat and radiate less heat. What colour paint he should use on the outer and the inner walls.
   a. Black outer wall and Silver inner wall
   b. Both the walls black
   c. Both the walls silver
   d. Silver outer wall and Black inner wall
10. We should prefer wearing dark coloured clothes during _____as they _____ more heat
    a. Summer, absorb
    b. Winter, absorb
    c. Summer, radiate
    d. Winter , radiate.
11. Which of the following thermometers has a kink?
    (a) Laboratory thermometer
    (b) Clinical thermometer
    (c) Both (a) and (b)
    (d) Digital thermometer
12. What is the range of the temperature reading of a clinical thermometer?
    (a) 35°C – 42°C (b) -10°C – 110°C (c) 0°C – 100°C (d) 32°C – 42°C
13. The process of transferring of heat without any contact between the source of heat and the heated object is called-
    (a) conduction (b) convection (c) radiation (d) induction
14. A marble tile would feel cold as compared to a wooden tile on a winter morning, because the marble tile
    (a) is a better conductor of heat than the wooden tile.
    (b) is polished while wooden tile is not polished.
    (c) reflects more heat than wooden tile.
    (d) is a poor conductor of heat than the wooden tile.
15. The range of laboratory thermometer is usually from
    a) 10 degrees Celsius to 110 degrees Celsius
    b) 10 degrees Celsius to --110 degrees Celsius
    c) --10 degrees Celsius to 110 degrees Celsius
    d) 35 degrees Celsius to 42 degrees Celsius

16. Stainless steel pans are usually provided with copper bottoms. The reason for this could be that
    a) Copper bottom makes the pan more durable
    b) Such pans appear colourful.
    c) Copper is a better conductor of heat than the stainless steel
    d) Copper is easier to clean than the stainless steel
17. Which of the following is not an insulator?
    a) brick b) bamboo c) brass d) cardboard
18. Black objects are :
    a) good absorbers and bad emitters of heat
    b) good absorbers and good emitters of heat
    c) bad absorbers and good emitters of heat
    d) bad absorbers and bad emitters of heat
19. Assertion (A): Sea breeze blows during daytime.
    Reason (R): During sea breeze the air above the sea is hot and moves toward land
    a) Both A and R are true and R is the correct explanation of A.
    b) Both A and R are true but R is not the correct explanation of A.
    c) A is true but R is false.
    d) A is false but R is true.
20. When ice cream melts:
    a. heat is lost from the ice-cream c. heat is gained by the ice-cream
    b. heat is gained by surrounding d. all of these
21. The convection currents in air transfer heat:
    a. upward b) downwards c) sideways d) all of these

ANSWER KEY

1. c	2. b	3. d	4. a	5. c
6. c	7. b	8. b	9. a	10. b
11. b	12. a	13. b	14. b	15. c
16. c	17. c	18. a	19. c	20. c
21. a				

CHAPTER 5: ACIDS, BASES AND SALTS

1. Identify the natural source in which you can find the following acid.
   Ascorbic acid, Tartaric acid
   a. Vinegar and curd
   b. Citrus Fruit and Unripe mangoes
   c. Unripe mangoes and Ant sting
   d. Ant sting and Vinegar
2. Window cleaner was added to the following solutions. What could be the correct colour change?
   Phenolphthalein, Blue litmus paper and China rose essence
   a. Colourless, Blue , Green
   b. Pink, Red, Green
   c. Pink, Blue, Green
   d. Colourless, Red, Dark Pink
3. A Solution which can neither change the colour of red nor blue litmus paper are _____
   a. Acidic b. Basic c. Neutral d. None
4. Coffee is brown and is bitter in taste. When added to china rose petal essence it will turn to_____
   a. Dark pink b. Green c. Blue d. Reddish Brown
5. Which of the following reaction is correct
   a. Acid + Base → Salt + Heat
   b. Acid + Base → Salt + water
   c. Acid + Base → Salt + Water + Heat
   d. None of the above.
6. The acid secreted in our stomach which causes indigestion is
   a. Digestive enzymes
   b. Hydrochloric acid
   c. Lactic acid
   d. All of the above.
7. What is the chemical name of quick lime and Slaked lime?
   a. Calcium Hydroxide and Calcium
   b. Calcium Oxide and Calcium Hydroxide
   c. Calcium Salts
   d. None of the above
8. Quick lime and Slaked lime are added to the soil when the soil is _____ so that it becomes _____
   a. Basic, acidic
   b. Acidic, Basic
   c. Acidic, Neutral
   d. Basic, Neutral
9. Name the chemical present in Calamine solution which is basic in nature.
   a. Zinc Carbonate
   b. Lime Water
   c. Sodium Hydrogen Carbonate
   d. Milk of Magnesia
10. If acid falls in our hand what should be the immediate and correct home remedy you should do?
    a. Wash the hand with water and apply cream
    b. Wash the hand with Vinegar
    c. Wash the hand with water and apply baking soda
    d. Dip your hand in warm water.

11. Colour of phenolphthalein indicator in basic and acidic medium, respectively are
    (a) pink and colourless (b) colourless and pink
    (c) blue and red (d) red and blue
12. Which of the following feel soapy on touching?
    (a) Acid (b) Base (c) Salt (d) None of these
13. Which of the following is basic in nature?
    (a) Lime water (c) Both (a) and (b)
    (b) Baking soda (d) Lemon juice
14. When we suffer from acidity, we should take
    (a) iron tonic (b) vitamins (c) antacid (d) lactocalamine
15. Citric acid is found in
    A) Curd B) Lime water C) Vinegar D) Oranges
16. Complete the following analogy: Sea water : Salty:: Soap: _____
    a) Bitter b) Slippery c) Sour d) Both (a) and (c)

CASE STUDY BASED QUESTIONS: (Read the passage below and answer Q 17 – Q20)

Passage - Paheli and Bhujo went to a party .Bhujo ate too much fast food in the party and after returning home was complaining about the stomachache. Paheli was worried about his condition. She took him to doctor. Doctor told them not to get worried as this is due to acidity and indigestion of food and gave him some medicines.

17. Indigestion is caused by presence of excess of _____in the stomach?
    a) food material b) hydrochloric acid c) baking soda d) milk of magnesia
18. The medicines that are used to relieve us of indigestion are generally called
    a) antibiotic b) analgesic c) antacid d) antipyretic
19. One of the following is a medicine for indigestion .This is :
    a) sodium hydroxide b) manganese hydroxide
    c) magnesium hydroxide d) potassium hydroxide
20. Remedy for indigestion caused by acidity involves _____reactions:
    a) carbonization b) hydrogenation c) titration d) neutralisation

ANSWER KEY

1. b	2. c	3. c	4. a	5. c
6. b	7. b	8. c	9. a	10. c
11. a	12. b	13. c	14. c	15. d
16. a	17. b	18. c	19. c	20. d

CHAPTER 6: PHYSICAL AND CHEMICAL CHANGES

1. Which of the following are the physical properties?

   i) Shape ii) Size iii) Colour iv) State

   a. i and iii b. i and ii c. i, ii and iii d. all of above
2. Which of the following is not a chemical change?
   a. Rusting of iron
   b. Ripening of fruit
   c. Freezing of ice
   d. Curdling of milk
3. **Assertion(A):** When an iron nail is put in Copper sulphate solution it gets a reddish brown deposit.

   Reason (R): Reaction of copper sulphate solution and Iron is a chemical change
   a. Both A and R are true and R is the correct explanation of A
   b. Both A and R are true but R is not the correct explanation of A
   c. A is True but R is false
   d. A is False but R is True
4. What changes do you observe when Iron nail is put in copper sulphate solution?
   a. Blue solution turns green
   b. A brown deposit was seen on the Iron nail
   c. Both a and b
   d. None of the above
5. A student cleaned a Magnesium ribbon with sand paper and heated it on a candle flame. He observed.
   a. White flame and White ash which on dissolving in water turned red litmus blue.
   b. White flame and black ash which on dissolving in water turned blue litmus red
   c. Yellow flame and White ash which on dissolving in water turned red litmus blue.
   d. White flame and White ash which on dissolving in water turned blue litmus red.
6. When Carbon dioxide is passed through lime water it turned milky. The milky substance is
   a. Calcium Hydroxide
   b. Calcium Oxide
   c. Carbon dioxide
   d. Calcium Carbonate
7. Which of the following changes will not be observed during a chemical change?
   a. Release of a Gas
   b. Heat and light is given off
   c. Shape may change
   d. Colour change may be observed.
8. Which of the following chemical change is correct during the formation of rust
   a. Iron(Fe) + Oxygen(O_2) → Rust(FeO)+ water (H_2O)
   b. Iron(Fe) + Oxygen(O_2) → Rust(Fe_2O_3)
   c. Iron(Fe) + Oxygen(O_2) + water (H_2O) → Rust(FeO)
   d. Iron(Fe) + Oxygen(O_2) + water (H_2O) → Rust(Fe_2O_3)
9. How would you prevent an Iron pan from getting rusted?
   a. Coating with grease
   b. Coating with Oil
   c. Painting it
   d. All of the above

10. Crystallisation of Copper Sulphate is a
    a. Physical Change
    b. Both
    c. Chemical Change
    d. None of the above
11. Stainless steel is made by mixing iron with
    a. Zinc
    b. Carbon
    c. Chromium, Nickel and Manganese
    d. Carbon, Chromium, Nickel and Manganese
12. Iron Pipes which were used in our house to carry water. It does not catch rust easily due to
    a. Painting b. Galvanisation c. Greesing d. All of the above
13. We obtain pure salt by the process of
    a. Condensation
    b. Saturation
    c. Crystallisation
    d. None
14. Properties like size, shape, colour, state of a substance are
    (a) chemical properties
    (b) mental properties
    (c) physical properties
    (d) physio-chemical properties
15. Rusting of iron is a
    (a) physical change
    (b) chemical change
    (c) both (a) and (b)
    (d) all of these
16. When carbon dioxide is passed through lime water, the substance formed is
    (a) calcium oxide
    (b) calcium carbonate
    (c) both (a) and (b)
    (d) none of these
17. Two drops of dilute sulphuric acid were added to 1 g of copper sulphate powder and then small amount of hot water was added to dissolve it (step I). On cooling, beautiful blue-coloured crystals got separated (step II). Step I and step II are
    (a) physical and chemical changes respectively.
    (b) chemical and physical changes respectively.
    (c) both physical change
    (d) both chemical change

18. The gas we use in the kitchen is called liquefied petroleum gas (LPG). In the cylinder it exists as a liquid . When it comes out from the cylinder it becomes a gas (Change A) then it burns (Change B). The following statements pertain to these changes. Choose the correct one.
    a. A is chemical change and B is Physical change
    b. A is physical change and B is chemical change
    c. A & B both are Physical change
    d. A & B both are Chemical change
19. Which of the following is a neutralization reaction?
    a) Sodium chloride + Water → Sodium hydroxide + Hydrochloric acid
    b) Calcium carbonate + Water → Calcium hydroxide + Carbon dioxide
    c) Sodium hydroxide + Hydrochloric acid → Sodium chloride + Water
    d) Copper sulphate + Zinc →Zinc sulphate + Copper

20. Adding salt to water makes it salty. Which of the following statement is true regarding this change?
    a) It is a chemical change because a new substance is formed
    b) It is a physical change and the original substances can be recovered
    C) It is a chemical change because there is exchange of heat
    D) It is a physical change and the original substance can not be recovered

21. Complete the following equation of rusting of iron.
    Iron(Fe) + A + moisture → B
    a) A = Oxygen, B = Carbon dioxide
    b) A = Water, B = Rust (Iron Oxide)
    c) A = Oxygen, B = Rust (iron oxide)
    d) A = Carbon dioxide, B = Oxygen
22. Two changes are stated below:
    (i) A piece of magnesium gives of bright flames when burnt.
    (ii) A piece of iron glows red when heated strongly.
    Which of the above changes is a chemical change?
    a) i only b) ii only c) Both i and ii d) neither i nor ii

ANSWER KEY

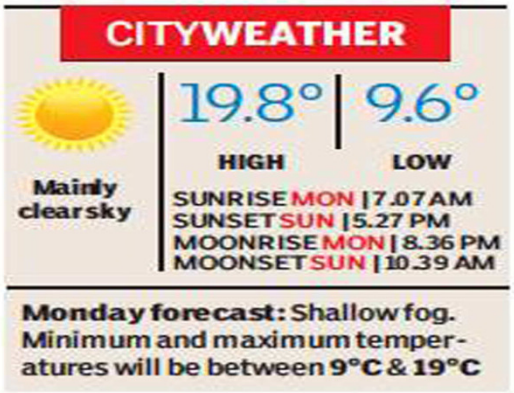
1. d	2. c	3. a	4. c	5. a
6. d	7. c	8. d	9. b	10. a
11. d	12. b	13. c	14. c	15. b
16. b	17. c	18. b	19. c	20. b
21. c	22. a			

CHAPTER 7: WEATHER, CLIMATE AND ADAPTATIONS OF ANIMALS TO CLIMATE

1. Which of the following detail cannot be given by Meteorological department?
   a. Cyclone b. Thunder Storm c. Humidity d. Earthquake

Case Study

Read the following weather report by Meteorological department and answer the following questions (Q2 to Q5)



2. Find the day length from the weather report given
   a. 10 hours 20 min
   b. 10 hours 17 min
   c. 10 hours
   d. 12 hours

3. The weather report given is of
   a. Summer Season
   b. Monsoon
   c. Winter Season
   d. Autum

4. When the maximum and minimum temperature of a day is calculated?
   a. Early morning and Mid night
   b. Early Morning and Mid noon
   c. Mid noon and Early evening
   d. Mid noon and Early morning

5. Which of the following element of weather is missing in the weather report?
   a. Temperature
   b. Sun Rise and Sun Set
   c. Humidity
   d. None of the above

6. All changes in the weather is mainly caused due to
   a. Temperature b. Clouds c. Wind speed d. Sun

7. Which of the following statement is not true about climate?
   a. Average weather pattern of 25 Years is climate
   b. Climate of a place is determined by Meteorological department
   c. Climate of a place changes very frequently
   d. Climate of Rajasthan is Hot and dry

8. Which of the following adaptations will not be shown by animals in Tropical rain forest?
   a. Camoflage
   b. Stick pads
   c. Migration
   d. Long beak

9. Which of the following features does not help a Penguin to keep them warm?
   a. Huddling
   b. Thick fat under skin
   c. White fur
   d. Thick skin
10. Why Siberian cranes migrate from Siberia to India?
   a. To escape severe Summer
   b. To escape severe winter
   c. To lay eggs
   d. To build nest
11. A bird with long beak and can reach the fruits on branches which are too weak. Identify.
   a. Siberian Crane
   b. Toucan
   c. Penguin
   d. None of the above.
12. Why a large variety of plants and animals are found in the Tropical rain forest?
   a. Sufficient Rainfall
   b. Equal length of day and night
   c. Hot Climate
   d. All of the above.
13. What would be the climatic conditions of a desert?

a) Wet
b) Hot and dry
c) Hot and humid
d) Cold and humid

14. Assertion: Animals are adopted to survive in the conditions they live.
   Reason: Features and habit that help to adapt are a result of evolution.

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

15. Out of the below adaptation, which statement is incorrect for a lion-tailed Macaque

a) Lives in rainforest of Western Ghats
b) Have silver-white mane
c) Are not a good climber
d) Lives major part of its life on tree.

16. Which department is responsible for making weather reports?

a) Weather department
b) Physical department
c) Environmental department
d) Meteorological department

17. Sia wants to measure the wind speed. Name the instrument that she will use

a) Anemometer b) Odometer c) Speedometer d) Galvanometer

18. Which of the following state has a tropical rainforest?

a. Kashmir b) Andhra Pradesh c) Assam d) Delhi

ANSWER KEY

1. d	2. a	3. c	4. d	5. c
6. d	7. c	8. c	9. c	10. b
11. b	12. d	13. b	14. a	15. c
16. d	17. a	18. c		

CHAPTER 9: SOIL

1. The rotting dead matter in soil is
   a. Gravel
   b. Humus
   c. Clay
   d. Silt
2. The vertical section through different layers of the soil is called
   a. Soil Profile
   b. Soil Layer
   c. Soil Composition
   d. Soil details
3. Which of the following causes Soil Pollution?
   a. Polythene bags
   b. Pesticide
   c. Fertilizers
   d. All of the above.
4. Which of the following is not a cause of weathering?
   a. Wind
   b. Soil
   c. Climate
   d. Water
5. A potter was intending to make the best matkas. What type of soil should he use to make the same?
   a. Clayey Soil with burnt horse dung
   b. Loamy soil with burnt horse dung
   c. Sandy soil with burnt horse dung
   d. Only Clayey Soil
6. Which of the following is not the property of Sandy soil?
   a. Sandy soil has greater proportion of big particles.
   b. Sandy soil absorbs more water
   c. Sandy soil has greater percolation rate.
   d. All of the above
7. If 450 ml of water percolates a soil in 30 min. Calculate the rate of percolation of that soil?
   a. 15 ml / min
   b. 45 ml / min
   c. 30 ml / min
   d. 15 min / ml
8. If 60 g of soil absorbs 12 g of water. What could be the percentage of water absorption by the soil?
   a. 10% b. 12% c. 20% d. 25%
9. Cereals like wheat and gram are grown in soil that_____
   a. Good at retaining water
   b. Good at percolating water
   c. Both a and b
   d. None of the above.
10. Paddy grows best in
    a. Loamy soil
    b. Sandy loam
    c. Clayey soil
    d. Sandy soil
11. Which of the following could be the reason for soil erosion?
    i. Deforestation
    ii. Over grazing
    iii. Afforestation
    iv. wind and flowing water.
    a. All of the above b. i and ii only c. i, ii and iii d. i, ii and iv

12. Match the following and choose the correct option

i)	Paddy	m) sandy loam
ii)	Cotton	n) Fine clay
iii)	Wheat	o)loam
iv)	Lentils	p) Clay and organic matter

a. i) – p, ii) – m, iii) – o, iv – n
b. i) – p, ii) – m, iii) – n, iv – o
c. i) – p, ii) – o, iii) – m, iv – n
d. i) – m, ii) – p, iii) – o, iv – n

13. Choose the correct statement-

a) Sandy soil is good for wheat growth
b) Loamy soil is good for pulses
c) Cotton grows well in loamy soil
d) Groundnut grows well in loamy soil

14. For a certain sample, it took 25 minutes for 500 ml to percolate. So calculate the rate of percolation

a) 10 mL/min b) 15 mL/min c)20 mL/min d)25 mL/min

15. Which soil would have minimum water holding capacity

a) Clayey
b) Sandy
c) Loamy
d) None of these

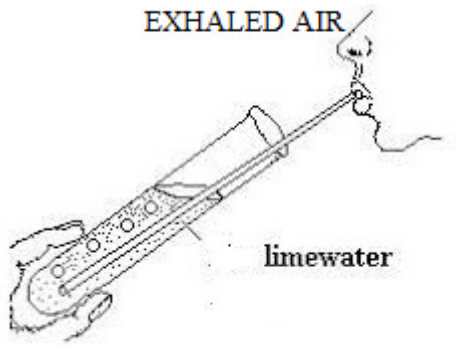
ANSWER KEY

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

CHAPTER 10: RESPIRATION IN ORGANISMS

1. The breakdown of glucose in the cell with the release of energy is called _____
   a. Breathing b. Nutrition c. Respiration d. Cellular Respiration
2. Which of the following reaction takes place in the muscle when there is sufficient oxygen?
   a. Glucose + Oxygen → energy + Carbon dioxide + water
   b. Glucose (With out Oxygen) → Lactic acid + energy
   c. Glucose + Oxygen → Lactic acid + energy
   d. Glucose (without oxygen) → alcohol + carbon dioxide + energy
3. Yeast are single celled organism used to make wine and beer because
   a. They respire aerobically and produce alcohol
   b. They respire anaerobically and produce alcohol
   c. They respire both aerobically and anaerobically and produce alcohol
   d. They respire partial aerobic respiration and produce alcohol
4. What happens when we give a hot water bath or massage during muscle cramps?
   a. Lactic acid is removed from the blood
   b. Increased supply of oxygen breaks Lactic acid to Carbon dioxide and water
   c. Lactic acid is Converted to alcohol
   d. Increased supply of oxygen breaks lactic acid to protein
5. Breathing rate increases during
   a. Heavy exercise b. Sleeping c. Eating d. Drinking water
6. Which of the following is the common passage for food and air?
   a. Trachea b. Nose c. Oesophagus d. Pharynx
7. When we have Cold our nose gets blocked but still we can breathe through our mouth. What are the possibilities when we breathe through mouth?
   a. Clean air enters the respiratory track
   b. Foreign particles may enter respiratory track
   c. Water may enter the respiratory track
   d. All of the above
8. When we inhale which of the following enters our respiratory track?
   a. Only Oxygen c. Everything present in air
   b. Both oxygen and Carbon dioxide d. Only Carbon dioxide
9. What happens during inhalation?
   a. Ribs move inward and diaphragm moves downward
   b. Ribs move inward and diaphragm moves upward
   c. Ribs move outward and diaphragm moves down ward
   d. Ribs move inward and diaphragm moves upward.
10. When a person's rib gets fractured what difficulty he might face?
    a. Difficulty in breathing and pain
    b. Pain in the chest
    c. Difficulty in movement of hands.
    d. Only difficulty in breathing

11. What is the difference in the percentage Oxygen inhaled and exhaled by humans?
    a. 21% b. 16.4% c. 0.4% d. 4.6%
12. What is the percentage of Carbon dioxide exhaled by humans?
    a. 0.04% b. 4.4% c. 0.4% d. 0.004%
13. What would happen when exhaled air is mixed with limewater?



    a. Lime water turns milky due to the formation of Carbon dioxide
    b. Lime water turns milky due to the formation of Calcium oxide
    c. Lime water turns milky due to the formation of Calcium Carbonate
    d. Lime water will become clear
14. Why whales come often to the surface of the water?
    a. To catch its prey
    b. To breathe as they respire through lungs
    c. To breathe as they respire through gills
    d. To breathe as they respire through skin
15. What would happen when we over water a potted plant?
    a. Plant will grow nicely as they need more water
    b. Plant will take less water
    c. Plant will produce strong roots.
    d. Plant will die as the roots are unable to respire
16. Yeast are used to make alcohol by which process

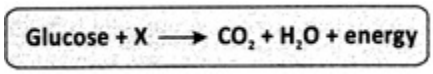
a) Aerobic respiration
b) Anaerobic respiration
c) Digestion
d) Breathing

17. Match the following correctly

1. Fish	a. Moist skin
2. Insect	b. Gills
3. Earthworm	c. Tracheae

a) 1-b 2-c 3-a
b) 1-a 2-b 3-c
c) 1-c 2-a 3-b
d) 1-b 2-a 3-c

18. Identify X in the given equation of aerobic respiration.



a) Water b) Oxygen c) Ethyl alcohol d) Nitrogen

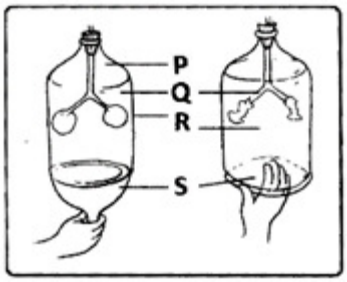
19. Why do we get muscle cramps after heavy exercise?
    a) It is due to the partial breakdown of glucose to produce lactic acid.
    b) It is due to the complete breakdown of glucose to produce lactic acid.
    c) It is due to the muscle cells that respire in the presence of oxygen.
    d) It is due to the increased supply of oxygen to muscle cells.

20. Yeast converts glucose into:

    a) starch b) alcohol c) lactic acid d) yoghurt

21. Which of the following path correctly illustrates the passage of oxygen in the respiratory system?
    a) Nose →Lungs →Wind pipe →Blood
    b) Nose →Blood →Wind pipe →Lungs
    c) Nose →Blood →Lungs →Wind pipe
    d) Nose →Wind pipe →Lungs →Blood

22. Which of the following labelled parts represent diaphragm in the given figure?



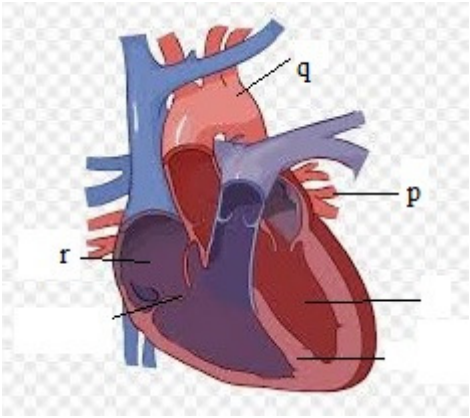
a) P b) Q c) R d) S

ANSWER KEY

1. D	2. a	3. b	4. b	5. a
6. d	7. b	8. c	9. c	10. a
11. d	12. b	13. c	14. B	15. d.
16. b	17. a	18. b	19. a	20. b
21. d	22. d	23.	24.	25.

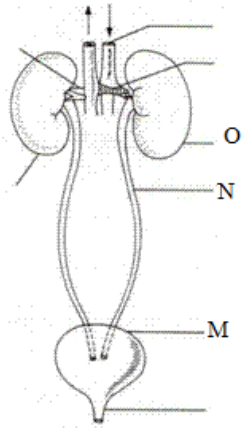
CHAPTER 11: TRANSPORTATION IN ANIMALS AND PLANTS

1. The pulse which we feel on the wrist is a/an _____
   a. Artery b. Vein c. Capillary d. None
2. What is the pulse rate of a person who is resting?
   a. 60 - 72 beats/min
   b. 70 – 80 beats / min
   c. 72 – 80 beats / min
   d. 90 – 100 beats / min
3. Which of the following mineral is essential for Haemoglobin?
   a. Vitamin A
   b. Iron
   c. Calcium
   d. Vitamin C
4. The _____ is the only artery which carries deoxygenated blood to the _____
   a. Pulmonary artery, all parts of body
   b. Pulmonary artery, to lungs
   c. Aorta, to kidney
   d. Aorta, to all parts of body
5. The heart chamber with thickest muscular walls is _____ and it pumps blood at a very high pressure to the _____
   a. Left Ventricle, Aorta
   b. Left Ventricle, Pulmonary artery
   c. Right Ventricle, Aorta
   d. Right Ventricle, Pulmonary Artery
6. The doctor feels the heartbeat using an instrument known as_____
   a. Thermometer
   b. Stethoscope
   c. BP machine
   d. All of the above
7. Identify p, q and r in the figure given below



   a. p- Aorta, q – Pulmonary vein, r- Right atrium
   b. p- Pulmonary Vein , q – Aorta, r- Right atrium
   c. p- Aorta, q – Pulmonary artery, r- Left atrium
   d. p- Aorta, q – Pulmonary vein, r- Left atrium
8. Urine consists of 95% water, 2.5% urea and 2.5% other waste. Where are these waste generated in human body?
   a. Muscles b. Every cell c. Heart d. Urinry bladder
9. The major excretory product of birds, lizards and snake is_____
   a. Urea b. Urine c. Uric acid d. Ammonia
10. Aquatic animals like fishes excrete cell waste as_____
    a. Urea b. Urine c. Uric acid d. Ammonia

11. Identify the option that has the correct labelling with its correct function



a. M – Urinary bladder – helps to filter urine from blood
b. N – Urethra – Connects Kidneys to the Urinary Bladder
c. M – Urinary bladder – Stores urine temporarily
d. O – Right Kidney – Filters urine from blood

12. Name the cell of blood that helps in clotting
a) Red blood cells
b) White blood cells
c) Platelets
d) None of these

13. What role does pulmonary vein performs
a) Carry oxygenated blood from lungs to heart
b) Carry deoxygenated blood from lungs to heart
c) Carry oxygenated blood from heart to body
d) Carry deoxygenated blood from heart to body

14. Name the organ where urine is stored
a) Kidney
b) Ureter
c) Urethra
d) Urinary bladder

15. Name the tissue that is responsible for transportation of food in plants
a) Xylem
b) Phloem
c) Both of these
d) None of these

16. Pulmonary arteries carry :
a) pure blood to lungs b) impure blood to lungs
c) impure blood to kidney d) Pure blood to the kidney

17. Coagulation of blood in a cut or wound is brought about by :
a)plasma b) platelets c) white blood cells d) red blood cells

18. Match column I with column II and select the correct answer using the code given below the columns

Column-I	Column-II
(A) Xylem	(i) transpiration
(B) Pholem	(ii) transport of food
(C) Root hairs	(iii) transport of water
(D) Stomata	(iv) Absorption of water

a) (A) →(i), (B) →(ii), (C) →(iii), (D) →(iv)

b) (A) →(ii), (B) →(iii), (C) →(i), (D) →(iv)

c) (A) →(iii), (B) →(ii), (C) →(iv), (D) →(i)

d) (A) →(iii), (B) →(ii), (C) →(i), (D) →(iv)

19. Assertion A : The blood in veins flow in one direction only :towards the heart.
Reason (R): The veins have thick walls

a) Both A and R are true and R is the correct explanation of A.

b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false.

d) A is false but R is true

20. The cells in blood which destroy disease causing germs are:

a. capillaries b) RBC c) WBC d) platelets

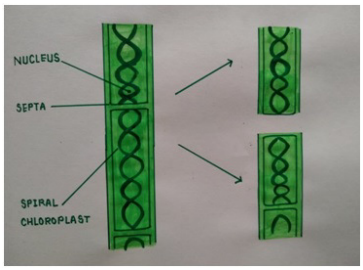
21.

ANSWER KEY

1. a	2. c	3. b	4. b	5. a
6. b	7. b	8. b	9. c	10. d
11. c	12. c	13. a	14. d	15. c
16. b	17. b	18. c	19. c	20. c

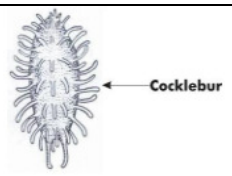
CHAPTER 12: REPRODUCTION IN PLANTS

1. **Assertion (A):** Growing rose by cutting is asexual reproduction
   Reason (R): In asexual reproduction new plants are produced from seeds.
   a. Both A and R are true and R is the correct explanation of A
   b. Both A and R are true but R is not the correct explanation of A
   c. A is True but R is false
   d. A is False but R is True
2. Which of the following plant does not show vegetative propagation?
   a. Budding of yeast
   b. Cutting of rose
   c. Sprouting of potato
   d. Leaf of Bryophyllum
3. **Assertion (A):**Plants produced by vegetative propagation takes less time to grow.
   Reason (R): Plants produced by vegetative propagation are exact copies of their parent
   a. Both A and R are true and R is the correct explanation of A
   b. Both A and R are true but R is not the correct explanation of A
   c. A is True but R is false
   d. A is False but R is True
4. Identify the organism and the type of reproduction



   a. Spirogyra – Fragmentation
   b. Spirogyra – budding
   c. Yeast - Budding
   d Yeast – Fragmentation

5. The given picture shows the seed of a plant called cocklebur. Choose the correct method by which this seed is dispersed.

	a. Carried by water b. Carried by wind c. Carried on animal's fur d. Eaten by animal

6. Which is the part of the flower that develops into a seed?
   a. Ovary b. Ovule c. Carpel d. Pistil
7. It is known that light is not required for moist pea seeds to germinate. However, dry seeds will not germinate even if there is light. Lata sets up 4 experiments using similar pea seeds:
   1. Dry pea seeds kept in light.
   2. Dry pea seeds kept in the dark
   3. Moist pea seeds kept in light
   4. Moist pea seeds kept in the dark

In which case(s) will the seeds germinate?

a. Only case 1 b. Only case 3 c. Case 3 and 4 d. Case 1 and 3

8. Which part of the flower protects the young flower when it is a bud?

a. Sepal b. Stamen c. Stigma d. Petal

9. Ashok placed some seeds on moist cotton in a shallow dish. He sprinkled some water on the seeds and put them in the refrigerator. The seeds did not germinate even after two days. What is the most likely reason for this?

a. Seeds did not get enough water
b. Seeds did not get enough air
c. The seeds were not provided with the right temperature for germination
d. The refrigerator did not work properly

10. An incomplete flower will usually undergo

a. Self pollination c. Both self and cross pollination
b. Cross Pollination d. None of the above.

11. The Plants which have lost the ability to produce seeds.

a. Do not reproduce c. Reproduce by sexual mode
b. Reproduce by Vegetative Propagation d. All of the above

12. Seeds that are dispersed by wind should not be / have

a. light b. hairy c. winged d. Spongy outer coat

13. Assertion: In vegetative propagation new plants are exact copies of the parent plant
Reason: Vegetative propagation include single parent only

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

14. Spores are the …

a) Seeds
b) Sexual reproductive bodies
c) Buds to a plant
d) Asexual reproductive bodies

15. The process of fusion of male and female gametes is called……

a) Pollination
b) Embryo formation
c) Fertilization
d) Reproduction

16. Arvind observed that a plant has buds in the margins of its leaves. The plant may be

a) Rose b) Dahlia c) Bryophyllum d) Hibiscus

17. Vegetative propagation refers to the formation of new plants from the following existing organs of the old plants:
    a) stems, roots, flowers b) stems, flowers, fruits
    c) roots, stems, leaves d) stems, leaves, flowers
18. Which of the following constitute a pistil?
    a) Stigma, style and anther b) Stigma, style and ovary
    c) Stigma, stamen and ovary d) Pollen sac, style and ovule
19. Read the following three statements carefully and choose the correct option.
    (i) Spirogyra reproduce by budding
    (ii) Rose reproduce by stem cutting
    (iii) Yeast reproduce by fragmentation
        a) Statements (i) and (iii) are incorrect but (ii) is correct.
        b) Statements (i) and (ii) are incorrect but (iii) is correct.
        c) All statements are correct.
        d) All statements are incorrect.
20. These are asexual reproductive bodies which are covered by a hard protective coating and they can survive for a long time. These are
    a) stamen b) stigma c) spores d) none of these

21. The seeds / fruits of which of the following plant are not dispersed by wind ?
    a) drumstick b) grass c) coconut d) cotton

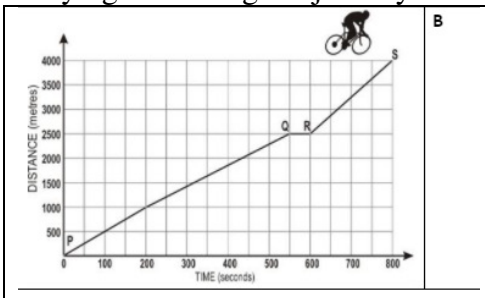
22. Which of the following is the correct sequence of events in the sexual reproduction of a plant from the flowers ?
    a) pollination- seed - fertilization - germination
    b) pollination- fertilisation - seed- germination
    c) pollination- seed - germination - fertilisation
    d) pollination- fertilisation- germination - seeds

ANSWER KEY

1. c	2. a	3. b	4. a	5. c
6. b	7. c	8. a	9. c	10. b
11. b	12. d	13. a	14. d	15. c
16. c	17. c	18. b	19. a	20. c
21. c	22. b	23.	24.	25.

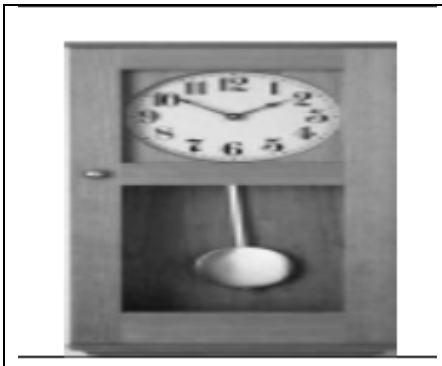
CHAPTER 13: MOTION AND TIME

1. A cyclist starts at a point P and cycles in a straight line to a point S, 4 kilo metres away. His distance is noted every 100 seconds in a graph. Answer the question after studying it. During the journey from P to S



a. The cyclist travelled at the same speed
b. The cyclist increased his speed after a short break
c. The cyclist decreased his speed after a short break
d. The cyclist decreased his speed continuously.

2. Identify the types of motion that can be observed in the given picture



a. Rectilinear motion and circular motion
b. Circular motion and Oscillatory motion
c. Rectilinear and Oscillatory motion
d. Rectilinear, Oscillatory and Circular motion.

3. What is the function of the 'quartz' in a quartz watch?
   a. It is the source of energy that powers the watch.
   b. It is a decorative stone used on the watch face
   c. Its vibrations are used by the watch to keep time.
   d. It is a very hard material that makes the watch durable
4. Some satellites are called 'geo-stationary' - they seem to hover above the earth, as they remain 36,000 km above a single point on the earth's surface and spin with the earth as it rotates. How much time would such a satellite take to complete one revolution of the earth?
   a. 12 hours b. 24 hours c. 30 days d. 365 days
5. The 'cubit' is among the first recorded units of length used by ancient people. One cubit is equal to the length from the elbow to the tip of the longest finger of a person. If this measure (cubit) was used by some students of a school to measure the length of a 30 metre long corridor, how much would it measure?
   a. 15 cubits c. 45 cubits
   b. 30 Cubits d. Will vary from student to student.
6. Ravi has a pendulum whose time period is 3.5 s. What should he do to increase the time period of the pendulum?
   a. Increase the weight of the bob c. Increase the length of the chord
   b. Displace the bob to the maximum length d. Decrease the length of the chord
7. What is the time taken for 30 oscillation if the time period of the pendulum is 2.1 sec?
   a. 630 sec b. 61 sec c. 63 sec d. 610 sec

8. What is the speed of the vehicle if it covers 20 Km in 40 min?
   a. 8.5 m/s b. 800 Km/min c. ½ km/h d. 800km/h
9. One micro second is equal to _____
   a. $1/10^6$ Sec b. $1/10^3$ Sec c. $1/10^5$ Sec d. $1/10^2$ Sec
10. One nano second is equal to _____
   a. One millionth of second c. One million second
   b. One billionth of second d. One billion second
11. A simple pendulum takes 42 sec. to complete 20 oscillations. What is its time period?
   (a) 2.1 s
   (b) 4.2 s
   (c) 21 s
   (d) 8.40 s
12. Which of the following formula is correct?
   (a) speed = distance × time
   (b) speed = 1/ (distance × time)
   (c) speed = Time / distance
   (d) Distance = Speed x Time
13. The device which is used for measuring time intervals in sport activities is called
   (a) wrist watch
   (b) stop clock
   (c) stop watch
   (d) quartz watch

14. The Standard unit of speed is :
   a) km/min b) m/min c) km/h d) m/s

ANSWER KEY

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

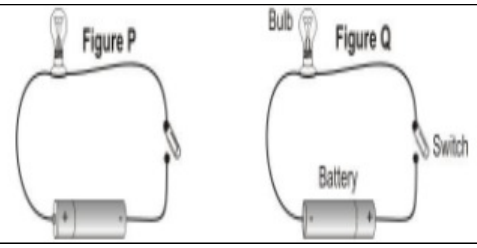
CHAPTER 14: ELECTRIC CURRENT AND ITS EFFECTS

1. Will a battery that is used in a torch light up a regular 60W bulb used in homes?
   a. Yes, it will and the bulb will glow quite brightly.
   b. Yes, it will but the bulb will glow dimly.
   c. No, it will not because a battery does not produce electricity.
   d. No, it will not because the current will not be sufficient.
2. A torch uses three different forms of energy. Which of these shows the energy changes in the correct order?
   a. Mechanical → heat → chemical
   b. Chemical → electrical → Light
   c. Heat → Chemical → Light
   d. Electrical → Mechanical → Chemical
3. The table given below classifies a few substances as good or bad conductors of electricity. Which substance has been put under the wrong heading?

Good conductor	Bad conductor
Graphite	Plastic
Wax	Air
Copper	Paper
Iron	Cloth

   a. Graphite
   b. Wax
   c. Air
   d. Paper

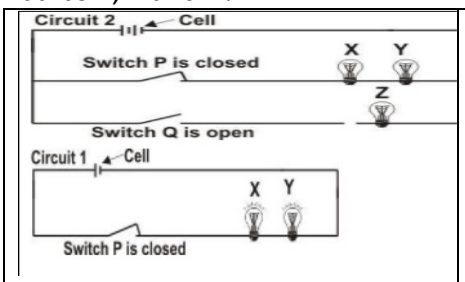
4. See the circuit shown below in figure P. If the battery is connected the other way (as shown in figure Q), what will happen when the switch is on?



   a. The bulb will glow in exactly the same way
   b. The bulb will glow but less brightly
   c. The bulb will fuse out
   d. The bulb will not glow but will not be damaged.

5. Many electrical devices like televisions and electric irons have plugs which have 3 pins. However, other devices sometimes work with only 2 pins. Why is the third pin necessary?
   a. It is not necessary; it is only to provide a better grip.
   b. Since the sockets often have three holes, the third pin fits into the third hole.
   c. It is provided for safety in case electricity leaks onto the body of the appliance.
   d. It allows the electric device to draw more power than it could with only 2 pins.
6. The filament of an electric bulb is made up of
   a. Copper b. Aluminium c. Tungsten d. Any of the above
7. Which of the following is not a reason for Short circuit
   a. Direct contact of wires due to wear and tear
   b. MCB is not connected to the Circuit
   c. Connecting many device to single socket
   d. High voltage of current from the external wire

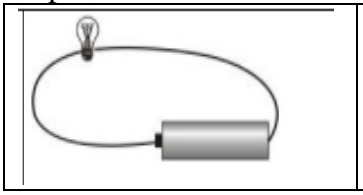
8. See Circuit 1. Bulbs X and Y are glowing. If a second cell is added to the circuit as shown in Circuit 2, with switch P closed and switch Q open, what would happen to bulbs X, Y and Z?



Options	Brightness of X and Y	Z
A.	Doubles	Not lit
B.	Decreases	Not lit
C.	Increases	lit
D.	Doubles	lit

9. Rahul wants to increase the magnetic effect produced by the electric current. Suggest him the way to do so.
   a. Increase the number of winding.
   b. Decrease the electric current
   c. Decreasing the number of windings
   d. Both a and b

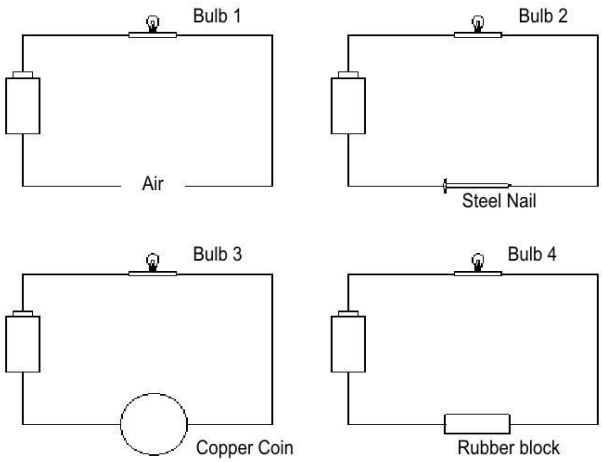
10. When connected as shown, the bulb glows, but dimly. Which of these CAN be the explanation for this:



   a. The wires are not touching the battery or bulb.
   b. The bulb is fused (that is, its filament is broken.)
   c. The battery is weak and not producing enough electricity.
   d. The battery is connected the wrong way around.

11. Which of the following appliance works on the principle of heating effect of electric current?
   a. Electromagnets
   b. Fuse
   c. Bullet trains
   d. Electric bell

12. The diagram shows a flashlight battery and a bulb connected by wires to various substances. Which of the bulbs will light?



(a) 1 and 2 only
(b) 2 and 3 only

(c) 3 and 4 only
(d) 1, 2 and 3 only

13. In an electric circuit, current starts from the

(a) negative terminal
(b) positive terminal
(c) either of the two terminals
(d) depend upon the circuit

14. When current is passed through an electric bulb, its filament glows, but the wire carrying current to the bulb does not glow because

(a) the filament has a coating of fluorescent material over it.
(b) the wire has less resistance than the filament.
(c) the wire has more resistance than the filament.
(d) less current flows in the wire as compared to that of filament.

15. A fuse wire is made of

(a) copper and lead
(b) lead and tin
(c) copper and tin
(d) aluminum and copper

16. When an electric current flows through the wire, it behaves like
A) Cell B) Battery C) Switch D) Magnet

17. Match Column-I with Column-II and select the correct answer using the codes given below the columns.

Column - I	Column - II
(A) CFL	(i) A safety device which prevents electric fires
(B) ISI	(ii) The wire used in heater to get heat
(C) Switch	(iii) Consume less energy than bulb
(D) Fuse	(iv) Appliance is safe to use
(E) Element	(v)Turns the circuit ON or OFF

a) A→(iv), B→(v), C→(iii), D→(ii), E→(i)
b) A→(iii), B→(iv), C→(v), D→(i), E→(ii)
c) A→(ii), B→(iv), C→(v), D→(i), E→(iii)
d) A→(iii), B→(v), C→(iv), D→(i), E→(ii)

18. The figure below is the symbol of: 
a) closed plug key b) cell c) variable resistance d) open plug key

19. When electric current is passed through the filament of a bulb ,it gives off
A) Sound B) Heat C) Magnetism D) Light :
a) A and B b) B and C c) B and D d) only D

CASE STUDY BASED QUESTIONS : (Read the passage and answer Q 20 –Q22)

Passage: Bhoojo had gone to meet his grandfather who was staying in a village .In the evening ,they both were watching TV ,suddenly the lights went off. Grand father told Bhoojo that the fuse must have blown up as their neighbors had electricity .Luckily Bhoojo knew how to change a fuse. His grandfather was happy and told him that if he had been alone, he would have to spend the night in the dark without a fan. Bhoojo decided to replace the fuse with a circuit breaker so that his grandfather would not have any problems in future .

20. An electric fuse works on the :
    a) chemical effects of current b) magnetic effects of current
    c) lighting effects of current d) heating effects of current

21. Circuit Breaker Device which can be used in place of fuse in domestic electric wiring is called :
    a) CBD b) DCB c) MCB d) MCD

22. Which of the following works on the magnetic effect of electric current :
    a) electric bulb b) miniature circuit breaker c) immersion rods d) electric iron

23. Nichrome wire is used in-
    a. hair dryer b) CFL c) electric fuse d) MCB

24. The compact fluorescent electric lamp has:

    a) Nichrome b) no filament c) Tungsten filament d) Copper filament

ANSWER KEY

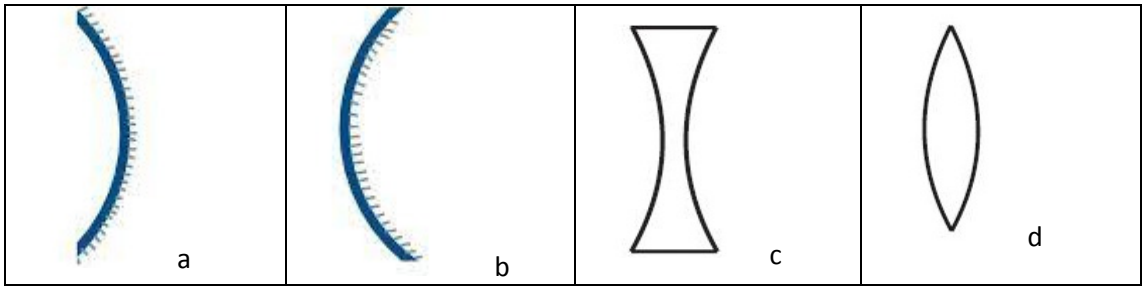
1. d	2. b	3. b	4. a	5. c
6. c	7. b	8. a	9. a	10. c
11. b	12. b	13. b	14. b	15. B
16. d	17. b	18. d	19. b	20. d
21. c	22. b	23. a	24. b	25.

CHAPTER 15: LIGHT

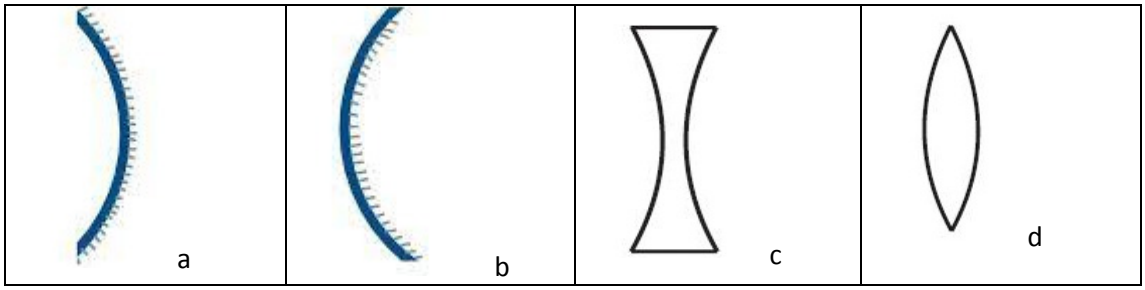
1. Neha focused a magnifying glass on to a tissue paper and held it. After a while, the tissue paper caught fire. Identify the statement that provides the correct explanation for this observation
   a. Neha lit the tissue paper.
   b. The magnifying glass focuses the heat from the Sun's radiation.
   c. The magnifying glass is a good conductor of heat and transmits the heat to the paper.
   d. Air is a good conductor of heat and transmits the heat to the paper.
2. Which phenomenon of light is illustrated by the pair of boards shown here?

   a. Reflection
   b. Dispersion
   c. Lateral inversion
   d. Lateral dispersion

3. Veena observes the time in the clock shown in picture, through a MIRROR and thinks it is 9:40. What would be the actual time?
   a. 3:20 b. 3:40 c. 9:40 d. 3:10
4. We see an object?
   a. When it either emits or reflects light.
   b. Only when it reflects light
   c. Only when it emits light
   d. When it allows light to pass through itself.
5. Which of the following should be used as side mirror in scooters?



6. Which of the following a doctor should use to examine eyes, ears, nose and throat?



7. An image formed by a concave lens is always
   a. Real, erect and smaller in size than the object
   b. Virtual, Inverted and Smaller in size than the object
   c. Real, Inverted and larger in size than the object
   d. Virtual, erect and smaller in size than the object
8. A student sees a funny mirror in which his image was larger and erect when he was standing near the mirror and as he was moving far from the mirror the image was smaller in size and inverted. Can you identify the type of mirror on which he was seeing his reflection.
   a. Convex mirror c. Combination of both concave and convex mirror
   b. Concave mirror d. plane mirror
9. Which of the following is not an example of dispersion of light?
   a. White light passing through prism c. Newton's disc
   b. Rainbow d. A CD placed in sun
10. A concave lens bends light outward and Convex lens bends light inward so they are also called
   a. Converging and Diverging lens c. Magnifying glass
   b. Diverging and Converging lens d. None of the above.
11. Which of the following is not a characteristic of a concave lens?
   (a) a converging lens
   (b) a diverging lens
   (c) used in spectacles for clear vision
   (d) thick at the edges and thin in the middle
12. Kishan wants to see the magnified image of a cockroach using a magnifying glass. The magnifying glass is actually a type of
   a) Convex lens b) Concave lens c) Concave mirror d) Convex mirror
13. Shaving mirrors are
   a) convex mirrors b) plane mirrors c) concave mirrors d) None of the above
14. The band of seven colours formed on a screen when the white light suffers dispersion is called :
   a) solar colored band b) spectrum c) raibow d) none of the above
15. Assertion (A): Convex mirrors are used as side view mirrors in vehicles
   Reason (R): Convex mirrors form erect and very small images of the things and give a wider field of view

   a) Both A and R are true and R is the correct explanation of A.
   b) Both A and R are true but R is not the correct explanation of A.
   c) A is true but R is false.
   d) A is false but R is true.

16. Which of the following always diverge light rays?
   a) concave lens and concave mirror b) concave lens and convex mirror
   b) convex lens and Convex mirror d) Convex lens and Concave Mirror
17. Which of the following mirror can form a real image of an object:
   a. plane mirror b) concave mirror c) convex mirror d) none of these

ANSWER KEY

1. b	2. c	3. a	4. a	5. b
6. a	7. d	8. b	9. c	10. b
11. a	12. c	13. c	14. b	15. a
16. b	17. c	18.	19.	20.

CHAPTER 16: WATER: A PRECIOUS RESOURCE

1. The source of energy for the Earth's water cycle is _____.
   a. Wind
   b. The sun's radiation
   c. Earth's radiation
   d. Sun's Gravity
2. The seeping of water into the ground is _____ and when it gets stored between the rocks below the water table is known as _____
   a. Infiltration, aquifer
   b. Aquifer, Ground water
   c. Infiltration, Ground water
   d. Ground water, Aquifer.
3. Which of the following is not a reason for the depletion of water table?
   a. Scanty rainfall
   b. Deforestation
   c. Decrease effective area of seepage
   d. Solar energy
4. Which of the following is not a method of water conservation?
   a. Afforestation
   b. Drip Irrigation
   c. Rain water Harvesting
   d. Bawris
5. Which of the following will not be the effect of water scarcity for a long period of time in a particular place?
   a. Drought
   b. Scarcity of food
   c. Flood
   d. All of the above
6. Cloud, mist, fog, hail, dew or rain are referred to as type of
   (a) condensation
   (b) evaporation
   (c) precipitation
   (d) both (a) and (c)
7. Which of the following increases the rate of percolation of rain water into the soil?
   (a) overgrazing
   (b) vegetation and trees
   (c) construction of high-rise buildings
   (d) construction of roads
8. The amount of water recommended by the United Nations for drinking, washing, cooking and maintaining proper hygiene per person per day is a minimum of
   (a) 5 litres
   (b) 15 litres
   (c) 30 litres
   (d) 50 litres
9. World Water Day is celebrated on which date every year
   a) 22 March
   b) 22 May
   c) 23 October
   d) 16 January
10. Choose the correct option . The total water
    a) in the lakes and rivers of the world remains constant.
    b) under the ground remains constant.
    c) in the seas and oceans of the world remain constant.
    d) of the world remains constant.

11. Assertion (A): Rain containing excess amount of acid is called acid rain.
    Reason (R): Air pollutants like carbon dioxide, sulphur dioxide, nitrogen oxides dissolve in water to form carbonic acid, sulphuric acid and nitric acid.
    a) Both A and R are true and R is the correct explanation of A.
    b) Both A and R are true but R is not the correct explanation of A.
    c) A is true but R is false.
    d) A is false but R is true.
12. Water table :
    a) varies from places to place b) may change even at a given place
    c) Both a and b are correct d) None of the above are correct
13. The process of seeping water into the ground is called _____:
    a) aquifer b) infiltration c) Bawri d) water table

14. Which of the following is not responsible for water shortage ?
    a) rapid growth of industries b)increasing population
    c)heavy rain fall d)mismanagement of water resources

ANSWER KEY

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

CHAPTER 17: FORESTS: OUR LIFELINE

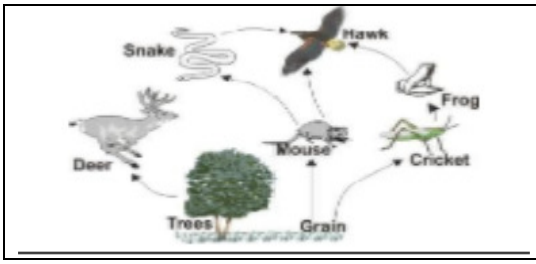
1. Which of these is unlikely to result in a reduction in wildlife in a region?
   a. pollution in the region
   b. deforestation in the region
   c. a new factory in the forest
   d. heavy monsoon rains

2. Zaheeda put the following items into a big polythene bag. She took each of them out after two weeks. She made a table and put them under heads as Decomposed and Not decomposed'. Which item(s) have been put under incorrect headings?

Option	Decomposed	Not Decomposed
a.	Grass	Key chain
b.	Bread	Plastic spoon
c.	Tin can	Cucumber
d.	Orange peel	Straw

3. In a rain forest, the thick forest canopy restricts the amount of sunlight reaching plants at the lower levels. Which of these characteristics might help a plant at the lower level survive in a rainforest?
   a. Bright flowers
   b. Large leaves
   c. Short stems
   d. Long roots

4. If the number of crickets in this food web was to reduce drastically, the most likely result will be_____.



   a. More competition between frogs
   b. An increase in number of frogs
   c. A decrease in available grain
   d. A decrease in number of mice.

5. Ahmed's grandfather plants trees all along the edge of their farm in the hills along the boundary fence. What is likely to be the best reason for this?
   a. To reduce the rainfall
   b. To keep away goats
   c. To conserve the soil
   d. To demarcate the boundary

6. Study this food chain.
   Plant → Caterpillar → Bird → Cat → Snake
   What is likely to be an immediate effect if the cat population INCREASES a lot?
   a. The food chain will not be affected
   b. The bird population will decrease
   c. The snake population will decrease
   d. The caterpillar population will decrease

7. The average temperature of earth has ----------due to ---------- levels of carbon dioxide and methane in the atmosphere.
   a. Increased, decreasing
   b. Decreased, Increasing
   c. Increased, Increasing
   d. Decreased, decreasing

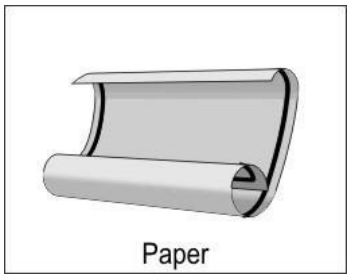
8. If an organism eats seeds, fruits and insects", in which list would you put it?
   a. Herbivore b. Top level carnivore c. Omnivore d. Producer

9. Which of the following will not get affected if decomposers are removed from the earth?
   a. Formation of humus
   b. Replenishment of nutrients in soil
   c. Decomposition of dead organism
   d. Balance of Oxygen and Carbondioxide

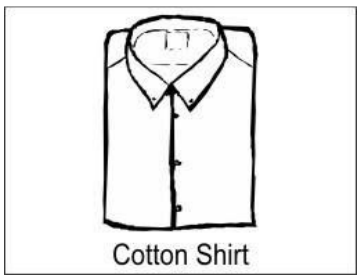
10. Which of the following statement is not true.
   a. Forest play a major role in balancing the Oxygen and Carbondioxide in atmosphere
   b. Forest provide food and shelter to many animals
   c. Roots of trees prevent Soil erosion and cause flood.
   d. Forest bring rain

11. The average temperature has -------due to ---------- levels of carbon dioxide and methane in the atmosphere.
   (a) increased, decreasing
   (b) decreased, increasing
   (c) increased, increasing
   (d) decreased, decreasing

12. Which of these items of daily use does NOT come from living things?

(a) 

(b) 

(c) 

(d) 

13. What are the roles of forests?
   (a) Provide food, shelter, water and medicines
   (b) Prevent soil erosion
   (c) Prevent flood
   (d) All the above

14. Plantation of saplings on a large scale is celebrated as
   (a) forestation day
   (b) vanmahotsava
   (c) plantation day
   (d) forestation day

15. Micro-organisms act upon the dead plants to produce
   a) clay b) mushrooms c) humus d) wood

16. The correct arrangement in the order from upper layers to lower layer in forests is :
    a) Trees, Shrubs, herbs
    b) herbs, shrubs, trees.
    c) trees, herbs, shrubs.
    d) shrubs, herbs, trees.
17. In the forests there is interaction between.
    a) soil and water only b) air and living organism only
    c) soil, water, air and living organisms. d) none of the above is correct
18. The micro-organisms that convert the dead plants and animals to humus are known as
    a) primary consumers b) decomposers c) predators d) none of these

19. Y and Z are two types of organism which are found in the forests. Y eats up dead animals while Zbreakdown the body of the dead animals into simpler substances and feeds on it. Y is a _____ and Z is a _____
    a. Saprophyte, Scavenger
    b. Scavenger, Saprophyte
    c. Parasite, Scavenger
    d. Scavenger, Parasite

ANSWER KEY

1. d	2. c	3. b	4. a	5. c
6. b	7. c	8. c	9. d	10. c
11. c	12. d	13. d	14. b	15. c
16. a	17. c	18. b	19. b	20.