

# **Brilliant Public School , Sitamarhi**



## **VII Science Practice Paper**

**Session : 2012-13**

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# Science for Class 7

## 1. Nutrition in Plants

Q 1 Name a plant that has both autotrophic as well as heterotrophic mode of nutrition.

Mark (1)

Q 2 Name the green pigment that helps the leaves to capture sunlight.

Mark (1)

Q 3 What is a lichen?

Mark (1)

Q 4 What is the stored form of carbohydrates in plants?

Mark (1)

Q 5 Why in the rainy season does a loaf of bread turn blue, brown or greenish?

Mark (1)

Q 6 Write the chemical equation representing the process of photosynthesis.

Marks (2)

Q 7 How are nutrients replenished in the soil?

Marks (2)

Q 8 Why does the pitcher plant feed on insects though it is green?

Marks (2)

Q 9 How would you test the presence of starch in leaves?

Marks (2)

Q 10 What do you mean by heterotrophs?

Marks (2)

Q 11 What is Autotrophic nutrition? Give an example of autotrophs.

Marks (2)

Q 12 Why do organisms need to take food?

Marks (2)

Q 13 Define nutrition.

Marks (2)

Q 14 What are nutrients?

Marks (2)

Q 15 (i) How do fungi appear suddenly during the rainy season?

(ii) What is the mode of nutrition adapted by fungi?

Marks (3)

Q 16 What is the difference between parasites and saprotrophs? Give an example for each.

Marks (3)

Q 17 (i) Define the process of photosynthesis.

(ii) What is site of the photosynthesis in plants?

Marks (3)

Q 18 What are insectivorous plants? Explain with example.

Marks (5)

Q 19 Draw the diagram of:

(a) Stomata

(b) Schematic diagram showing photosynthesis

Marks (5)

Q 20 What is symbiosis? Explain this relationship with help of two examples.

Marks (5)

Q 21 Why are leaves called the food factories of plants? Explain.

Marks (5)

## 2. Nutrition in Animals

Q 1 What is the mode of feeding in Python?

Mark (1)

Q 2 What are the two components of digestive system?

Mark (1)

Q 3 Name the process of taking in food?

Mark (1)

Q 4 Name the glands present in the mouth.

Mark (1)

Q 5 What helps the food to taste it by our tongue?

Mark (1)

Q 6 Name the largest gland in human body.

Mark (1)

Q 7 Write one similarity and one difference between the nutrition in amoeba and human beings.

Marks (2)

Q 8 Why do we get instant energy from glucose?

Marks (2)

Q 9 What is the function of premolars and molars? Write the number of both teeth in each jaw.

Marks (2)

Q 10 Which teeth do you use for piercing and tearing? Write the number of these teeth.

Marks (2)

Q 11 How many types of teeth do you find in humans? Name them.

Marks (2)

Q 12 What are the main steps of digestion in humans?

Marks (2)

Q 13 What is digestive System?

Marks (2)

Q 14 Name the type of food and mode of feeding of the following animals-

- a) Ant
- b) Mosquito

Marks (2)

Q 15 Define digestion.

Marks (2)

Q 16 What do you understand by animal nutrition?

Marks (2)

Q 17 Name the type of carbohydrate that can be digested by ruminants but not by humans.

Marks (3)

Q 18 What do you understand by rumen and rumination?

Marks (3)

Q 19 Write the functions of the tongue.

Marks (3)

Q 20 What is the difference between milk teeth and permanent teeth?

Marks (3)

Q 21 Draw labelled diagrams of -

(a)Regions of the tongue for different tastes

(b)Amoeba

Marks (5)

Q 22 Write short notes on:

(a) The stomach

(b) The liver

Marks (5)

Q 23 Write a short note on structure and feeding in amoeba.

Marks (5)

Q 24 What are villi? What is their function?

Marks (5)

Q 25 Write a note on stomach.

Marks (5)

Q 26 What do you understand by alimentary canal or digestive tract?

Marks (5)

### Most Important Questions

Q 1 What do you understand by animal nutrition?

Q 2 Define digestion.

Q 3 Name the type of food and mode of feeding of the following animals:

(a) Ant

(b) Mosquito

Q 4 Name the process of taking in food?

Q 5 Name the glands present inside the oral cavity.

Q 6 What helps our tongue to taste the food ?

Q 7 What do you understand by alimentary canal or digestive tract?

Q 8 What constitutes the digestive System?

Q 9 What are the two components of digestive system?

Q 10 What is the difference between milk teeth and permanent teeth?

Q 11 How many types of teeth are present in humans? Name them.

Q 12 Which teeth do you use for piercing and tearing? Write the number of these teeth.

Q 13 What is the function of premolars and molars? Write the number of both teeth in each jaw.

Q 14 List the functions of the tongue.

Q 15 How many pairs of salivary glands are present in humans and what is the function of saliva?

Q 16 What are the main steps of digestion in humans?

Q 17 Write short notes on ---

(a) The stomach

(b) Liver

Q 18 What are villi? What is their function?

Q 19 What do you understand by rumen and rumination?

Q 20 Why do we get instant energy from glucose?

Q 21 Name the type of carbohydrate that can be digested by ruminants but not by humans.

Q 22 What is the mode of feeding in Python?

Q 23 Name the largest gland in human body.

Q 24 Write a short note on structure and feeding of amoeba.

Q 25 Write one similarity and one difference between the nutrition in amoeba and human beings.

Q 26 Draw labelled diagrams of ---

(a) Human digestive system

(b) Amoeba

### 3. Fibre to Fabric

Q 1 What is sericulture?

Mark (1)

Q 2 What is scouring?

Mark (1)

Q 3 Which animal material is used to weave fine, soft shawls called Pashmina shawls?

Mark (1)

Q 4 Where are the sheep kept in winters?

Mark (1)

Q 5 Name the most common silk moth.

Mark (1)

Q 6 How many eggs can a female silk moth lay?

Mark (1)

Q 7 What treatment is given to the cocoons to separate out the threads?

Mark (1)

Q 8 Name the protein which is the chief component of wool fibres.

Mark (1)

Q 9 Which animal produces angora wool?

Mark (1)

Q 10 Why wool has a greater bulk than silk?

Mark (1)

Q 11 Define the term grading.

Mark (1)

Q 12 Which country is the largest producer of wool?

Mark (1)

Q 13 Why caterpillars should not be collected with bare hands?

Marks (2)

Q 14 Why caterpillars need to shed their skin when they grow bigger?

Marks (2)

Q 15 What is reeling?

Marks (2)

Q 16 Write sequence of steps in the processing of wool.

Marks (2)

Q 17 Name any four wool-yielding animals.

Marks (2)

Q 18 (i) What is selective breeding?

(ii) Name most common silk moth.

Marks (2)

Q 19 Name two types of fibres which form the hairy skin of the sheep.

Marks (2)

Q 20 Why wool yielding animals have a thick coat of hair?

Marks (2)

Q 21 Name four varieties of silk.

Marks (2)

Q 22 Which respiratory diseases are common among the workers of sericulture industry? What is the cause of the disease?

Marks (2)

Q 23 Why does silk have different varieties?

Marks (2)

Q 24 Why is skirting done before the preparation of fleece?

Marks (2)

Q 25 What is the structural unit of fabrics?

Marks (2)

Q 26 Write various stages of the life history of silk moth.

Marks (3)

Q 27 What is meant by the following -

(a) Rearing

(b) Shearing

Marks (3)

Q 28 (i) What is shearing?

(ii) Name the season in which it is usually done.

(iii) What is the use of fleece?

Marks (3)

Q 29 (a) What is dyeing? Why is it done on fabrics and wools?

(b) What are burrs?

Marks (3)

Q 30 (a) What are the two types of fibres obtained from the fleece of a sheep?

(b) Name the fibre which is used for making wool.

(c) What is the colour of natural fleece of sheep and goat?

Marks (3)

Q 31 (a) How is silk fibre obtained from cocoon?

(b) Name the property of silk which makes it so attractive.

(c) Name the most common silk moth.

Marks (3)

Q 32 How is silk produced?

Marks (5)

Q 33 Give reasons of the following -

(a) Why it hurts when someone pulls his hair but not when he goes for a haircut?

(b) Why a cotton garment cannot keep us as warm in winter as a woollen sweater can?

Marks (5)

Q 34 What are the steps followed in the processing of fibres into wool?

Marks (5)

### Most Important Questions

Q 1 What is a fibre?

Q 2 Fibres are classified into how many types?

Q 3 Write the two types of fibres.

Q 4 Define natural fibres?

Q 5 Give two examples of natural fibres.

Q 6 What are animal fibres?

Q 7 Write any two examples of animal fibres.

Q 8 From where do we get wool?

Q 9 What is wool?

Q 10 Which animal material is used to weave fine and soft shawls called Pashmina?

Q 11 Which of the following can provide hair as wool source?

- (A) Camel
- (B) Llama
- (C) Alpaca
- (D) All of these

Q 12 Sorter's disease is associated with-

- (A) Cotton industry.
- (B) Wool industry.
- (C) Silk industry.
- (D) None of the above.

Q 13 What do you understand by rearing?

Q 14 What is selective breeding?

Q 15 What are synthetic fibres?

Q 16 Name the two breeds of sheep which have finest fleece?

Q 17 Find odd one out-

- (A) Goat
- (B) Camel
- (C) Yak
- (D) Woolly dog

Q 18 Why wool yielding animals have a thick coat of hair?

Q 19 Name an Indian breed of sheep which gives good quality wool.

Q 20 Match the items of column 'A' and column 'B'

Column 'A'	Column 'B'
(i) Alpaca	(a) The bringing up and looking after the sheep
(ii) Wool	(b) Cotton
(iii) Rearing	(c) Protein
(iv) Natural fibre	(d) Wool yielding animal

Q 21 What is shearing of wool?

Q 22 Define scouring.

Q 23 What do you mean by carding?

Q 24 What is roving?

Q 25 The fleece are combed to remove-

(A) Burrs.

(B) Dust.

(C) Low quality hair.

(D) None of these

Q 26 What are the uses of wool?

Q 27 Name the plant on which silk larva feeds.

Q 28 Muga is the strongest variety of –

(A) Wool

(B) Silk

(C) Cotton

(D) Jute

Q 29 What is sericulture?

Q 30 What is reeling of silk?

Q 31 Define moulting.

Q 32 What is the scientific name of mulberry?

Q 33 Which of the following disease is most common among the workers of sericulture industry?

(A) Respiratory and skin

(B) Cancer and skin

(C) T.B.

(D) Cancer and T.B.

Q 34 Who discovered silk?

Q 35 Cocoon is -

- (A) The fibre cover spun by the silk larva around its body on changing into pupa state.
- (B) The stage of larva.
- (C) Both 'A' and 'B'
- (D) None of these

Q 36 How many eggs can a female silk moth lay?

Q 37 In the life cycle of silkworm, which stage comes before?

- (A) Cocoon
- (B) Caterpillar
- (C) Cocoon with developing moth
- (D) Adult

Q 38 Fill in the blanks-

- (i) ----is the largest producer of silk.
- (ii) Silk is a ----conductor of heat.
- (iii) ----is a dried perspiration found in raw wool.
- (iv) A----is a long continuous thread.

Q 39 Match the items of column 'A' and column 'B'

Column 'A'	Column 'B'
(i) Cocoon (ii) Science of rearing silk worms so as to obtain silk. (iii) Australia (iv) China	(a) Wool (b) Yields silk fibres.  (c) Sericulture (d) Silk

## 4. Heat

Q 1 State the range of laboratory thermometer.

Mark (1)

Q 2 How can we measure the temperature of our body?

Mark (1)

Q 3 Name the components of clinical thermometer?

Mark (1)

Q 4 What is the normal temperature of a human body?

Mark (1)

Q 5 What is the use of the kink in clinical thermometer?

Mark (1)

Q 6 What is the range of the clinical thermometer?

Mark (1)

Q 7 Which type of thermometer does not contain mercury as one of its component?

Mark (1)

Q 8 Name the process by which heat is transferred from hotter object to the colder object when they come in contact with each other.

Mark (1)

Q 9 What is the process by which heat of sun is able to reach us?

Mark (1)

Q 10 What is temperature?

Mark (1)

Q 11 In places of hot climate, it is advised that the outer walls of houses should be painted white. Explain.

Marks (2)

Q 12 Explain, why wearing two thin sweaters during winter keeps us warmer than wearing just one thick sweater?

Marks (2)

Q 13 How is heat transferred in air ? In which direction does the smoke go?

Marks (2)

Q 14 Define conduction.

Marks (2)

Q 15 How does the heat flow?

Marks (2)

Q 16 What would we prefer to wear in summers, a black shirt or a pink shirt ? Why?

Marks (2)

Q 17 What are conductors and insulators? Give examples.

Marks (3)

Q 18 Write two similarities and two dissimilarities between laboratory thermometer and the clinical thermometer.

Marks (3)

Q 19 What do you understand by clinical thermometer and laboratory thermometer?

Marks (3)

Q 20 Write short notes on

(a) Sea breeze .

(b) Land breeze.

Marks (4)

Q 21 Write down the differences between clinical thermometer and laboratory thermometer with respect to temperature measurement.

Marks (5)

Q 22 Write down the differences between clinical thermometer and laboratory thermometer with respect to temperature measurement.

Marks (5)

Q 23 Praveen heated a beaker containing water. He took a few coloured paper pieces and added them in the water. He observed that the paper pieces started moving. Then, he heated a piece of iron, but did not observe any movement of iron particles. Why? Explain.

Marks (5)

Q 24 Praveen heated a beaker containing water. He took a few coloured paper pieces and added them in the water. He observed that the paper pieces started moving. Then, he heated a piece of iron, but did not observe any movement of iron particles. Why? Explain.

Marks (5)

### Most Important Questions

Q 1 Name three hot and three cold objects, you observed today. How you feel that a particular object is hot or cold?

Q 2 How will you measure temperature?

Q 3 Which scale is commonly used in India?

Q 4 Which thermometer you will use to measure temperature of your friend?

Q 5 Which thermometer you will use to measure temperature of the day?

Q 6 Will you use clinical thermometer to measure the temperature of freezer? Explain.

Q 7 How will you measure temperature using clinical thermometer?

Q 8 What is the normal temperature of human body?

Q 9 What is the difference between laboratory thermometer and clinical thermometer?

Q 10 How will you measure temperature of water using laboratory thermometer

Q 11 What do you understand by conduction?

Q 12 How does the heat flow takes place?

Q 13 What is convection?

Q 14 What do you understand by radiation?

Q 15 What is the difference between sea breeze and land breeze?

Q 16 What do you understand by conductor? State one use of conductor

Q 17 What do you understand by insulators? State one use of insulator.

Q 18 Which kind of clothes you use in summers? Explain why.

Q 19 Which kind of clothes you use in winters? Explain why.

## 5. Acids, Bases and Salts

Q 1 Give the names of two weak acids.

Mark (1)

Q 2 What is brine?

Mark (1)

Q 3 What do you understand by deliquescence?

Mark (1)

Q 4 Which of the following materials is almost neutral?

Tap water, distilled water, rain water

Mark (1)

Q 5 What is the chemical nature of a compound that turns blue litmus red?

Mark (1)

Q 6 What happens when you blow  $\text{CO}_2$  into lime water through a glass-tube?

Mark (1)

Q 7 Which base is found in window cleaner?

Mark (1)

Q 8 Why do some fruits like oranges taste sour?

Mark (1)

Q 9 Where is lactic acid found?

Mark (1)

Q 10 Name the acid which is found in our body cells.

Mark (1)

Q 11 What is the nature of aqueous solution of metallic oxide?

Mark (1)

Q 12 Name the organic acid present in tomatoes?

Mark (1)

Q 13 What is the nature of soap solution?

Mark (1)

Q 14 What is the basicity of carbonic acid?

Marks (2)

Q 15 Why is factory waste neutralized before disposing it into the water bodies?

Marks (2)

Q 16 Blue litmus paper is dipped in a solution. If it remains blue, what is the nature of the solution?

Marks (2)

Q 17 Give reason- An antacid tablet is taken when you suffer from acidity.

Marks (2)

Q 18 Name the acids present in the following

(i) Vinegar

(ii) Curd

(iii) Tamarind

(iv) Citrus fruits

Marks (2)

Q 19 Define indicators. Give examples.

Marks (2)

Q 20 What is a salt? What is the chemical nature of salts?

Marks (2)

Q 21 What are neutral substances?

Marks (2)

Q 22 Why does milk get sour on keeping it for sometime? What substances are added by the milkman to keep it fresh?

Marks (2)

Q 23 How is acidity of the stomach removed?

Marks (2)

Q 24 Which acid is present in an ant's sting? What is the remedy for this?

Marks (2)

Q 25 What do you understand by acid rain? How is it harmful

Marks (3)

Q 26 John has a few bottles of soft drink in his restaurant. Unfortunately, these are not labelled. One customer wants acidic drink, another wants basic and third one want neutral drink. How will John decide which drink is to be served to whom?

Marks (3)

Q 27 Why is Calamine solution applied on the skin when an ant bites.

Marks (3)

Q 28 How is litmus obtained? What is the use of it?

Marks (3)

Q 29 Differentiate between acids and bases.

Marks (3)

Q 30 How does fire extinguisher prevent the spreading of fire? Name the chemical used in fire extinguisher.

Marks (3)

Q 31 What are the differences between mineral acid and organic acid?

Marks (3)

Q 32 Why do farmers need to treat the soil of their fields with slaked lime before sowing the seeds?

Marks (3)

Q 33 How does hydrochloric acid help in the digestion of food?

Marks (3)

Q 34 Three liquids are given to you. One is hydrochloric acid; another is sodium hydroxide and third is a sugar solution. How will you identify them? You have only turmeric indicator.

Marks (5)

Q 35 (i) Name the substance which a farmers add to soil if the soil is

(a) acidic in nature (b) basic in nature

(ii) During neutralization reaction does the temperature of container increase or decrease and why?

(iii) Solution (X) does not change the colour of either blue litmus or red litmus. On the basis of this observation classify this solution as acidic or basic or neutral.

Marks (5)

Q 36 When hydrochloric acid is added to sodium hydroxide solution, sodium chloride and water are formed.

(a) Name this reaction.

(b) What changes in colour will be observed when

(i) A strip of blue litmus paper is dipped in it.

(ii) A strip of red litmus paper is dipped in it.

(c) A test tube is filled with a solution (X). When a few drops of phenolphthalein are added to this solution, the colour becomes pink. Identify if solution (X) is an acid or a base.

(d) How will you test that a solution is acidic or basic using China rose indicator?

Marks (5)

### Most Important Questions

Q 1 Describe the process of neutralization with the help of an example.

Q 2 Which base is found in window cleaner?

Q 3 Name the acid which is found in our body cells.

Q 4 Which of the following materials is almost neutral?

Tap water, distilled water, rain water

Q 5 Differentiate between acids and bases

Q 6 What do you mean by neutral substances?

Q 7 What are the indicators and how litmus solution is prepared?

Q 8 Three liquids are given to you. One is hydrochloric acid; another is sodium hydroxide and third is a sugar solution. How will you identify them? You have only turmeric indicator.

Q 9 Why is calamine solution applied on the skin when an ant bites?

Q 10 An antacid tablet is advised to take when you suffer from acidity.

Q 11 Blue litmus paper is dipped in a solution. It remains blue. What is the nature of the solution?

Q 12 Why is factory waste neutralized before disposing it into the water bodies?

Q 13 John has a few bottles of soft drink in his restaurant. Unfortunately, these are not labelled. One customer wants acidic drink, another wants basic and third one want neutral drink. How will John decide which drink is to be served to whom?

Q 14 What do you understand by acid rain? Write disadvantages of it.

Q 15 Name the acid present in following substances

Curd, Lemon, grapes, Vineger

## 6. Physical and Chemical Changes

Q 1 What is the chemical name of Baking Soda?

Mark (1)

Q 2 What is Rust?

Mark (1)

Q 3 What type of change is photosynthesis?

Mark (1)

Q 4 What do you understand by physical properties of a substance?

Mark (1)

Q 5 Is crystallization an example of physical change?

Mark (1)

Q 6 What is a chemical change?

Mark (1)

Q 7 What is malleability?

Mark (1)

Q 8 Name four characteristics which are included in the physical properties of matter.

Mark (1)

Q 9 Write the chemical formula of blue vitriol.

Mark (1)

Q 10 What does slow change mean?

Mark (1)

Q 11 What are decomposers? Give two examples.

Marks (2)

Q 12 Explain why rusting of iron objects is faster in coastal areas than in deserts.

Marks (2)

Q 13 Why setting of curd is regarded as a chemical change?

Marks (2)

Q 14 Give two examples of physical change.

Marks (2)

Q 15 What happens when magnesium oxide is dissolved in water?

Marks (2)

Q 16 How is salt extracted from the sea water?

Marks (2)

Q 17 (i) What is galvanisation?

(ii) Why galvanised pipes are used for supplying water?

Marks (2)

Q 18 What happens when baking soda is treated with vinegar?

Marks (2)

Q 19 Explain why burning of wood and cutting it into small pieces are considered as two different types of changes?

Marks (3)

Q 20 Is the burning of candle a physical change?

Marks (3)

Q 21 Write two differences between physical change and chemical changes. Give one example of each.

Marks (3)

Q 22 Which one is better technique to obtain sugar from sugar solution- crystallization or evaporation to dryness?

Marks (3)

Q 23 What happens when a piece of iron metal is placed in copper sulphate solution?

Marks (3)

Q 24 What happens when an iron nail is dropped in copper sulphate solution?

Marks (3)

Q 25 What is neutralisation reaction?

Marks (3)

Q 26 How is alloy prepared?

Marks (3)

Q 27 Describe how crystals of copper sulphate are prepared?

Marks (5)

Q 28 What is rusting? How can we prevent rusting?

Marks (5)

Q 29 When a candle burns, both physical and chemical changes take place. Identify these changes. Give another example in which both the chemical and physical changes take place.

Marks (5)

### Most Important Questions

Q 1 What is physical change of a substance?

Q 2 Which all properties are affected during physical change?

Q 3 What is freezing of water?

Q 4 What is freezing point of water?

Q 5 What do you understand by melting?

Q 6 How melting and freezing related?

Q 7 What should we do to melt wax?

Q 8 What is evaporation?

Q 9 At what temperature water evaporates and what do we call it?

Q 10 What are the characteristics of physical changes?

Q 11 What do you understand by chemical change?

Q 12 What are the side products formed in a reaction along with the main products?

Q 13 What is rusting?

Q 14 Give the equation for rusting?

Q 15 What are the two important conditions for rusting?

Q 16 How can we prevent rusting?

Q 17 What is galvanisation?

Q 18 What is crystallization?

Q 19 Give three example of crystallization?

Q 20 Give an example of galvanization?

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

Q 1 Define humidity.

Mark (1)

Q 2 What is the method other than adaptation for animals to avoid harsh, cold condition?

Mark (1)

Q 3 What do you mean by weather?

Mark (1)

Q 4 Which department gives the information about weather and how?

Mark (1)

Q 5 Give names of some countries where tropical rain forests are present.

Mark (1)

Q 6 Is the time of sunrise and sunset constant throughout the year?

Mark (1)

Q 7 Which regions of the earth have severe climatic condition?

Mark (1)

Q 8 What is the role of the Meteorological Department of a country?

Mark (1)

Q 9 How do penguins keep themselves warm?

Mark (1)

Q 10 Which type of climatic conditions prevail in the following regions? - Jammu & Kashmir, Kerala, Rajasthan and North-east India.

Marks (2)

Q 11 When we move towards western region, which type of climate we see and why?

Marks (2)

Q 12 What is the purpose for thunder and lightening?

Marks (2)

Q 13 Some birds travel as much as 15000 km to avoid the extreme climatic conditions to the same places every year. What are the probable reasons to travel to the same places every year?

Marks (2)

Q 14 Give two functions of the large ears of elephant.

Marks (2)

Q 15 What are the characteristics of the climate of tropical regions?

Marks (2)

Q 16 Why does polar bear have white fur?

Marks (2)

Q 17 What do you mean by the term 'Migration'? Give an example of a living organism which show this phenomenon.

Marks (2)

Q 18 "All the changes in the weather are caused by sun." Do you agree with this statement? If yes, then explain.

Marks (3)

Q 19 What are the characteristics of the climate of polar region.

Marks (3)

Q 20 What are adaptations? Explain the types of adaptations.

Marks (3)

Q 21 What are the features of tropical region?

Marks (3)

Q 22 How does an elephant living in tropical rain forest adapt itself?

Marks (3)

Q 23 Write a short note on the characteristics of Beard ape.

Marks (3)

Q 24 (i) What is camouflage?

(ii) Why is it important for animals? Give an example.

Marks (3)

Q 25 Describe the adaptations of the polar bear in the polar climatic condition.

Marks (5)

Q 26 (i) Write the important characteristics of tropical rain forest?

(ii) Which type of animals are inhabitants of this area?

Marks (5)

Q 27 (a) Rainforests offers hospitable climatic conditions to support huge population of animals. Explain how?

(b) Explain with examples how animals have adapted themselves to overcome the competition for food and shelter in the rainforests.

Marks (5)

### Most Important Questions

Q 1 Which type of climatic conditions prevail in the following regions?-  
Jammu & Kashmir, Kerala, Rajasthan and North-east India.

Q 2 When we move towards western region, which type of climate we see and why?

Q 3 All the changes in the weather are caused by sun." Do you agree with this statement? If yes, then explain.

Q 4 What do you understand by weather?

Q 5 Name some countries which come under polar region?

Q 6 What is rain guage?

Q 7 What is the main cause of all changes in the weather?

Q 8 How can you measure the temperature?

Q 9 What are the different modes through which we can get the daily reports of weather?

Q 10 What do you understand by climate?

Q 11 Name some countries where tropical rainforest are found?

Q 12 What are two regions of the earth which have severe climatic conditions?

Q 13 Why does our parents insist to carry an umbrella when the sky is cloudy?

Q 14 Name the department in which weather reports are prepared and tell how they do this?

Q 15 What is the term humidity means?

Q 16 What is called as maximum and minimum temperature.

Q 17 What are the characteristics of the climate of polar region.

Q 18 What are the features of tropical region?

Q 19 Which features of the elephant help him to adapt to the conditions of tropical rain forest?

Q 20 Describe the adaptations of the polar bear in the polar climatic condition.

Q 21 What do you understand by the term migration?

Q 22 Why tropical rainforest has a huge number of plants and animals.

Q 23 Some birds travel as much as 15000 km to avoid the extreme climatic conditions to the same places every year. What are the probable reasons to travel to the same places?

Q 24 What does animal do to overcome the competition for food and shelter in tropical rainforest?

Q 25 Generally penguins are huddled together. Why is it so?

Q 26 Which features of penguin make them a good swimmer?

Q 27 What are the different features of animals help in to adapt the condition of tropical rainforest?

Q 28 Red-eyed frog has sticky pads on its feet. How does it help him.

Q 29 Mention the name of any five animals found in tropical forest?

Q 30 How does elephant uses its trunk?

Q 31 Why polar bears close its nostrils during swimming under water?

## 8. Winds, Storms and Cyclones

- Q 1 What happens to the pressure of the wind if its speed is increased?  
Mark (1)
- Q 2 How can we predict about the cyclones in advance?  
Mark (1)
- Q 3 Name the device which help to measure the speed of wind.  
Mark (1)
- Q 4 How are winds formed?  
Mark (1)
- Q 5 What do you mean by “calm area” of a cyclone?  
Mark (1)
- Q 6 What is the main cause behind the movement of air?  
Mark (1)
- Q 7 What are the factors that contribute to the formation of cyclones?  
Mark (1)
- Q 8 What is tornado?  
Mark (1)
- Q 9 Which is lighter, warm air or cold air?  
Mark (1)
- Q 10 How do winds flow from the oceans towards the land in summer?  
Marks (2)
- Q 11 Explain why a can (or bottle) with hot water gets distorted when cold water is poured over it?  
Marks (2)
- Q 12 Why bicycle tube burst when they are overfilled?  
Marks (2)
- Q 13 Where do thunderstorms develop?  
Marks (2)
- Q 14 How does cyclone cause destruction?  
Marks (2)
- Q 15 What is the direction of air movement in an area?  
Marks (2)
- Q 16 Why the poles are colder compared to other regions of the Earth?

Marks (2)

Q 17 Explain why holes are made in hanging banners and hoardings?

Marks (3)

Q 18 What affects the direction of wind on the earth?

Marks (3)

Q 19 Explain why a paper kept at the mouth of a bottle doesn't go inside if we blow air on the mouth of the bottle?

Marks (3)

Q 20 What precautions should one take in a cyclone hit area?

Marks (5)

Q 21 How are cyclones formed?

Marks (5)

### Most Important Questions

Q 1 What is the main cause of wind movement?

Q 2 Name the device by help of which we can measure the speed of wind?

Q 3 What are the factors that contribute to the formation of cyclone?

Q 4 What happens to the pressure of the wind if its speed is increased?

Q 5 Explain why holes are made in hanging banners and hoardings?

Q 6 Explain why a hot can (or bottle) gets distorted when water is poured over it?

Q 7 What precautions you should take when you are staying in a cyclone hit area?

Q 8 How a cyclone formed?

Q 9 How winds flow from the oceans towards the land in summer?

Q 10 Why cyclones are destructive?

Q 11 What precautions you should take during thunderstorm?

Q 12 What causes a thunderstorm?

Q 13 What is lightning?

Q 14 What causes thunder?

Q 15 What causes the wind to blow?

Q 16 What are the global wind patterns?

Q 17 What is the difference between a hurricane and a typhoon?

Q 18 What is a tornado?

## 9. Soil

Q 1 Define humus.

Mark (1)

Q 2 What do you mean by soil profile?

Mark (1)

Q 3 Which is the best soil for growing plants?

Mark (1)

Q 4 Which soil is used to make pots, toys and statues?

Mark (1)

Q 5 What is soil?

Mark (1)

Q 6 What do you mean by soil erosion?

Mark (1)

Q 7 What is residual soil?

Mark (1)

Q 8 Does soil possess different colours?

Mark (1)

Q 9 Give a collective name for different layers of soil.

Mark (1)

Q 10 'Soil is found almost everywhere'. Justify the statement.

Mark (1)

Q 11 What is weathering?

Marks (2)

Q 12 What are the factors which affect the soil?

Marks (2)

Q 13 Why are some soils more productive than others?

Marks (2)

Q 14 What is percolation of water? How it is different for different types of soil?

Marks (2)

Q 15 What will you observe on heating the soil in a test tube? Explain your observation.

Marks (2)

Q 16 Why is soil known as the habitat of many living organisms?

Marks (2)

Q 17 What factors are used to differentiate various layers of soil?

Marks (2)

Q 18 What is silt? It is a component of which type of soil?

Marks (2)

Q 19 Which layer in a soil profile is described as most productive and why?

Marks (2)

Q 20 How can soil erosion be prevented?

Marks (2)

Q 21 What are the causes of soil erosion?

Marks (2)

Q 22 How does moisture affect the fertility of the soil?

Marks (3)

Q 23 Describe the process of formation of soil.

Marks (3)

Q 24 How will you say that the soil is one of the most important natural resources?

Marks (3)

Q 25 What is the basis to classify the soil in different types? Describe all the types.

Marks (3)

Q 26 Write a short note on the factors that pollute soil. Also give measures of prevention.

Marks (3)

Q 27 Why does erosion of soil occur? Give the methods to prevent it.

Marks (3)

Q 28 List the factors which help in classification of soil.

Marks (3)

Q 29 Why different soils suit different crops? Explain.

Marks (5)

Q 30 How does the sizes of different soil particles affect its properties?

Marks (5)

Q 31 Describe the different layers in soil profile.

Marks (5)

Q 32 Name the soil best suited for the growth of rice, wheat, lentils and cotton. Justify your answer with an account on properties of soil.

Marks (5)

Q 33 Soil particles size is an important factor to determine the property of soil. Explain.

Marks (5)

### Most Important Questions

Q 1 Define humus.

Q 2 What do you mean by soil profile?

Q 3 Which is the best soil for growing plants?

Q 4 Which soil is used to make pots, toys and statues?

Q 5 What is soil?

Q 6 What is weathering?

Q 7 What are the factors which affect the soil?

Q 8 Why are some soils more productive than others?

Q 9 Describe the formation of soil.

Q 10 How will you say that the soil is one of the most important natural resources?

Q 11 What is the basis to classify the soil in different types? Describe all the types.

Q 12 Write a short note on the factors that pollute soil. Also give measures of prevention.

Q 13 Why does erosion of soil occur? Give the methods to prevent it.

Q 14 Why different soils are suited different crops? Explain it.

Q 15 How does the size of different soil particles affect its properties?

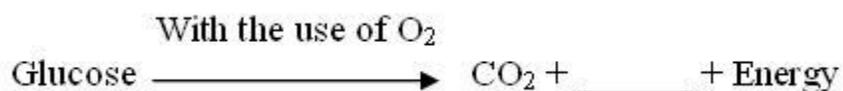
Q 16 Describe the different layers in soil profile.

Q 17 What do you mean by soil erosion?

- Q 18 What is percolation of water? How is it different for different types of soil?
- Q 19 Why does erosion of soil occur? Give the methods to prevent it.
- Q 20 What do you understand by soil moisture?
- Q 21 What will happen if we drop water on an unpaved road and on a floor in a house?
- Q 22 How can we find the percolation time of water in soil.
- Q 23 Why the air above the land seems to shimmer in hot summer days?
- Q 24 What will happen if we heat the tube which contains the soil sample in it?
- Q 25 How can you find out the amount of water retained by the soil.
- Q 26 What type of soil samples can you take for observing the percolation rate of water?
- Q 27 What precautions should be taken while doing the activity to find the percolation rate?
- Q 28 What will happen if we let the water fall on two trays one containing soil and other containing the vegetation?
- Q 29 Why water is not allowed to fall at one spot on a soil sample in funnel to find the water retaining capacity of soil?
- Q 30 How can we calculate the rate of percolation in soil sample?
- Q 31 How can we calculate the percentage of water absorbed by the soil?

## 10. Respiration in Organisms

- Q 1 What are the products of anaerobic respiration?  
Mark (1)
- Q 2 What is cellular respiration?  
Mark (1)
- Q 3 Define aerobic respiration.  
Mark (1)
- Q 4 What is anaerobic respiration?  
Mark (1)
- Q 5 What is the product of partial breakdown of glucose?  
Mark (1)
- Q 6 Where does cellular respiration take place?  
Mark (1)
- Q 7 Why does a muscle cramp occur ?  
Mark (1)
- Q 8 Define breathing rate.  
Mark (1)
- Q 9 What does a breath mean?  
Mark (1)
- Q 10 What happens during increased physical activity?  
Mark (1)
- Q 11 Which organ is involved in exchange of gases in earthworm and insects respectively?  
Mark (1)
- Q 12 Give an example of a single-celled organism and its use.  
Marks (2)
- Q 13 What is the effect of hot water bath or massage on body?  
Marks (2)
- Q 14 What are anaerobes? What happens to glucose in the absence of oxygen?  
Marks (2)
- Q 15 Complete this equation



Marks (2)

Q 16 What is the difference between inhalation and exhalation?

Marks (2)

Q 17 Define cellular respiration. Where does it take place?

Marks (2)

Q 18 What is the percentage of oxygen and carbon dioxide in inhaled and exhaled air?

Marks (2)

Q 19 Which phenomenon takes place during breathing?

Marks (3)

Q 20 Why do our muscle cells respire anaerobically for a short time during heavy exercise?

Marks (3)

Q 21 Why do we often sneeze when we inhale a lot of dust-laden air?

Marks (3)

Q 22 Which body parts take part in the gaseous exchange in earthworm and frog?

Marks (3)

Q 23 State the importance of gills in fishes.

Marks (3)

Q 24 Give a brief account of respiratory system and process of respiration in cockroach.

Marks (5)

Q 25 Describe the process of breathing in humans.

Marks (5)

Q 26 How do plants respire? Give the mechanism.

Marks (5)

### Most Important Questions

Q 1 What is cellular respiration?

Q 2 Define aerobic respiration.

Q 3 What is the product of partial breakdown of glucose?

Q 4 Where does cellular respiration take place?

Q 5 Why does a muscle cramp ?

Q 6 Define breathing rate.

Q 7 What does a breath mean?

Q 8 What happens during increased physical activity?

Q 9 Give the example of a single-celled organism and its use.

Q 10 What is the effect of hot water bath or massage on body?

Q 11 What are anaerobes? What happens to glucose in the absence of oxygen?

Q 12 What is the percentage of oxygen and carbon dioxide in inhaled and exhaled air?

Q 13 Which phenomenon takes place during breathing?

Q 14 Why do our muscle cells respire anaerobically for a short time during heavy exercise?

Q 15 Why do we often sneeze when we inhale a lot of dust-laden air?

Q 16 Describe the process of breathing in humans.

Q 17 What is inhalation and exhalation?

Q 18 Complete this equation

$$\text{Glucose} \xrightarrow{\text{With the use of O}_2} \text{CO}_2 + \text{_____} + \text{Energy}$$

Q 19 Give the equation of anaerobic respiration taking place in the muscle cells.

Q 20 Which organ is involved in exchange of gases in earthworm and insects respectively?

Q 21 Which body parts do take part in the gaseous exchange in earthworm?

Q 22 Why do fish have gills?

Q 23 Give a brief account of respiratory system and process of respiration in cockroach.

Q 24 How do plants respire? Explain the mechanism.

Q 25 What do you know about spiracles?

Q 26 Why root cells of plants need oxygen?

Q 27 How do the root cells of plants take oxygen?

Q 28 Where does the exchange of gases take place in plants?

Q 29 Name some animals which have lungs in their chest cavity like the human beings?

Q 30 Give the equation to show the energy production in plants.

Q 31 How can fish breathe in water while human beings cannot?

Q 32 Do insects breathe in same way as human beings?

Q 33 Which body parts do take part in the gaseous exchange in frog?

Q 34

Match the items of column A with those of column B:

Column A	Column B
A.Gills	(i) Leaves
B.Inhalation	(ii) Presence of oxygen
C.Aerobic respiration	(iii) Fish
D.Stomata	(iv)Taking in air

Q 35 Like other living organisms, plants also respire for their survival. Respiration in plants occurs through-

- (A) Flowers of different colours.
- (B) Root hairs present underground.
- (C) Tiny pores present on leaves.
- (D) All of the above.

## 11. Transportation in Animals and Plants

Q 1 While playing, Deepak fell down and his elbow got injured. Blood was coming out from the cut. After sometime, he noticed that bleeding had stopped and a dark red clot had plugged the cut. How?

Mark (1)

Q 2 Name the water conducting tissue of the plants.

Mark (1)

Q 3 Which process helps to remove excess of water from the plant through the leaves?

Mark (1)

Q 4 Define Homeostasis.

Mark (1)

Q 5 Name the main excretory product of snakes?

Mark (1)

Q 6 Why is heart known as the pumping organ of the human body?

Mark (1)

Q 7 Name the main organs of the excretory system.

Mark (1)

Q 8 What is the significance of dividing heart into different chambers?

Mark (1)

Q 9 State the role of haemoglobin.

Mark (1)

Q 10 What is the function of valves in heart?

Mark (1)

Q 11 Name an instrument to measure heart beat.

Mark (1)

Q 12 How do plants absorb water and minerals from soil?

Marks (2)

Q 13 What is blood?

Marks (2)

Q 14 What does circulatory system consist of?

Marks (2)

Q 15 How many types of blood vessels are there in our body?

Marks (2)

- Q 16 What do you mean by pulse and pulse rate?  
Marks (2)
- Q 17 What is a stethoscope?  
Marks (2)
- Q 18 What is excretion?  
Marks (2)
- Q 19 Why do we experience sweating on a hot summer day?  
Marks (2)
- Q 20 How does water move from roots to the leaves?  
Marks (2)
- Q 21 What is phloem?  
Marks (2)
- Q 22 What is transpiration?  
Marks (2)
- Q 23 Why are arteries thick walled?  
Marks (2)
- Q 24 Explain pulse, pulse rate and heart beat.  
Marks (2)
- Q 25 Name the different components of blood.  
Marks (2)
- Q 26 Name the vascular tissues of the plants.  
Marks (2)
- Q 27 Why do we sweat more in summers than in winters? Name the physical process involved.  
Marks (2)
- Q 28 How does the process of excretion in fishes and birds differ from humans?  
Marks (2)
- Q 29 What does blood consist of?  
Marks (3)
- Q 30 How does the heart work?  
Marks (3)
- Q 31 What is a heartbeat? What is its importance?

Marks (3)

Q 32 How does the excretory system work in human beings?

Marks (3)

Q 33 "Blood is the main transport system of the body". Explain.

Marks (3)

Q 34 What are the three components of circulatory system in humans?

Marks (3)

Q 35 How does the two chambered heart function?

Marks (3)

Q 36 How does blood reach every part of our body?

Marks (3)

Q 37 State the colour and location of arteries and veins.

Marks (3)

Q 38 How does the excretory system work in our body?

Marks (3)

Q 39 (a) Name the two types of vascular tissues in plants?

(b) Describe the process of absorption of water in the plants.

(c) Explain the role of stomata. What controls the opening and closing of stomata?

Marks (5)

Q 40 How does blood reach every part of our body? Support your answer with a suitable diagram.

Marks (5)

Q 41 (a) Show the flow of blood in human heart with help of a diagram.

(b) How does blood circulate in human body?

Marks (5)

Q 42

(a) Why is transpiration important? Give three reasons.

(b) How does water reach to top leaves in tall plants?

(c) Which modification helps a plant to survive in deserts?

Marks (5)

### Most Important Questions

Q 1 What is Blood?

Q 2 What is Blood?

Q 3 What does the circulatory system consist of?

Q 4 What does blood consist of?

Q 5 How many types of blood vessels are there in our body?

Q 6 Draw Schematic diagram of circulation.

Q 7 While playing, Deepak fell down and his elbow got injured. Blood was oozing out from the cut. After sometime, he noticed that bleeding had stopped and a dark red clot had plugged the cut. Why?

Q 8 What are Pulse and Pulse rate?

Q 9 What is Heart?

Q 10 How does the heart work?

Q 11 What is heartbeat?

Q 12 What is a stethoscope?

Q 13 Draw various sections of human heart.

Q 14 What are uses of blood ?

Q 15 Why is the colour of blood appear red?

Q 16 What are the difference between arteries and veins?

Q 17 What is excretion?

Q 18 How does excretory system work in human-beings?

Q 19 Why do we experience sweat on a hot summer day?

Q 20 How do plants absorb water and minerals from soil?

Q 21 How does water move from roots to the leaves?

Q 22 What is phloem?

Q 23 What is transpiration?

Q 24 Draw a diagram of the human excretory system and label the various parts.

Q 25 What does excretory system of humans consist of?

Q 26 What is xylem?

Q 27 What is the role of root hair in absorption of water and mineral nutrients in plants?

Q 28 What do you understand by dialysis?

Q 29 In which form do aquatic animals excrete their wastes?

Q 30 Why are white patches formed on our clothes in hot summer days ?

Q 31 What does urine of human consist of?

## 12. Reproduction in Plants

Q 1 Define reproduction.

Mark (1)

Q 2 Which parts are called as vegetative parts of the plant?

Mark (1)

Q 3 What is the function of flowers in the plants?

Mark (1)

Q 4 Give the term if the flower has both male and female parts.

Mark (1)

Q 5 What are the different modes of reproduction?

Mark (1)

Q 6 Give two examples of plants containing winged seeds.

Mark (1)

Q 7 From which part of the plant do leaves arise?

Mark (1)

Q 8 Which part of the potato forms new plant?

Mark (1)

Q 9 Where are the buds located in Bryophyllum?

Mark (1)

Q 10 List few modes of seed dispersal.

Mark (1)

Q 11 Name the parts of a plant that can reproduce through vegetative propagation.

Mark (1)

Q 12 What is the difference between an ovary and an ovule?

Mark (1)

Q 13 Define fertilisation.

Mark (1)

Q 14 What are the advantages of vegetatively propagated plants?

Marks (2)

Q 15 What are vegetative buds?

Marks (2)

Q 16 Define vegetative propagation.

Marks (2)

Q 17 Write the difference between asexual and sexual reproduction.

Marks (2)

Q 18 Explain two types of pollination seen in plants.

Marks (2)

Q 19 Define pollination. Name the two types of pollination.

Marks (2)

Q 20 What are the agents of pollination?

Marks (2)

Q 21 What is the need of seed dispersal?

Marks (2)

Q 22 Give the mechanism of vegetative reproduction in:

- (a) Potato plant
- (b) *Bryophyllum*

Marks (2)

Q 23 State two advantages of vegetative propagation.

Marks (2)

Q 24 Show the diagram of the following parts of the plant:

- (i) Stamen
- (ii) Pistil

Marks (3)

Q 25 Draw a diagram showing the process of budding in yeast.

Marks (3)

Q 26 What are spores? What are their functions?

Marks (3)

Q 27 Describe the process of fragmentation with a suitable diagram.

Marks (3)

Q 28 Give the name of an organism which shows budding as the mode of reproduction. Also describe the process.

Marks (3)

Q 29 What do you understand by the term 'leaf venation'? What are the two types of leaf venation?

Marks (3)

Q 30 Describe various modifications developed by seeds in respect to their habitat for their suitable dispersal.

Marks (3)

Q 31 Draw diagrams showing the process of fertilisation. What are fruits and seeds? How seed dispersal helps plants?

Marks (5)

Q 32 What are the unisexual and bisexual flowers? Give examples. Write a note on sexual reproduction in plants.

Marks (5)

Q 33 Describe the reproductive parts of a plant with the help of a labeled diagram.

Marks (5)

Q 34 (a) Name an alga which reproduces by fragmentation. Explain its process of reproduction with help of a diagram.

(b) Define sporogenesis. Give an example.

(c) What is the mechanism of reproduction in *hydra* and yeast?

Marks (5)

#### Most Important Questions

Q 1 Define reproduction.

Q 2 Which are the vegetative parts of a plant?

Q 3 What are the functions of flowers in a plant?

Q 4 What are the different modes of reproduction?

Q 5 Give the example of plants containing winged seeds.

Q 6 Where are the buds located in Bryophyllum?

Q 7 What are vegetative buds?

Q 8 How can you define vegetative reproduction?

Q 9 Write the difference between asexual and sexual reproduction.

Q 10 What are the properties of vegetatively propagated plants?

Q 11 Give the name of the organism, which produces buds as the mode of reproduction. Also describe the process.

Q 12 Draw a diagram showing the process of budding in yeast.

Q 13 Describe the process of fragmentation with diagram.

- Q 14 What are spores and what are their functions? Show the diagram.
- Q 15 What do you understand by the term budding?
- Q 16 What are the unisexual and bisexual flowers? Give the examples.
- Q 17 What is pollination?
- Q 18 Draw the diagram showing the process of fertilization. What are fruit and seed?
- Q 19 Write a note about sexual reproduction in plant.
- Q 20 What are the various agents which are responsible for pollination?
- Q 21 How does seed dispersal help the plants?
- Q 22 Show the diagram of the following parts of the plant.  
(i) Stamen  
(ii) Pistil
- Q 23 Where are the seeds formed in a plant?
- Q 24 What are the various ways of seed-dispersal to carry them to different places?
- Q 25 What are the two types of pollination?
- Q 26 What do you understand by the term fertilisation?
- Q 27 What will happen if all seeds of a plant were to fall at the same place and grow there?
- Q 28 What are the male and female reproductive part of a flower?
- Q 29 Mention characteristics of asexual reproduction?
- Q 30 Mention some difference between sexual and asexual reproduction?
- Q 31 How do pollen grains reach the female gamete present in the ovary?

## 13. Motion and Time

Q 1 What is speed?

Mark (1)

Q 2 Define non-uniform motion.

Mark (1)

Q 3 Which devices are used to measure time intervals?

Mark (1)

Q 4 What is a bob?

Mark (1)

Q 5 What is a periodic motion?

Mark (1)

Q 6 Define time period of a simple pendulum.

Mark (1)

Q 7 What are quartz clocks?

Mark (1)

Q 8 What is the use of odometer in a vehicle?

Mark (1)

Q 9 What is the use of speedometer in a vehicle?

Mark (1)

Q 10 How do we know an object is moving faster compared to another object?

Mark (1)

Q 11 What is the advantage of distance-time graphs?

Mark (1)

Q 12 A simple pendulum takes 15 seconds to complete 5 oscillations. What is the time period of the pendulum?

Marks (2)

Q 13 If a car is moving with a speed of 5 km/h on a highway, find the distance travelled by the car in 3 hours?

Marks (2)

Q 14 The distance between two stations is 240 km. A train takes 6 hours to cover this distance. Calculate the speed of the train.

Marks (2)

Q 15 Explain, how motion of a child on a see-saw is an oscillatory motion?

Marks (2)

Q 16 What is the nature of distance-time graph for the motion of an object moving with a constant speed?

Marks (2)

Q 17 Explain, how in ancient times, a day, a month and a year was measured.

Marks (2)

Q 18 Explain the different positions of the bob of the simple pendulum while it oscillates.

Marks (3)

Q 19 Priya takes 20 minutes from her house to reach her school on a bicycle. If the bicycle has a speed of 2 m/s, calculate the distance between her school and her house.

Marks (3)

Q 20 What are the points that should be kept in mind while choosing scale for drawing a graph?

Marks (3)

Q 21 A car is moving with speed 72 km/hr. Convert this speed into metre/sec.

Marks (4)

Q 22 What do you understand by the term 'Uniform motion'? Give an example.

A truck moves with a speed of 60km/hr for 30 minutes. What is the total distance travelled by the truck?

Marks (5)

Q 23 A car moving at a speed of 80km/h covers a certain distance in 15 minutes. How much time will it take to cover the same distance if it moves with a speed of 40km/h?

Marks (5)

Q 24 Show the distance-time graph for the motion in the following cases:

(i) A car moving with a constant speed.

(ii) A car parked on a side road.

(iii) A car moving with non-uniform speed.

Marks (5)

Q 25 The odometer of a car reads 80323.0 km when the clock shows the time 09:10 AM. Calculate the distance moved by the car, if at 09:30 AM, the odometer reading has changed to 80338.0 km? Also, tell the speed of the car in km/min during this time. Express the speed in km/h also.

Marks (5)

### Most Important Questions

Q 1 Name any three types of motion.

Q 2

Q 2 A faster moving object covers:

- (a) Less distance in more time
- (b) More distance in more time
- (c) Less distance in shorter time
- (d) More distance in shorter time

Q 3 Slower moving vehicle will have

- (a) Higher Speed
- (b) Lower Speed
- (c) Equal Speed
- (d) More Distance

Q 4 Define Speed?

Q 5 Average Speed is the total distance covered

- (a) Divided by distance traveled in one hour
- (b) Multiplied by the total time taken
- (c) Divided by the total time taken
- (d) All of these

Q 6 In a uniform motion

- (a) Average speed is the same as the actual speed
- (b) The object is moving along a straight line
- (c) The object is moving a constant speed
- (d) All the three statements are true

Q 7 If the speed of an object, moving along a straight line, keeps changing then,

- (a) The motion is said to be a uniform motion
- (b) The motion is said to be a non uniform motion
- (c) The object is said to be stationary
- (d) The motion is said to be a fast motion

Q 8 The time between one sunrise and the next is known as a

- (a) Month
- (b) Year
- (c) Day
- (d) Interval

Q 9 The time between one new moon to the next can be called a

- (a) Month
- (b) Year
- (c) Day
- (d) Interval

Q 10 A year was fixed as the time taken by

- (a) The earth to complete one revolution around its axis
- (b) The earth around the sun

- (c) The moon around the earth
- (d) The satellite around the earth

Q 11 Time intervals shorter than a day can be measured by using

- (a) Clock
- (b) Watch
- (c) Stop Watch
- (d) Clock, watch or stop watch

Q 12 Periodic motion is the motion which

- (a) Repeats itself after a regular interval of time
- (b) Repeats itself after indefinite time
- (c) Does not repeat itself
- (d) Takes same time

Q 13 The most common example of periodic motion is

- (a) Digital clock
- (b) Simple Pendulum
- (c) Moving car
- (d) Movement of a pedestrian

Q 14 A simple pendulum consists of

- (a) Small metallic ball - bob only
- (b) A string only
- (c) Small metallic ball suspended from a rigid stand by a string
- (d) None of these

Q 15 Periodic motion is also known as

- (a) Rectilinear motion
- (b) Circular motion
- (c) Non uniform motion
- (d) Oscillatory motion

Q 16 An oscillation is said to be complete when

- (a) The bob of pendulum starts from its mean position
- (b) Moves to extreme on one side and goes to the extreme on the other side
- (c) Returns to its original mean position
- (d) The bob of the pendulum starts from its mean position, goes to extreme on one side and then to extreme on the other side and finally comes to the mean position.

Q 17 Time period is defined as

- (a) The time taken to complete one revolution
- (b) The time taken to go from one extreme to the other
- (c) The time taken to return to mean position from the extreme on one side only
- (d) All of these.

Q 18 If the distance-time graph is a straight line, it indicates

- (a) The speed of the object keeps changing
- (b) The object is moving with a constant speed
- (c) The object is not moving
- (d) None of these.

Q 19 The distance-time graph can be used to find

- (a) Distance moved by an object at any instant of time
- (b) Speed of the object
- (c) Distance moved by an object during definite time intervals
- (d) All of these.

Q 20 What do you mean by the term motion?

Q 21 If a car is moving with a speed of 10 km/h on a road. Find the distance travelled by the car in 3 hours?

Q 22 The distance between two stations is 360 km. A train takes 6 hours to cover this distance. Calculate the speed of the train ?

Q 23 Shruti covers a distance of 2.4 km from her house to reach her school on a bicycle. If the bicycle has a speed of 2 m/sec, calculate the time taken by her to reach the school ?

Q 24 Show the distance-time graph for the motion in the following cases:

- (i) A car moving with a constant speed.
- (ii) A car parked on a side road.
- (iii) A car moving with non-uniform speed.

Q 25 What is the advantage of distance-time graphs?

Q 26 A simple pendulum takes 30 seconds to complete 6 oscillations. What is the time period of the pendulum?

Q 27 Look at the table:

Time	10:30 am	11:00 am	11:30 am	12:00 noon	12:30 pm
Distance from origin point(KM)	0	15	28	40	60

1) Is the car is moving with constant speed?

2) What is the average speed?

Q 28

What do the following measure in a car?

- (a) Speedometer
- (b) Odometer.

Q 29 A bus covers a distance from A to B at 40 km/h and while returning it travels at 50 km/h. calculate the average speed.

## 14. Electric Current and its Effects

Q 1 What is a battery?

Mark (1)

Q 2 What happens to the wire when electric current is passed through it?

Mark (1)

Q 3 Name the safety device which is based on the heating effect of an electric current.

Mark (1)

Q 4 How is positive terminal represented in the symbol of an electric cell?

Mark (1)

Q 5 Name the scientist who discovered magnetic effect of an electric current.

Mark (1)

Q 6 Is there an electromagnet inside an electric bell ?

Mark (1)

Q 7 What is the heating effect of an electric current ?

Mark (1)

Q 8 How an electric bulb glows when an electric current is switched on ? Explain.

Mark (1)

Q 9 What are Miniature circuit breakers (MCBs) ?

Mark (1)

Q 10 What is a compass needle? How can you detect the presence of a magnet using a compass needle?

Marks (2)

Q 11 How can an electric current be used to make magnets?

Marks (2)

Q 12 How can we make a battery of two cells ?

Marks (2)

Q 13 Explain an open and a closed circuit.

Marks (2)

Q 14 What are electric fuses?

Marks (3)

Q 15 What is an electromagnet?

Marks (3)

Q 16 An electrician wants to replace a fuse by a piece of wire. Is it safe?

Marks (3)

Q 17 What are the reasons for excessive currents in the electrical circuits?

Marks (3)

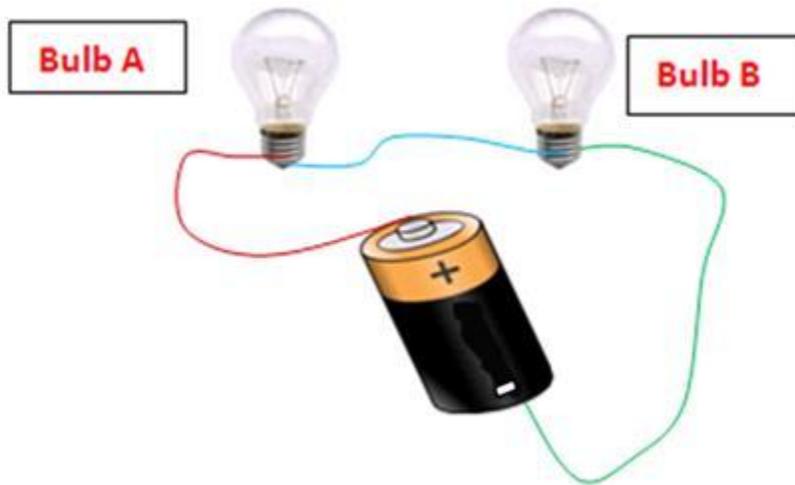
Q 18 Explain the working of fuse in a circuit.

Marks (3)

Q 19 Explain the working of an electric bell .

Marks (3)

Q 20 Explain and draw a circuit diagram to represent the picture shown below.



Marks (5)

Q 21 What is an electric heater and on what principle it is based?

Is the working principle of an electric bulb and an electric heater same? If yes, then, why an electric heater does not glow like an electric bulb?

Marks (5)

### Most Important Questions

Q 1 How do we represent the symbol of a cell in an electric circuit ?

Q 2 What is a battery?

Q 3 How the positive terminal is represented in a cell?

Q 4 What happens to a wire when electric current is passed through it?

Q 5 What is heating effect of electric current?

Q 6 What is magnetic effect of electric current?

Q 7 Name the scientist who discovered the magnetic effect of electric current?

Q 8 Why the filament of electric bulb glows?

Q 9 How will you make a battery of two cells?

Q 10 Name the safety device which is based on the heating effect of electric current?

Q 11 What are electric fuses?

Q 12 What are miniature circuit breakers?

Q 13 What is an electromagnet?

Q 14 What do you mean by an open and closed circuit?

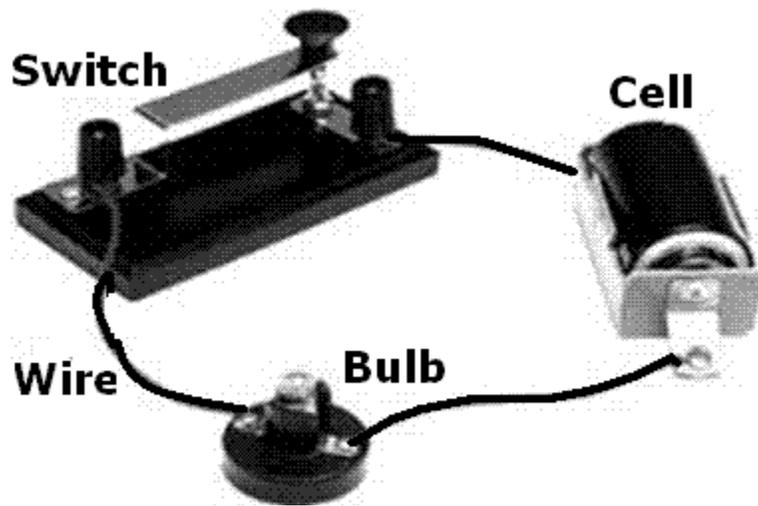
Q 15 Explain the working of an electric bell?

Q 16

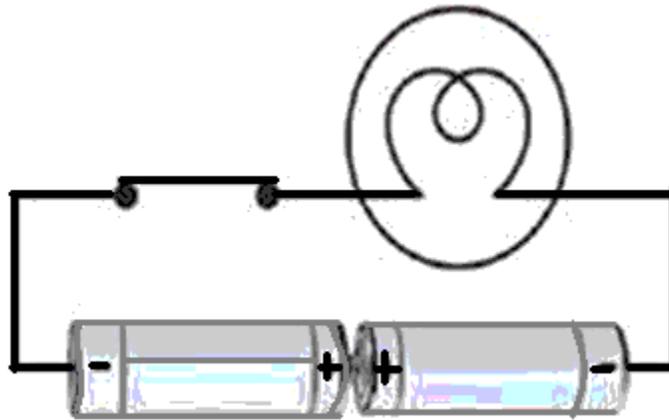
Fill in the blanks.?

- (1) A wire gets \_\_\_\_\_ when an electric current passes through it.
- (2) An electric bell has a \_\_\_\_\_ in it.
- (3) A coil of wire present in electric heater is called an\_ \_\_\_\_\_.

Q 17 Draw the circuit diagram to represent the circuit shown below.

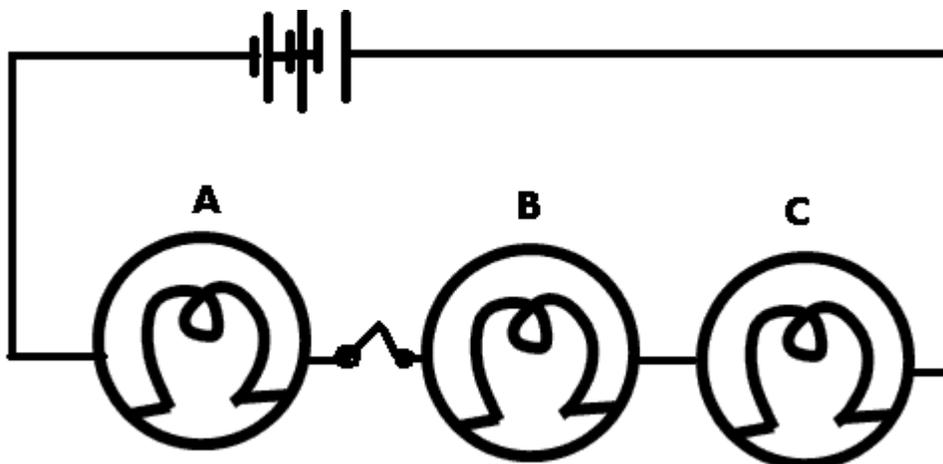


Q 18 The bulb in the circuit shown below does not glow. What could be the problem?

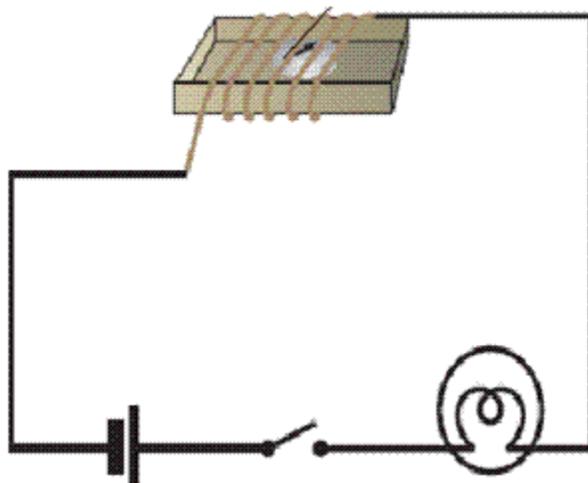


Q 19 Give three examples of devices that make use of the heating effect of electric current.

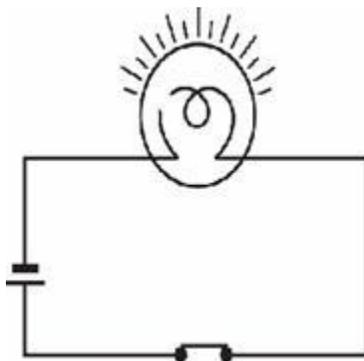
Q 20 Would any of the bulb glow when the switch is in the 'ON' position?



Q 21 A compass needle gets deflected from its north-south position ,when the current is switched on through a wire kept nearby . Explain?



Q 22 The bulb in the circuit shown below does not glow. Explain ?



Q 23 Fill in the blanks

(a) The thicker shorter line in the symbol for a cell represents its \_\_\_\_\_ terminal. (b) The combination of two or more cells is called a \_\_\_\_\_ .

(c) A current carrying coil of an insulated wire wrapped \_\_\_\_\_ around a piece of iron is called \_\_\_\_\_ .

## 15. Light

Q 1 Does light travels in a straight line?

Mark (1)

Q 2 Can a shiny surface change the direction of the light?

Mark (1)

Q 3 Does light gets reflected from a plane mirror ?

Mark (1)

Q 4 What is a real image?

Mark (1)

Q 5 What is a virtual image?

Mark (1)

Q 6 What is a concave lens ?

Mark (1)

Q 7 What is a convex lens?

Mark (1)

Q 8 Can we obtain an image on the screen by a plane mirror?

Mark (1)

Q 9 Which type of lens always forms a virtual image?

Mark (1)

Q 10 We can't see the flame of a candle through a bent pipe. Explain.

Marks (2)

Q 11 How are objects visible?

Marks (2)

Q 12 What should we do if we see an ambulance coming behind our vehicles?

Marks (2)

Q 13 What do you mean by the reflection of light ?

Marks (2)

Q 14 What are the characteristics of the image formed by a concave lens?

Marks (2)

Q 15 What are the different types of mirrors?

Marks (3)

Q 16 What are the characteristics of an image formed by a convex mirror?  
Marks (3)

Q 17 While seeing an image of an object in the plane mirror, sides of an object are interchanged in an image formed. Explain with examples.  
Marks (3)

Q 18 What are the characteristics of an image formed by a plane mirror?  
Marks (3)

Q 19 State the characteristics of an image formed by a concave mirror when an object is placed very close to it.  
Marks (3)

Q 20 Which mirrors are used as side mirrors in scooters and cars? Justify your answer.  
Marks (3)

Q 21 Explain a rainbow.  
Marks (3)

Q 22 What are concave mirrors and convex mirrors?  
Marks (4)

Q 23 What is Newton's disc?  
Marks (4)

Q 24 When Rita looked at her image in the mirror, she noticed that her right appears to be left and left appears to be right. Why is it so? Also, when she observed the image of her hand in a plane mirror, the distance between her hand and the mirror is 10 cm. If she moves her hand 5 cm backwards, then what will be the distance between her hand and its image?  
Marks (5)

Q 25 What is a mirror? State the characteristics of the image formed by a plane mirror. We know that the rear view mirror of the bus is a plane mirror. A driver is reversing his bus at a speed of  $4 \text{ ms}^{-1}$ . The driver sees in his rear mirror the image of a car parked behind his bus. What will be the speed at which the image of the car appears to approach the driver?  
Marks (5)

#### Most Important Questions

Q 1 How do you see objects?

Q 2 State two properties of light.

Q 3 what do you understand by luminous objects? Give two examples.

Q 4 what do you understand by non-luminous objects? Give two examples.

Q 5 What do you understand by opaque objects? Give some examples.

Q 6 we can see through transparent objects but cannot see through opaque objects. Why?

Q 7 What is reflection?

Q 8 What do you understand by real image?

Q 9 What is virtual image?

Q 10 Which kind of mirror you use at home?

Q 11 State different kinds of mirrors?

Q 12 What is lateral inversion?

Q 13 Ambulance is written in a strange manner on the ambulances. Why?

Q 14 State the characteristic of the image formed by convex mirror.

Q 15 State the characteristic of the image formed by plane mirror.

Q 16 State some uses of concave mirrors.

Q 17 State some uses of convex mirrors.

Q 18 State two properties of lenses.

Q 19 How will you differentiate between concave and convex lens?

Q 20 State the characteristic of image formed by concave lens.

Q 21 Give some examples where you can clearly see the colours of light.

Q 22 How will you prepare Newton's disk?

Q 23 What are constituent colours of light?

Q 24 Light appears white. Why?

Q 25 State two uses of convex lens.

Q 26 We can see through lens but can't see through mirror why?

Q 27 Newton's disk appears white, when it rotates. Why?

Q 28 My younger sister was playing with soap bubbles. I noticed that the bubbles appear coloured in sunlight. Why?

Q 29 Some images can't be obtained on screen. What kind of images are those?

Q 30 Find a word of English alphabet so that the image formed in a plane mirror appears exactly like the letter itself.

## 16. Water: A Precious Resource

- Q 1 Define aquifer.  
Mark (1)
- Q 2 What is water management?  
Mark (1)
- Q 3 Define Drip Irrigation?  
Mark (1)
- Q 4 What is surface water?  
Mark (1)
- Q 5 What is the main source of water on the earth?  
Mark (1)
- Q 6 What is infiltration?  
Mark (1)
- Q 7 What do you mean by water table?  
Mark (1)
- Q 8 Name the process by which groundwater is recharged.  
Mark (1)
- Q 9 When do we celebrate "Water day"?  
Mark (1)
- Q 10 How can we utilize rain water?  
Mark (1)
- Q 11 How can we come to know that there is a scarcity of water in plants?  
Mark (1)
- Q 12 What kind of water do we get from tube wells?  
Mark (1)
- Q 13 What is the purpose behind celebrating '22<sup>nd</sup> March' as water day every year?  
Mark (1)
- Q 14 How much surface area of our earth is covered with water?  
Mark (1)
- Q 15 Why do we use soft water for drinking purpose?  
Mark (1)
- Q 16 What do you understand by rainwater harvesting?

Marks (2)

Q 17 What is the role of water in sustaining life on earth?

Marks (2)

Q 18 What do you understand by underground water?

Marks (2)

Q 19 What is spring water?

Marks (2)

Q 20 Why can't we consume sea water?

Marks (2)

Q 21 Write any two water-wise habits?

Marks (2)

Q 22 Write the chemical formula of water and its ratio by mass.

Marks (2)

Q 23 Which method of irrigation is employed to minimise the wastage of water?

Marks (2)

Q 24 What are aquifers? How is water extracted from these aquifers?

Marks (2)

Q 25 In which form does water exist?

Marks (2)

Q 26 How much water is recommended by the United Nations for the daily needs of human being?

Marks (2)

Q 27 Name the sources of ground water used for drinking purpose.

Marks (2)

Q 28 How much water is present in our body?

Marks (2)

Q 29 Why do plants acquire more leaves during the summer season?

Marks (2)

Q 30 There are 5 hand pumps in a lane of 25 houses. What could be the long-term impact on water table?

Marks (3)

Q 31 How can we conserve water?

Marks (3)

Q 32 Water is a very precious resource. What preventive measures can we take to avoid its wastage?

Marks (3)

Q 33 (a) Why does the uptake of water in plants increase in summers?

(b) During cold nights, water appears on the surface of the leaves. What is that process known as and why does it occur?

Marks (3)

Q 34 (a) List three factors affecting the level of water table?

(b) Give three reasons for water scarcity?

Marks (3)

Q 35 Why is water considered as an important liquid for all human beings?

Marks (3)

Q 36 What are the causes of water scarcity?

Marks (5)

Q 37 What do you understand by replenishment of water table? Which factors disturb water table?

Marks (5)

Q 38 (a) How can we conserve run away water in our homes? What are its advantages?

(b) Why can't we use this water for drinking purposes?

(c) What is rain water harvesting?

Marks (5)

### Most Important Questions

Q 1 Discuss one irrigation method which minimises the use of water.

Q 2 Describe the method by which saline water is treated to remove salt.

Q 3 What are the three forms of water and how they interchange?

Q 4 What is freezing point and boiling point of water?

Q 5 Differentiate between condensation and evaporation.

Q 6 What are aquifers and where are they present?

Q 7 List 5 water wise habits.

Q 8 What are the main sources of water?

Q 9 What are the reasons for water scarcity?

Q 10 Define water table and discuss factors responsible for its decline.

Q 11 What is water harvesting and what are its advantages?

## 17. Forests: Our Lifeline

- Q 1 What is the importance of forests in our life?  
Mark (1)
- Q 2 What is the importance of forests for animals?  
Mark (1)
- Q 3 Give some examples of plants that are found in forests?  
Mark (1)
- Q 4 What is crown of the tree?  
Mark (1)
- Q 5 What is the food of micro-organisms in soil?  
Mark (1)
- Q 6 Which is the primary source of food for herbivores and carnivores?  
Mark (1)
- Q 7 Which phenomenon shows the feeding relationship?  
Mark (1)
- Q 8 What are saprophytes? Give an example.  
Mark (1)
- Q 9 What is understorey?  
Mark (1)
- Q 10 Which part of the plant mainly helps in preventing soil erosion?  
Mark (1)
- Q 11 How animals in the forest warn their fellow animals about the intruders?  
Mark (1)
- Q 12 What are autotrophs and heterotrophs?  
Marks (2)
- Q 13 Why are forests known as “Green Lungs”?  
Marks (2)
- Q 14 From where do decomposers derive their food?  
Marks (2)
- Q 15 What is photosynthesis?  
Marks (2)
- Q 16 What are decomposers?

Marks (2)

Q 17 What is forest?

Marks (2)

Q 18 How do the forest officers recognise the presence of some animals in the forest?

Marks (2)

Q 19 What is the difference between canopy and crown?

Marks (2)

Q 20 Explain how forests prevent flow of runoff water?

Marks (2)

Q 21 How will the water-cycle be affected by the number of trees?

Marks (2)

Q 22 Differentiate between climbers and creepers.

Marks (2)

Q 23 Explain the role of forests in maintaining the balance between oxygen and carbon dioxide in the atmosphere.

Marks (2)

Q 24 Why do heavy rains in forests not cause flood?

Marks (3)

Q 25 What is food chain?

Marks (3)

Q 26 What is the effect of deforestation on water cycle?

Marks (3)

Q 27 Is forest just a home to plants and animals?

Marks (3)

Q 28 What are decomposers? Give example. What is their role in the forest?

Marks (3)

Q 29 What is soil erosion? How do the forests prevent soil erosion?

Marks (3)

Q 30 In forests, the waste product of a level of organisms becomes the food for the next level. So, there is no waste in a forest. Justify.

Marks (3)

Q 31 Why is forest known as a “Dynamic living entity”?

Marks (5)

Q 32 What would happen if forest will disappear from earth?

Marks (5)

Q 33 Explain how animals' dwelling in the forest help in its regeneration?

Marks (5)

Q 34 Explain the important role of forests in the sustenance of life on earth?

Marks (5)

Q 35 "Forests are dynamic, full of life and vitality." Explain.

Marks (5)

### Most Important Questions

Q 1 Give the name of some forest plants along with their uses.

Q 2 What is crown of the tree?

Q 3 Define:

1. Autotrophs
2. Heterotrophs

Q 4 What do you understand by the term food chain?

Q 5 Define photosynthesis.

Q 6 What are decomposers?

Q 7 Why are the forests considered as "Green Lungs" of the earth?

Q 8 What do you understand by the term forest?

Q 9 How can deforestation affect the water cycle?

Q 10 Is forest just a home to plants and animals?

Q 11 How do forest officers recognise the presence of some animals in the forest?

Q 12 How do heavy rains in forests not cause floods?

Q 13 What would happen if forests will disappear from earth?

Q 14 Mention the importance of forest in our life.

Q 15 What is humus?

## 18. Wastewater Story

Q 1 What is waste water ?

Mark (1)

Q 2 Name the inorganic impurities present in waste water?

Mark (1)

Q 3 Name the organic impurities present in waste water?

Mark (1)

Q 4 Which instrument removes the solids like faeces and other substances from the waste water?

Mark (1)

Q 5 Name 2 diseases caused by micro-organisms present in sewage.

Mark (1)

Q 6 What is the function of skimmer in waste water treatment plant?

Mark (1)

Q 7 Which chemicals are used to disinfect water?

Mark (1)

Q 8 Who decomposes the sludge?

Mark (1)

Q 9 What is the use of bar screens in a waste water treatment plant?

Mark (1)

Q 10 What are contaminants?

Mark (1)

Q 11 What do you understand by “Sewage Treatment”?

Mark (1)

Q 12 Name two bacterial diseases.

Mark (1)

Q 13 Name the byproducts of waste water treatment.

Mark (1)

Q 14 What is the function of sewerage?

Mark (1)

Q 15 Why is vermi- compost considered as rich source of nutrients?

Mark (1)

- Q 16 What do you understand by sludge? How is it treated?  
Marks (2)
- Q 17 Why should oils and fats not be discharged in the drain?  
Marks (2)
- Q 18 What do you understand by sewerage system?  
Marks (2)
- Q 19 What is clarified water?  
Marks (2)
- Q 20 Which problems arise due to open drain system?  
Marks (2)
- Q 21 Name 2 techniques which are used to improve sanitation?  
Marks (2)
- Q 22 Explain why untreated human excreta is a health hazard?  
Marks (2)
- Q 23 What is the main cause of flood in rivers?  
Marks (2)
- Q 24 What are the various uses of treated waste water?  
Marks (2)
- Q 25 Why is defecation in open considered as a big problem?  
Marks (2)
- Q 26 Which tree should be planted near sewage ponds?  
Marks (2)
- Q 27 Why is it advised to remove plastic bags from sewerage?  
Marks (2)
- Q 28 Why is the amount of potable water going down?  
Marks (2)
- Q 29 Why is it necessary to install water treatment plant in the society?  
Marks (2)
- Q 30 What do you understand by waste water treatment?  
Marks (2)
- Q 31 What do you mean by sewage. Why untreated sewage should not be discharged into rivers or seas?  
Marks (3)

Q 32 What is the relationship between sanitation and disease?

Marks (3)

Q 33 How do the kitchen wastes block the drains?

Marks (3)

Q 34 How does agriculture increases the water pollution of the surroundings?

Marks (3)

Q 35 Write the steps involved in getting clarified water from wastewater.

Marks (5)

Q 36 How would you improve sanitation conditions of an area?

Marks (5)

#### Most Important Questions

Q 1 Why is water our lifeline?

Q 2 What is waste water? Give its physical characteristics.

Q 3 What is sewage?

Q 4 Name the impurities present in sewage.

Q 5 What is sewerage?

Q 6 Why it is essential to treat polluted water?

Q 7 Explain the process of wastewater treatment.

Q 8 Write the better housekeeping practices by which water pollution can be controlled.

Q 9 Name the diseases, which caused by the polluted water.

Q 10 Write measures government is taking to dispose sewage.

Q 11 How we can help our government in protecting the environment and water from being polluted?

Q 12 What is the function of manholes in the sewage system?