

SRI KANCHI MAHASWAMI VIDYA MANDIR
QUESTION BANK 2019-20
SCIENCE

CLASS: VIII

CROP PRODUCTION AND MANAGEMENT

VERY SHORT ANSWER QUESTIONS (ONE MARK EACH)

1. Which agricultural practise is carried out with the help of sickle?
2. What name is given to the cutting and gathering of a food crop like wheat or paddy?
3. Name the process of beating out the grains from harvested crop.
4. Name the process in which grains are separated from chaff and hay with the help of wind.
5. Name one meat yielding animal and one egg yielding animal.
6. Name an animal food obtained from insects.
7. Name the major food nutrient provided by fish.
8. Name the vitamin / vitamins present in the cod liver oil.
9. Name one government agency involved in procuring food grains (like wheat and rice) from farmers and storing them properly.
10. What type of organisms grow on stored food grains having higher moisture content?
11. Which crop is generally grown between two cereal crops in crop rotation to restore the fertility of the soil?
12. State one advantage of growing a leguminous crop between two cereal crops.
13. Name the nitrogen – fixing bacteria present in root nodules of leguminous plants.
14. Which is the first step in cultivation of a crop?
15. For what purpose is a hoe used?
16. Name the implement used in sowing.
17. Name the two types of substance which are added to the fields by the farmers to maintain the fertility of the soil
18. Name one crop which can tolerate standing water (water-logging) in the field and one which cannot.
19. Which is the best time for the removal of weeds?
20. Name two methods of irrigation which conserves water.

SHORT ANSWER QUESTIONS (TWO/THREE MARKS EACH)

1. Why is it necessary to dry the harvested food grains before storage? Add a note on the ways in which the grains are stored.
2. What are weeds? How do they affect the growth of crops?
3. Explain how the irrigation requirements of a crop depend on the nature of the soil in which the crop grows.
4. Describe the sprinkler and drip system of irrigation.
5. State the advantages of the sprinkler and drip system of irrigation.
6. If wheat is sown in kharif season what would happen? Discuss
7. What is a crop? Give two examples of crops
8. What are the two types of crops based on seasons? Give one example of each type
9. Describe briefly how soil is prepared for sowing the seeds.
10. Why do farmers carry out the levelling of ploughed fields?
11. What are the advantages of sowing seeds with seed drill?
12. Why should seeds be sown at right spacing?
13. Define manure. What are the advantages of manure?
14. What is a fertiliser? Can they be used in excessive quantities?

- 15 What is weeding? Why is it necessary?
- 16 What precautions should be taken while spraying weedicides? Why?
- 17 Give any 4 differences between manure and fertilisers
- 18 Define the terms. (i) Harvesting (ii) threshing (iii) winnowing
- 19 What is a 'Combine' which is used in agriculture? State its functions.
- 20 What is animal husbandry?

LONG ANSWER QUESTIONS (5 MARKS EACH)

1. What is meant by kharif and rabi crops? Give examples for each
2. What is sowing? Explain the methods and precautions to be followed in sowing
3. What are good quality seeds? How will you select good, healthy seeds for sowing?
4. What is the process of transplantation in agriculture? State the advantages of this process and give examples of the crops grown by this process
5. What is irrigation? Why is it necessary? Name the sources of irrigation in our country
6. Arrange the following methods in the correct order and explain in brief about each method
Sending crop to sugar factory, Irrigation, Harvesting, Sowing, Preparation of Soil, Ploughing the field
7. Why do farmers in North India grow legumes as fodder in one season and wheat in next season? What is this practice called? States its advantages
8. Explain any two traditional and modern, methods of irrigation
9. What are the various process necessary for raising animals for food and other purposes?
10. How is loosening of soil by ploughing beneficial to farmers?

MICROORGANISMS: FRIEND AND FOE

VERY SHORT ANSWER QUESTIONS (ONE MARK EACH)

1. Name the instrument which is needed to see the microorganisms
2. What is the name of microorganisms which reproduce only inside the living cells of other organisms?
3. What are the major groups of microorganisms?
4. Name an antibiotic extracted from fungus.
5. Name the scientist who discovered the vaccine for small pox.
6. Name the scientist who discovered the *Pencillin*.
7. Name one biological nitrogen fixer.
8. Name the microbe which causes Malaria.
9. Name the causative microorganisms of Anthrax and Foot and mouth disease.
10. Name any 2 special chemicals which are used as food preservatives.
11. How is cholera caused?
12. Name the food material preserved by pasteurisation.
13. What happens to percentage of nitrogen in the atmosphere due to Nitrogen cycle?
14. Name any 2 materials that can be preserved using common salt and oil.
15. What is the full form of HIV?
16. Name the insect which is the carrier of the malarial parasite.
17. Name any 2 diseases spread by the house fly.
18. Name any 1 disease which spreads thru infected food or water.
19. What is deep freezing?
20. Can sugar be used as a food preservative?

SHORT ANSWER QUESTIONS (TWO/THREE MARKS EACH)

1. How do viruses differ from other microorganisms?
2. What are microorganisms? Give any 2 examples
3. How do houseflies carry pathogens? State any 2 ways of preventing diseases spread by houseflies
4. How do mosquitoes carry pathogens? State any 2 ways of preventing diseases spread by mosquitoes
5. What is meant by fermentation? Which microorganisms are involved in fermentation?
6. How do microorganisms help in increasing soil fertility?
7. How do microorganisms help in cleaning the environment?
8. What are antibiotics? What precautions must be taken while taking antibiotics?
9. Why are antibiotics not effective against common cold and Flu?
10. Describe how curd is made from Milk? Name the bacteria involved in this process
11. What is food poisoning? How is this caused?
12. What is food preservation? Name any five methods for food preservation
13. How do you preserve cooked food at home?
14. Why should we not let water collect anywhere at neighbourhood?
15. What is the function of *Rhizobium*?
16. Name any two bacteria, fungi, virus, algae and protozoa.
17. After consuming a dish of mutton, a person complained of nausea, vomiting, diarrhoea and pain in the abdomen. What type of disease is he suffering from? What causes this disease?
18. To which category of microorganism do the following belong?
Amoeba, Lactobacillus, Chlamydomonas, Penicillium, Yeast, HIV.
19. Name any two animal diseases and two plant diseases caused by microorganisms
20. Which disease is spread by female *Anopheles* / *Aedes* mosquito?

LONG ANSWER QUESTIONS (5 MARKS EACH)

1. What is meant by communicable disease? Give examples. What are the various ways in which communicable disease can occur and spread?
2. Name any five human diseases caused by microorganisms. Name the causative organism and mode of spread for each of these disease
3. What is a vaccine? Why is it given to children? How does it work?
4. What is nitrogen fixation? State two ways in which nitrogen gas of the atmosphere can be fixed in nature?
5. Draw a neat labelled diagram of nitrogen cycle in nature.
6. Explain the various steps in the nitrogen cycle.
7. Where do microorganisms live? Design an activity to show the presence of microorganisms in soil and water
8. How do microorganisms help in the making of bread? Explain an experiment by which we can conclude that yeast is used in making bread.
9. The mosquito P is a carrier of virus and spreads a disease Another mosquito R is the carrier of protozoan S and spreads a disease called T
 - a) Name mosquito P and disease Q
 - b) Name the mosquito R and protozoan S
 - c) Name the disease T
 - d) Name the sex of mosquito P
 - e) Name the sex of mosquito R
10. Draw a neat diagram of the following
Paramecium, Bacteriophage, Rhizopus, Penicillium, Aspergillus

Lesson: Synthetic fibres and plastics

Very short Answer Type Questions

- 1) Name the units of which cellulose polymer is made.
- 2) Name the man-made fibre prepared from natural materials
- 3) To Which kind of synthetic fibres does terylene belong?
- 4) State two disadvantages of using synthetic fibres for making clothes.
- 5) Name four different types of plastics.
- 6) Give two uses of Teflon.
- 7) Which of the two is a thermosetting plastic: PVC or Bakelite? Explain.
- 8) Name the fibre obtained by the chemical treatment of wood pulp.
- 9) What is polyester? Name popular polyester.
- 10) Arrange the following fibre in their increasing strength
Nylon, cotton, wool, polyester, Silk
- 11) Why should not we wear clothes made up of synthetic fibres while working in kitchen?
- 12) What type of shirts should we buy for summer: cotton shirts or shirts made from synthetic materials? Give reason for your answer.
- 13) Why are thermoplastics not used for making frying pan handles?
- 14) Choose the thermosetting and thermoplastics from the following
Melamine, Polythene, Bakelite, PVC
- 15) State two uses of polythene.
- 16) Write the full form of PVC. Is it thermoplastic or thermosetting plastic?
- 17) Write two uses of Bakelite.
- 18) Give two uses of PVC
- 19) Name the manmade fibre which is regarded as artificial silk.
- 20) How do carelessly thrown plastic bags affect:
 - a) Dirty water drains and sewers?
 - b) Animals (such as cows)

II) Short answer type questions

- 1) What is a polymer? Name the natural polymer of which cotton is made.
- 2) State the characteristics of synthetic fibres.
- 3) What is Nylon? State the importances of nylon.
- 4) Give the important uses of nylon.
- 5) What is PET? State the uses of PET.
- 6) What is acrylic? State important properties of acrylic.
- 7) Write the uses of acrylic fibres.
- 8) Explain how, manufacturing of synthetic fibres is actually helping in the conservation of forests.
- 9) What are various types of plastics? Give two examples of each type of plastics.
- 10) Why are electric switches, plugs and sockets made of thermosetting plastics?
- 11) Explain the differences between thermoplastics and thermosetting plastics.

- 12) Should the handle and bristles of a toothbrush be made of the same type of plastic material? Explain your answer.
- 13) Explain, why plastic containers are preferred for storing food.
- 14) Give the uses of PVC.
- 15) Write some of the uses of plastics in healthcare industry.
- 16) State whether plastic is biodegradable or non-biodegradable? Give reasons for your answer.
- 17) Explain how, the use of plastics has a bad effect on the environment.
- 18) Explain why, the disposal of plastic wastes is a major problem.
- 19) What are the various ways to save the environment from excessive plastic wastes?
- 20) What is meant by 3R's principle in the context of use of plastics?

III) Long answer type questions

- 1) a) What is rayon? How is rayon made?
b) Give two uses of rayon.
- 2)(a) What are synthetic fibres? Name any two synthetic fibres.
b) Why have synthetic fibres become more popular than natural fibres.
- 3) a) What are thermoplastics? Give two examples of thermoplastics.
b) What are thermosetting plastics? Give two examples of thermoplastics.
- 4) Explain why, thermoplastics become soft on heating but thermosetting plastics do not become soft on heating. Draw labeled diagrams to illustrate your answer.
- 5) What is meant by biodegradable and non biodegradable materials? Give examples of two biodegradable and non biodegradable materials.
- 6) State the various ways in which we can avoid the use of plastics.
- 7) Write the importance of synthetic polymer in our life.
- 8) Write an activity to show that synthetic fibres are stronger than the cotton fibres.
- 9) Despite being very useful it is advised to restrict the use of plastic. Why is it so? Can you suggest some methods to limit its consumption?
- 10) What are the disadvantages of synthetic fibres?

Lesson: Metals and non Metals

I) very short answer type questions

- 1) What is the general name of the elements whose properties are intermediate between those of metals and nonmetals? Give one example.
- 2) Name one metal and one nonmetal which exist in liquid state at room temperature.
- 3) If a metal coin is dropped on hard floor, produces a ringing sound. What is this property of metals known as? Explain.
- 4) State one chemical property which can be used to distinguish a metal from a nonmetal.
- 5) Write a word equation for the reaction of magnesium with oxygen.
- 6) Which metal is used to galvanize iron to protect it from rusting?

- 7) Name a metal which is used to make thin foils for packaging medicines, chocolates, and food items.
- 8) Where is iron present in our body?
- 9) Name one nonmetal which is essential for maintaining life and inhaled during breathing.
- 10) Name one nonmetal used for making fertilizers.
- 11) Which nonmetal is used in water purification process to make drinking water supply antiseptic?
- 12) Name two non-metals which are used in fireworks.
- 13) Define a) Malleability and b) ductility
- 14) What is meant by the saying the metals are lustrous and sonorous?
- 15) There are two boxes, one made of metal and the other made of wood, which are similar in appearance. How will you find out which box is made of metal?
- 16) Consider the following materials:
Copper, Sulphur, Phosphorus, Carbon, ,Gold, silver
Which of these materials are i) malleable and ductile and ii) brittle
- 17) a) Name one metal which reacts with dilute hydrochloric acid to produce hydrogen gas
b) Name one metal which does not react with dilute hydrochloric acid.
- 18) Name any five objects used in our everyday life which are made of metals.
- 19) Which nonmetal is used as a fuel?
- 20) How do metal oxides differ from nonmetal oxides?

II) Short answer type questions

- 1) State three physical properties on the basis of which metals can be distinguished from nonmetals.
- 2) Name the gas produced when aluminium foil reacts with:
 - a) Dilute hydrochloric acid
 - b) Sodium hydroxide solution.
- 3) State any three physical properties for believing that aluminium is a metal.
- 4) Compare the properties of metals and nonmetals with respect to i) malleability ii) ductility and iii) conduction of heat and electricity
- 5) Give reason ;
 - a) Copper metal is used for electric wires.
 - b) Graphite is used for making electrode in a cell.
 - c) Immersion rods for heating liquids are made of metallic substances.
- 6) Can you hold a hot metallic pan which is without a plastic or a wooden handle? Give reason for your answer.
- 7) The screw driver used by an electrician has a plastic or wooden handle.Why?
- 8) What happens when a copper vessel is exposed to moist air for a long time?
- 9) When a copper object is exposed to moist air for a long time, then a green coating is formed on its surface.
 - a) What is the material of the green coating?
 - b) State whether the green coating is acidic or basic
- 10) Sodium metal reacts vigorously with water.
 - a) Name a gas evolved when sodium reacts with water.
 - b) State whether the solution formed by the reaction of sodium with water is acidic or basic

- 11) How do metals react with dilute acids? Explain with the help of an example.
- 12) What would you observe when a strip of Zinc is placed in copper sulphate solution? Write the word equation of the reaction which takes place.
- 13) Can copper displace iron from iron sulphate solution? Give reason for your answer.
- 14) a) Name one metal which can displace iron from iron sulphate solution.
b) Name one metal which cannot displace iron from iron sulphate solution
- 15) Can you store lemon pickle in an aluminium utensil? Explain.
- 16) Give reason for the following:
a) Sodium and potassium stored under kerosene.
b) Copper cannot displace Zinc from its salt solution.
- 17) a) Why are metals used for making bells?
b) Why is phosphorus kept under water?
- 18) Which of the following can be beaten into thin sheets? Why?
a) Zinc b) Phosphorus c) Sulphur d) Oxygen
- 19) Give one use each of the following metals:
a) Iron b) Copper c) Aluminium d) Zinc e) Mercury
- 20) State one use each of the following non metals;
a) Oxygen b) Nitrogen c) Sulphur d) Chlorine e) Iodine

III) Long answer type questions

- 1) a) What are metals? Name five metals.
b) What are nonmetals? Name five non metals
- 2) a) What are metalloids? Name two metalloids.
b) Classify the following elements into metals, nonmetals and metalloids:
Copper, Sulphur, Aluminium, Oxygen, Silicon, Nitrogen, Germanium, Mercury, Chlorine, Sodium.
- 3) a) What happens when sulphur dioxide is dissolved in water? Write a word equation for the reaction which takes place.
b) What happens when an iron nail is placed in copper sulphate solution? Write word equation of the reaction involved.
- 4) a) State five characteristics of metals and five characteristics of nonmetals.
b) Write any five uses of metals and five uses of nonmetals.
- 5) Compare the chemical properties of metals and nonmetals in tabular form.
- 6) Explain physical and chemical properties of metals and nonmetals.
- 7) Explain the differences between metal and nonmetal on the basis of their properties like hardness, malleability, ductility, appearance and heat conduction.
- 8) What happens when dilute sulphuric acid is poured on a copper plate?
- 9) Iron is more reactive than copper. Can you write an activity to show this?
- 10) Write the physical properties of metals.

Lesson: Coal and petroleum

I) Very short answer type questions

- 1) Name three useful products of coal.
- 2) Which product of coal is used as a reducing agent in the extraction of metals?
- 3) Name the process by which plant material buried deep under the earth was slowly converted into coal.
- 4) Name the product of coal which is thick black liquid having an unpleasant smell.
- 5) Name any five substances used in everyday life which is manufactured starting from the products of coal tar.
- 6) Name an important source from which naphthalene balls are obtained.
- 7) Which substance is used for metalling the roads these days in place of coal tar?
- 8) Name the most common fuel used in light motor vehicle.
- 9) Name the fuel which is used in jet aircraft engines.
- 10) Name the petroleum product used to drive heavy vehicles.
- 11) Name the petroleum product which is commonly used for electric generators.
- 12) What is the full form of LPG?
- 13) Is it possible to extract petroleum from under the sea-bed?
- 14) What is the full form of CNG?
- 15) Name any two places in India where natural gas is found.
- 16) Name the major component of natural gas.
- 17) Name a fossil fuel other than coal and petroleum.
- 18) Name two places in India where coal is found.
- 19) Name the petroleum product used for surfacing of roads.
- 20) Name any four places in India where petroleum is found.

II) Short answer type questions

- 1) Explain why, fossil fuels are exhaustible natural resources.
- 2) Describe how coal was formed. What is this process called?
- 3) What happens when coal is heated in air? State the uses of coal.
- 4) State the uses of coke.
- 5) What are the major products of petroleum refining? Give one use of each petroleum product.
- 6) What are the advantages of using natural gas as a fuel?
- 7) What is CNG? State its one use.
- 8) What are the constituents of coal gas? State one use of coal gas.
- 9) State the various uses of natural gas.
- 10) Where is natural gas found? Why natural gas is called a clean fuel?
- 11) Name any five useful substances which are manufactured from petrochemicals.
- 12) Which material is called 'black gold'? Why?
- 13) a) Where and when was the world's first oil well drilled?
b) Where and when was oil first struck in India?
- 14) What is the major cause of air pollution? Write the various tips for minimizing the wastage of petrol while driving vehicles.
- 15) What is carbonization process?
- 16) How is petroleum formed in nature?
- 17) We must look for alternative sources of energy. Why?
- 18) What is a natural gas? Where does it occur?

19) Why is solar energy better than thermal energy?

20) What is the major cause of global warming?

III) Long answer type questions

1) a) What is meant by inexhaustible natural resources? Name two inexhaustible natural resources.

b) What is meant by exhaustible resources? Name any two exhaustible resources.

2) a) What are fossil fuels? Name three fossil fuels.

b) Describe how, fossil fuels are formed.

3) a) What is petroleum? Where does petroleum occur?

b) Describe the process of formation of petroleum.

4) a) What are petrochemicals? Name any two petrochemicals.

b) Why are petrochemicals so important?

5) Name the various products obtained by the processing of coal. Write one line about each?

6) Mention four consequences of excessive use of fossil fuels.

7) What is meant by refining of petroleum? Explain the process.

8) Describe in brief the formation of coal in earth.

9) Why do we group fossil fuels under exhaustible natural resources.

10) What measures are given by Petroleum Conservation Research Association to save petrol and diesel while driving?

Lesson : Combustion and Flame

I) Very short answer type questions

1) What is a combustible substance?

2) Which poisonous gas is formed as a result of complete combustion?

3) What is a fire extinguisher?

4) Define ignition temperature of the substance.

5) Which of the two has a lower ignition temperature: Petrol or Kerosene?

6) Name one fuel which burns without producing a flame.

7) How many zones are there in a flame?

8) Which zone of a candle flame is the hottest?

9) In a candle flame, what is the colour of a) innermost zone b) middle zone c) outer zone?

10) Name the unit in which the calorific value of a fuel is expressed.

11) Which of the following does not produce a flame on burning?

Camphor, Charcoal, Kerosene

12) Define combustion.

13) What is rapid combustion?

14) Name two substances having low ignition temperature and two having high ignition temperature.

15) Name the very poisonous gas produced by the incomplete combustion of fuels.

16) What is complete and incomplete combustion?

17) Define calorific value?

18) Which of the following fuels having highest calorific value?

Kerosene, Wood, Hydrogen, Cow dung cakes, LPG

19) Which of the following fuels having lowest calorific value?

Diesel, Methane, CNG, Coal, Petrol

20) Name one substance which undergoes spontaneous combustion.

II) Short answer type questions

1) What do you mean by calorific value?

2) Differentiate between luminous and non luminous zone.

3) How does a forest catch fire?

4) What is rapid combustion?

5) What causes acid rain?

6) How does a complete combustion differ from an incomplete combustion?

7) How are fuels classified on the basis of physical state? Give two examples each.

8) What are the advantages of using LPG as a fuel?

9) Name any five useful substances which are manufactured from petrochemicals.

10) Why should we use fossil fuels only when absolutely necessary?

11) a) What are fuels? Name any two common fuels.

b) State any four characteristics of an ideal fuel.

12) How will you show that air is necessary for combustion?

13) Can the process of rusting be called combustion? Give reason for your answer.

14) Give two examples of a) Solid fuels b) liquid fuels c) gaseous fuel

15) Why does a goldsmith blow air into the kerosene lamp flame with a blow pipe?

16) In which zone of a candle flame: a) Partial combustion of fuel takes place and b) complete combustion of fuel takes place?

17) Explain how, the use of CNG in automobiles has reduced pollution in cities.

18) What are the disadvantages of burning wood as fuel?

19) Give reasons for the following: LPG is a better domestic fuel than wood.

20) It is difficult to burn a heap of green leaves but dry leaves catch fire easily. Explain.

III) Long answer type questions

1) How are fuels classified on the basis of physical state? Give two examples each.

2) Write five characteristics of ideal fuel.

3) On What principle is the soda acid fire extinguisher based?

4) What are the conditions necessary for combustion?

5) a) What are combustible substances? Name three combustible substances.

b) What are non combustible substances? Name three non combustible substances.

6) What are the conditions necessary for combustion to take place?

7) a) Make a labelled diagram of a candle flame.

b) What makes the middle zone of a candle flame luminous?

8) What is global warming? Name the gas whose increasing percentage in air is leading to global warming. State a harmful effect which can be caused by global warming.

- 9) Explain how, burning of fuels such as coal, petrol and diesel leads to acid rain. How is acid rain harmful?
- 10) You are provided with three watch glasses containing milk, petrol and mustard oil. Suppose you bring a burning candle near these materials one by one, which material will catch fire instantly and why?

CONSERVATION OF PLANTS AND ANIMALS

VERY SHORT ANSWER QUESTIONS (ONE MARK EACH)

1. Which gas in the atmosphere is utilized by the trees and plants in photosynthesis?
2. Which gas in the atmosphere traps the heat rays reflected by the earth?
3. Write one word for the following: Variety of plants, animals and micro-organisms generally found in an area.
4. What name is given to that part of the earth in which living organisms exist (or which supports life)?
5. Name the three types of protected areas which have been earmarked for the conservation of forests and wildlife.
6. Name one wildlife Sanctuary and one National Park which are contained in Pachmarhi Biosphere Reserve.
7. Name any five threatened wild animals which are protected and preserved in our Wildlife Sanctuaries.
8. For what purpose are National Parks in our country established?
9. Name the first Reserve forest of India.
10. Name the objects of historical significance found in Satpura National Park.
11. Name two animals which have vanished from Satpura National Park and two animals which are still found there.
12. What name is given to those species:
 - a) that are on the verge of vanishing from earth?
 - b) that have died out completely?
13. Name the publication which contains record of all the endangered species (plants and animals, etc.).
14. Name any five endangered species of animals listed in the Red Data Book of India.
15. What is the answer to deforestation?
16. Name the various old paper products which can be recycled.
17. How many full grown trees are needed to make 1 tonne of paper?
18. State one way in which we can reuse paper.
19. What is meant by deforestation?
20. What are the causes of deforestation?

SHORT ANSWER QUESTIONS (TWO/THREE MARKS EACH)

1. What are the consequences of deforestation?
2. What is desertification? Name one human activity which may lead to desertification.
3. Explain how, deforestation makes the soil infertile leading to desertification?
4. What is global warming? Name the gas which is responsible for causing global warming.
5. How does deforestation reduce rainfall on the one hand and lead to floods on the other?

6. Define the term 'biosphere'.
7. Define (i) biodiversity, and (ii) ecosystem.
8. What will happen if the natural habitat of a wild animal is destroyed?
9. What is the purpose of establishing several Biosphere Reserves, Wildlife Sanctuaries and National Parks in India?
10. State the role of Biosphere Reserves.
11. What is meant by the 'flora' and 'fauna' of an area? Give two examples of flora and two examples of fauna of Pachmarchi Biosphere Reserve.
12. Which of the following belong to 'fauna' and which belong to 'flora' of the Pachmarchi Biosphere Reserve?
Sal, Arjun, Cheetal, Teak, Leopard, Fern, Blue bull, Barking deer, Mango, Wolf.
13. What is the difference between 'flora' and 'fauna'?
14. What is meant by 'species'? Give any five examples of species.
15. What do you understand by 'endemic species'? Name two plant species and two animal species which are endemic to Pachmarchi Biosphere Reserve area.
16. Name two man-made causes of deforestation and two natural causes of deforestation.
17. What is a Wildlife Sanctuary? Name any two Wildlife Sanctuaries in India. Where are these Sanctuaries located?
18. Name any two Bird Sanctuaries in India. Where are these located?
19. What are the differences between a Biosphere Reserve and a Wildlife Sanctuary?
20. State the differences between a Wildlife Sanctuary and a Zoo.

LONG ANSWER QUESTIONS (5 MARKS EACH)

1. State the advantages of maintaining Red Data Book.
2. Explain 'Migration of birds' with examples.
3. What can be done to retain our 'green wealth' for the future generations?
4. Why should we save, reuse and recycle paper? Explain how, recycling of paper helps in conservation of forests.
5. With the help of a labelled diagram, describe the basic design of a Biosphere Reserve.
6. a) What is meant by the term 'Wildlife'? Why should forests and wildlife be conserved?
b) What are the various measures which can be taken to conserve forests and wildlife?
7. a) What are the various purposes for which the forest trees are cut?
b) What is the effect of deforestation on wild animals?
8. a) How does deforestation cause soil erosion?
b) Explain how, deforestation leads to frequent flooding of rivers.
9. a) Explain how, deforestation leads to reduced rainfall.
b) How does deforestation lead to global warming?
10. What is Biosphere Reserve? Name any two Biosphere Reserves of India. Where are these Biosphere Reserves located?

CELL STRUCTURE AND FUNCTIONS

VERY SHORT ANSWER QUESTIONS (ONE MARK EACH)

1. What is the basic similarity among all living organisms?
2. Name the scientist who coined the term 'cell'
3. Name the outermost layer of an animal cell
4. Which part of the cell carries out respiration?
5. What are the units of inheritance in living organisms?
6. Which is the largest floating body generally in the centre of cell?
7. What is the function of nucleus in cell?
8. What do chloroplasts contain?
9. What kind of cells is surrounded by a cell wall?
10. What sort of cells does not have a cell wall around them?
11. Which part of the plant cell releases energy from food?
12. What causes red colour in tomatoes?
13. Which type of cell has a large vacuole?
14. Which cell transmits messages between the brain and other parts of the body
15. Which cells in the human body can contract and relax?
16. Name the spindle shaped cells present in human body
17. Name one "single cell": which behaves as a whole organism. |
18. What controls the flow of substances in and out of the cell?
19. Which organism has the smallest cell?
20. Name a prokaryotic and eukaryotic cell.

SHORT ANSWER QUESTIONS (TWO/THREE MARKS EACH)

1. Why are plant and animal specimens stained with dyes before observing under microscope? Name a dye used for this purpose
2. What is a tissue? Give two examples of a tissue
3. What is an organ? Give examples
4. What is an organ system? Name two organ systems in plants and animals
5. Draw a neat diagram of any two human organs

6. What are the functions of the following organs
i) Heart ii) Brain iii) Roots iv) Leaves
7. What is the shape of Red blood cells in human blood? What functions do these cells perform?
8. State the differences between prokaryotic and eukaryotic cell
9. Why nerve cells are long and have branches?
10. State the cell theory.
11. What is the function of Mitochondria?
12. What are pseudopodia in Amoebae? What function do they perform?
13. Where are chromosomes found in cells? What are their functions?
14. What are genes? Where are they located?
15. What are plastids? Name the green plastid present in plant cell
16. What is the size of an ostrich egg? Is it a single cell or a group of cells?
17. What is the function of cell wall in a plant cell
18. Name two cells which are found in animals and two which are found in plants
19. Cells make up A; A make up B; B makes up C; C makes up an organism. What are A,B,C,D.
20. Name the cells that can be seen with naked eyes.

LONG ANSWER QUESTIONS (5 MARKS EACH)

1. What is cytoplasm/protoplasm? What are their functions?
2. What are unicellular and multicellular organisms? Give examples
3. Cells are different in shapes and sizes. Justify
4. Draw a neat labelled diagram of a plant cell.
5. Draw a neat labelled diagram of an animal cell.
6. Describe any five parts of a cell and add a note on their structure and function. Describe an activity to study a plant and an animal cell
7. What is the difference between an Amoebae cell and WBC? Diagrammatically represent these cells
8. State the differences between plant and animal cell
9. Make a sketch of human nerve cell. What function do they perform?
10. Make a sketch of human muscle cell. What function do they perform?

REPRODUCTION IN ANIMALS

VERY SHORT ANSWER QUESTIONS (ONE MARK EACH)

1. Which life process ensures that a plant or animal species will not disappear from the earth?
2. What is the name of the reproductive process which involves a single parent/two parents?
3. Name two animals which reproduce asexually/sexually
4. Give another term for a fertilised egg.
5. What is the other name of sex cells?
6. What are the organs in humans which produces the gametes?
7. What are the male and female gametes in humans called?
8. What do testes/ovaries in human male and female respectively produce?
9. In which female organ does the embryo get implanted?
10. Name the technique which is used to help a woman with blocked oviducts to have a baby
11. Expand IVF.
12. What type of fertilisation takes place in hen?
13. What term is used to denote the change from tadpole to frog?
14. What type of fission take place in Amoebae?
15. Name the asexual method of reproduction in Hydra and in Amoebae
16. Which organ of the human body passes sperms from man to a woman?
17. Name the technique which was used in producing 'Dolly' the sheep
18. Name the parent sheep of which Dolly was a clone.
19. What name is given to an animal which is an exact copy of its parents.
20. What is the change of caterpillar into an adult silk moth called?

SHORT ANSWER QUESTIONS (TWO/THREE MARKS EACH)

1. Why human beings do not undergo metamorphosis?
2. Differentiate sexual and asexual reproduction
3. Draw a neat labelled diagram of human sperm
4. Draw a neat labelled diagram of human egg
5. Differentiate internal and external fertilisation
6. Why are testes held outside the body in humans

7. What is the role of Urethra?
8. What is ovulation in humans?
9. What are the key steps in the process of reproduction in humans?
10. Give an account of the development of embryo to foetus
11. What are test tube babies?
12. Draw a labelled diagram of an hens egg
13. With a diagram represent the change during the formation of an adult frog
14. With a diagram represent the change during the formation of a silk moth
15. What are the advantages of cloning?
16. What is meant by an embryo? Can we identify the body features in an embryo?
17. Differentiate oviparous and viviparous animals with examples
18. Name two animals which undergo metamorphosis and two which do not undergo this process
19. What is a clone? Name one famous clone
20. What type of fertilisation takes place in the following?
Cow Frog Humans Fish Hen

LONG ANSWER QUESTIONS (5 MARKS EACH)

1. Explain with a help of a diagram the process of fertilisation of an egg by a sperm to form a zygote
2. Elucidate the steps in which sexual reproduction takes place in animals
3. Draw a net labelled diagram of Male reproductive system.
4. Draw a net labelled diagram of female reproductive system.
5. Explain in detail the human male reproductive system.
6. Explain in detail the human female reproductive system.
7. With a diagram explain fertilisation and embryo development in humans
8. Differentiate zygote, embryo and foetus
9. Explain the mode of reproduction in Amoeba and Hydra with a diagram.
10. Explain in detail how 'DOLLY'-the sheep was cloned.

REACHING THE AGE OF ADOLESCENCE

VERY SHORT ANSWER QUESTIONS (ONE MARK EACH)

1. What is the special name of the period of life between childhood and adulthood?
2. Name another term for adolescence
3. Which is the most conspicuous change in boys and girls during puberty?
4. What is the other name of voice box?
5. What is the common name of the projection at the front of throat in grown up boys?
6. Name the period time period in one's life when the brain has the greatest capacity of learning.
7. Name any two glands that act as both exocrine and endocrine glands.
8. What term is used for the secretion of ductless glands?
9. State one situation (other than menopause) when ovulation and menstruation stop.
10. Name the endocrine gland which controls the production of sex hormones "Testosterone" and "estrogen"
11. Name a natural balanced food for infants.
12. What is the legal age of marriage for boys and girls in our country?
13. Expand HIV,AIDS.
14. Name the substance which is needed by thyroid gland to make thyroxine hormone.
15. Name the hormone whose deficiency in body causes goitre.
16. Name the disease caused by the insufficient production of insulin.
17. Name the hormone which prepares our body for action to face emergency situations
18. Name the sex chromosomes in humans.
19. Name the hormone which is required for the metamorphosis of larvae into adult frogs.
20. Name the hormone which brings about metamorphosis in silk moth and changes caterpillar into adult silk moth.

SHORT ANSWER QUESTIONS (TWO/THREE MARKS EACH)

1. Define adolescence. State some of the changes which take place in boys and girls during adolescence.
2. What is puberty? In humans, who attains puberty at an earlier age?
3. Write two changes that happen during puberty to a) both boys and girls b) only boys c) only girls
4. What change in the voice of boys takes place when they reach puberty? What is the cause of this change?
5. Who is responsible for the sex of the unborn child: father or mother? Why?

6. What will be the sex of the child born if
 - a) X chromosome carrying sperm fuses with an egg cell carrying X chromosome
 - b) Y chromosome carrying sperm fuses with an egg cell carrying X chromosome
7. What are hormones? Where are hormones made in the human body?
8. Define i) Menarche ii) Menopause
9. What is menstruation? Explain
10. What are the various ways by which HIV can be transmitted?
11. Explain how the use of drugs helps in spreading AIDS disease?
12. State the harmful effects of taking drugs
13. Name one hormone secreted by pituitary gland. State the function of this hormone
14. Why are people advised to iodised salt in cooking food?
15. What is goitre? What causes goitre
16. What is the function of the hormone secreted by pancreas? What happens if this hormone is deficient?
17. Where are the following glands located in the human body?
 - i) Pituitary ii) Thyroid iii) Pancreas iv) Adrenal
18. What is acne? How are they formed?
19. Why is iron mineral needed by our body? Name some of the iron rich foods
20. State the various ways in which early marriage and motherhood is harmful to the girls

LONG ANSWER QUESTIONS (5 MARKS EACH)

1. What changes takes place in boys and girls during puberty
2. What are primary and secondary sexual characteristics? Give examples in each in both boys and girls
3. State the conditions necessary to maintain good reproductive health during adolescence.
4.
 - i) How can we calculate the percentage of full height of a boy or girl at a particular age? Explain with the help of a graph
 - ii) A nine year old boy is 120 cm tall.If the present of the boy is 75% of his full height calculate the full height which the boy will eventually reach at the end of growth period
5. When a human female reaches at a certain age the vaginal bleeding occurs for a few days after regular intervals of time
 - a) What is this process known as?
 - b) What is the human female said to have attained at this stage?
 - c) What does the onset of this process in human female signify?
 - d) At what particular event in the life of a human female this stops temporarily but starts again?

- e) What name is given to the event when this process stops permanently
6. A woman is in her reproductive phase of life. Even when the sperms are available at the time of release of a mature ovum by her ovary, fertilisation does not take place. Due to this, the woman is unable to bear a baby
 - a) What is most likely defect in the reproductive system of this woman?
 - b) Name the technique by which this woman can also have a baby
7. How is sex of a new born determined in humans? Explain with a representation
8. Give reasons why pituitary is called the master of glands?
9. What are the various types of food items which should be included in the diet of adolescents?
- 10 Explain with a diagram the changes in the uterine wall of human female if the egg is fertilised/not fertilised

11.FORCE AND PRESSURE

ONE MARK QUESTION:

1. What is the push or pull on an object known?
2. Name the unit of force.
3. Give one example where force changes the shape of an object.
4. Which action is involved in moving a wheel barrel? (push /pull/both)
5. Name any one contact force.
6. Name any one Noncontact force.
7. When a plastic pen is rubbed in dry hair it attracts tiny pieces of paper. Name the type of force involved in this process?
8. Which type of force is involved when a small device pulls iron nails from a distance?
9. Which force makes the rolling ball to stop on its own?
10. Which force can be used to gather iron pins scattered on the floor?
11. Name the force which always opposes motion?
12. What is a force acting on a unit area of a surface is called?
13. What type of pressure is involved in the filling of a liquid in a syringe?
14. How our body balances the atmospheric pressure acting on us?
15. Name any one device used in everyday life which work on the existence of atmospheric pressure.
16. What makes a balloon get inflated when air is filled in it?
17. Can liquid exert pressure upwards?
18. What force acting on an area of 0.5 m^2 will produce a pressure of 500 Pa ?
19. If the two forces applied to an object are equal and act in opposite directions the net force acting on the object will be _____.
20. Where will the atmospheric pressure be greater, at ground level or at the top of high mountain?

THREE MARKS QUESTION:

1. Define State of Motion of an object. What can change the state of motion of an object?
2. Give two examples where the application of force does not result in a change in the state of motion of the object.
3. Give two examples of situations where you push or pull to change the state of motion of objects.

4. Give two examples where the force can change the shape of an object.
5. What are the types of contact forces? Give examples.
6. Name some Noncontact forces. Give examples.
7. Define friction force. Give two examples.
8. Define electrostatic force. Give examples.
9. Explain scientifically why porters place a round piece of cloth on their head .
10. Define pressure. Give its Unit.
11. Explain two examples where you can infer that at least two objects must interact for a force to come into play.
12. Water comes out more slowly from an upstairs tap than from a similar tap downstairs.
13. Why does a sharp knife cut objects more effectively than a blunt knife?
14. Calculate the pressure when a force of 200N is exerted on an area of 10m^2 .
15. Explain with a simple activity to prove liquids exert equal pressure at the same depth.
16. Who invented the large atmospheric pressure and how? Explain shortly.
17. Explain the concept behind working of a syringe.
18. Define atmospheric pressure.
19. What will be the net force
 - i. If two forces applied on an object in the same direction.
 - ii. If two forces applied in the opposite direction of an object.
20. Name the type of forces involved in the following
 - i. A plastic comb rubbed in dry hair picking up tiny pieces of paper
 - ii. A sticker attached to steel almirah without glue.

FIVE MARKS QUESTION

1. i) What is meant by atmospheric pressure? What is the cause of atmospheric pressure?
 ii) Why are our bodies not crushed by the large pressure exerted by the atmosphere?
 iii) Explain why atmospheric pressure decreases as we go higher up above the earth surface.
2. Explain electrostatic force with an activity using straws.
3. What are contact forces? explain the types.
4. What is the state of motion? Explain with two examples of how a force can change the state of motion.
5. Explain atleast five changes a force can do on an object with one example for each.
6. Explain friction force with two examples.
7. Define pressure. Explain with an activity
 - I. Pressure exerted by water at the bottom of the container depends on the height of its coloumn.
 - II. Explain why the walls of a dam are thicker near the bottom.
8. a) Define pressure. what is the relation between pressure, force and area? State the unit in which pressure is measured.
 b) Explain why school bags are provided with wide straps to carry them.
9. Explain Otto von Guericke's experiment.

10. What is common in working of the devices such as a drinking straw , a syringe, a dropper and a rubber sucker?

12. FRICTION

ONE MARK

1. Name the force which always opposes motion.
2. What is the direction of force of friction acting on a moving object?
3. Name a device which is used to measure force acting on an object.
4. Rolling friction is much greater than sliding friction. Write (T/F)
5. Which force is responsible for the wearing out of car tyres?
6. Which type of friction comes into play when a book kept on cylindrical pencils is moved by pushing?
7. Name the force which helps things to move and stop.
8. Why is the slide in the park made polished?
9. Name the substance which is used to reduce friction.
10. Ball bearings reduce friction because they _____ rather than slide.
11. Friction can never be eliminated entirely. Write (T/F)
12. What is called frictional force exerted by fluids?
13. What is the shape of an aeroplane similar to?
14. What are provided in the soles of shoes to increase friction?
15. Objects which can move quickly through the water have a _____ shape.
16. Name the device which is attached to heavy luggage to move it easily by pulling.
17. State one way in which the friction between wheel and its axle can be reduced.
18. What causes wearing away the soles of your shoes?
19. Which friction comes into play when we try to move a stationary object?
20. Air will not exert friction on objects moving through it, since it is light and thin. Write (T/F)

THREE MARKS

1. What are the three types of Friction?
2. Why is it more difficult to walk on a wet marble floor?
3. Why do gymnasts apply a coarse substance to their hands?
4. What is the purpose of using ball bearings in machines?
5. Name any two machines in which ball bearings are used.
6. Why do we sprinkle fine powder on Carom board?
7. Explain why sliding friction is less than static friction.
8. Explain why
 - i. A pencil will write on paper but not on glass.
 - ii. Climbing a greasy pole is very difficult.
9. Why force of friction is greater if a rough surface is involved?
10. Why does a matchstick light when we strike it on a rough surface?
11. Which is easier to hold in hand? A Kulhar (earthen pot) or a Glass Tumbler. Why?
12. What is meant by lubrication? Why is it important?

13. Explain why, wheels are so useful?
14. Explain why, a speed boat has a streamlined shape?
15. Why the brake pads of vehicles have to be replaced quite often?
16. What is interlocking? How is it related to friction?
17. Give any two ways to increase friction.
18. Give any two ways to decrease friction.
19. Define drag.
20. Why do aeroplane are designed similar to a bird's shape?
21. How will you select slippers for your age old grandma to walk on your marble floored home? Why?

FIVE MARKS

1. Explain static, sliding and rolling friction.
2. Explain any five daily life scenarios where FRICTION IS A NECESSARY EVIL.
3. Explain any five methods of increasing Friction.
4. Explain any five methods of decreasing Friction
5. Define friction. What are the factors affecting friction? Explain with examples.
6. Explain in detail with suitable diagram that 'Friction can be reduced by applying lubricants to the rubbing surfaces'.
7. Explain about Fluid Friction.
8. i) What is the difference between static and sliding friction?
ii) Why luggage are fitted with rollers?
9. Imagine and give answer.
 - I. If there is no friction between our shoes and ground.
 - II. If there is no friction between tyres of vehicles and the road.
 - III. If there is no rough side in a matchbox.
 - IV. If there is no friction between brake pads and the discs.
10. i) Give examples to show that friction depends on the nature of two surfaces in contact.
ii) Give an example to show that friction depends on the force with which the two surfaces are pressed together.

13. SOUND

One Mark:

1. What should an object do to produce sound?
2. Name the vibrating part of Flute.
3. Who produces sound of higher pitch out of man and woman?
4. Name the sound producing organ in humans.
5. Which part of our body vibrates when we speak?
6. In which medium sound travels faster ? (Air / Iron)
7. Name the part of ear which vibrates when outside sound falls on it.
8. What is the unit of sound?
9. What is the unit of frequency?

10. What is the number of vibrations made per second is called?
11. How is the frequency of vibration and the pitch related?
12. Which factor determines the loudness of sound?
13. What name is given to the maximum displacement of a vibrating body from its central position?
14. Name the characteristic of sound which enables us to distinguish between a Man's voice and a Woman's voice.
15. If 125 oscillations are produced in 5 seconds, what is the frequency in Hertz?
16. Write the full form of db.
17. What is human voice box called?
18. What is called the time taken by an object to complete one oscillation?
19. What is the range of audible sound?
20. If the amplitude of vibrations are doubled then the loudness will become_____.
21. State any one observation in everyday life which shows that sound travels much more slower than light.

Three Marks :

1. What is the name of the strings in the human voice box which vibrate to produce sound?
 - a) What makes these strings vibrate?
2. How is sound produced by the human voice box?
3. Why are the voices of men, women and children different?
4. Name any three common musical instruments and mention its vibrating part.
5. Name one musical instrument each in which the sound is produced,
 - a. By vibrating a stretched string
 - b. By vibrating air enclosed in a tube
 - c. By vibrating a stretched membrane
 - d. By vibrating metal plates.
6. What is the frequency of a vibrating body whose time-period is 0.05 second?
7. Differentiate Audible and In audible sounds.
8. Differentiate Noise and Music.
9. What are the major causes of noise pollution?
10. What are the harms of Noise pollution?
11. What are the steps you would take to control noise pollution in your family function?
12. What is total and partial Hearing Impairment?
13. Define frequency and Time-period of vibrations.
14. Define the factor on which the loudness of sound depends.
15. Arrange the following sounds in the order of increasing frequency
 - Baby's voice
 - Man's voice
 - Woman's voice
16. What is a vibration (or an oscillation) ? Define 'amplitude' of vibration of an object.
17. Why sound cannot be heard on the moon? How do astronauts talk to one another on the surface of moon?

18. What can be done along the roads to reduce noise pollution caused by traffic from reaching the residents of the area?
19. Draw a labeled diagram of Larynx.

Five Marks :

1. Explain with an activity that sound needs a medium for propagation.
2. Explain about sound produced by humans with a neat diagram of voice box. Give an activity to show its working.
3. Draw a neat and labeled diagram of the human ear . Explain its working.
4. Write a short essay about noise pollution and how is it harmful to human beings?
5. Differentiate Noise and Music. Give some measures to limit Noise pollution.
6. Explain the three characteristics of sound.
7. How will you prove your friend that sound can travel through solids, liquids and gases?
8. What is the principle of working of Musical Instruments? Classify it and give atleast two examples each.
9. If you are the administrative head of a district, how will you make people aware of noise pollution ? Write 10 points.
10. Explain about low and high frequency sounds by drawing suitable wave diagrams. How is it related to pitch?

Lesson : Chemical effects of current

I) Very short answer type questions

- 1) Do liquids conduct electricity?
- 2) Name two liquids which conduct electricity and two liquids which do not conduct electricity.
- 3) Write the full form of LED.
- 4) How would you classify lemon juice- a good conductor or a poor conductor of electricity?
- 5) Vinegar is a sour liquid. State whether vinegar will conduct electricity or not.
- 6) What should be done to decompose water into hydrogen and oxygen?
- 7) Name the process in which a coating of one metal can be deposited on the surface of another metal by using current from a battery.
- 8) Name two metal objects which have a coating of another metal.
- 9) Name the most common application of chemical effect of electric current.
- 10) Name two metals which are usually electroplated on cheaper metals of making jewellery.
- 11) Which is the polluting waste generated by electroplating factories?
- 12) Give a list of five objects around you which are electroplated.
- 13) Name two metals which are purified by using the chemical effect of current.
- 14) Name the two metals which are produced by using the chemical effect of electric current.
- 15) Name one chemical compound which is produced by using the chemical effect of electric current.

- 16) Name one compound which is decomposed into hydrogen and oxygen by using the chemical effect of electric current.
- 17) State whether the following statements are true or false:
 - a) Rainwater is a non conductor of electricity.
 - b) A piece of fresh potato does not conduct electricity at all.
- 18) Name a device which glows even when a weak electric current passes through it.
- 19) Name the metal which is usually electroplated on car parts such as pumpers and bicycle handlebars made of steels.
- 20) Which metal is electroplated on iron for making 'cans' used for storing foods.

II) Short answer type questions

- 1) Which of the following liquids conduct electricity and which do not conduct electricity?
Lemon juice, Milk, Vinegar, Common salt solution, Sulphuric acid solution, Sugar solution, Distilled water, Honey, Sea water, Rain water.
- 2) Why is it touch dangerous to touch a working electrical appliance with wet hands?
- 3) What is the advantage of using LED in testing electrical conductivity of liquids?
- 4) Which effect of electric current is utilized for detecting the flow of current through the solution:
 - a) When is a torch bulb used?
 - b) When is a compass used?
- 5) Explain why, distilled water does not conduct electricity but tap water conducts electricity.
- 6) Distilled water does not conduct electricity. What substances can be added to distilled water in small amounts to make it a good conductor of electricity? Why?
- 7) Which of the two is the better conductor of electricity: Drinking water or sea water? Give reason for your answer.
- 8) Why does a brand new bicycle have shining handlebar and wheel rims? What will happen if these are accidentally scratched?
- 9) Is it safe for a electrician to carry out electrical repairs outdoors during heavy downpour? Explain.
- 10) Does pure water conduct electricity? If not, what can we do to make it conducting?
- 11) In case of a fire, before the fireman use the water hoses to throw water to douse fire, they shut off the electricity supply for the area. Explain why this is done.
- 12) a) Which effect of electric current is utilized when a thin layer of chromium metal is deposited on an iron tap? What is the process known as?
b) For electroplating copper on an iron object, which terminal of the battery is connected to the iron object? Also name the electrolyte you will use for this purpose.
- 13) Why is tin electroplated on iron to make cans used for storing food?
- 14) What do you mean by magnetic effect of electricity?
- 15) Why do we need magnetic compass to test the conduction of electric current?
- 16) Why do impurities dissolved in water increase its conductivity?
- 17) When an electric current is passed in an electrolytic cell, how can we make out that electrolysis is taking place?
- 18) Describe four uses of electrolysis.
- 19) Carbon electrodes are commonly used in electrolytic cells. Can you explain why?
- 20) Discuss why water is not used for extinguishing fires caused due to electrical faults.

III) Long answer type questions

- 1) a) What is meant by the chemical effect of electric current? Explain with the help of an example.
- b) Name any two applications of the chemical effect of electric current.
- c) What is electrolysis? Explain why, in the electrolysis of water, 'acidified water' is used.
- 2) a) Name three types of substances in which an electric current can produce a chemical effect.
- b) State some of the characteristics of chemical changes brought about by the chemical effect of electric current.
- c) Why does an electric bulb glow when a current passes through it?
- 3) a) What is meant by electroplating? What is the purpose of electroplating?
- b) Which properties of chromium metal make it suitable for electroplating it on car bumpers, bath tapes and bicycle handle bars etc., made of iron?
- 4) A strip of impure copper metal is given to you. Describe briefly how you will purify it by using the chemical effect of electric current. Draw a labeled diagram of the experimental set up used for this purpose.
- 5) With the help of a labeled diagram, describe briefly how an iron key can be electroplated with copper.
- 6) An electric current is passed through a conducting solution. List any three possible observations.
- 7) Explain the mechanism of glowing of bulb.
- 8) Explain the process of electrolysis with neat diagram.
- 9) Describe the effect of impurities on electrical conductivity of water.
- 10) List out the uses of electrolysis.

16.LIGHT

One mark

1. How many reflected rays can there be for a given single incident ray falling on a plane mirror?
2. An incident ray makes an angle 75° with the surface of a plane mirror. What will be the angle of reflection?
3. Where will be the ray of light which is incident normally on a plane mirror go after reflection?
4. What is the angle of incidence when a ray of light is incident normally on a plane mirror?
5. What is the angle of reflection when a ray of light is incident normally on a plane mirror?
6. What is the angle of incidence of a ray of light if the reflected ray is at an angle of 90° to the incident ray?
7. What type of reflection of light takes place from a rough surface?
8. Name the optical instrument in which reflected light is reflected again.
9. Diffuse reflection is due to incident rays which are not parallel. Write (T/F)
10. If an object is placed at a distance of 7.5cm from a plane mirror. How far would it be from its image?
11. Is the image of an object in a plane mirror Virtual or Real?
12. What will be the number of images formed when an object is placed between two parallel plane mirrors facing each other?
13. Name the device used to split white light into seven colours.
14. What type of lens (Convex/Concave) is present in the human eye?
15. What is the range of vision of a normal human eye?
16. How long does the Image of an object persist on the retina?
17. Diffuse reflection means the failure of the Laws of reflection of Light. Write (T/F)
18. Which part of human eye gives a distinct colour to it?
19. Who developed a system for visually challenged persons?

20. Name the cells in eye which are sensitive to bright light.
21. Name the cells in eye which are sensitive to dim light.

THREE MARKS

1. Define the angle of incidence and the angle of reflection.
2. How are we able to see the moon, though it is a non luminous object?
3. What difference is there in the way of light reflection by a wall and a mirror?
4. Write the characteristics of image formed by a plane mirror.
5. State the Laws of reflection of light.
6. Draw the ray diagram for
 - i) $i = 35^\circ$
 - ii) The angle between incident ray and the plane mirror is 15° .
7. What is periscope? How many mirrors are there in a periscope?
8. Explain how does hair dresser make you see hair at the back of your head after the hair cut.
9. How many images of a candle will be formed if it is placed between two plane mirrors which are inclined at 1) 120° 2) 45° .
10. How can you show that white light consists of seven colours?
11. What is meant by 'Dispersion of light'?
Name a natural phenomenon which is caused by it in the sky.
12. How does eye adjust itself to deal with light of varying intensity?
13. Explain why we cannot see our surroundings clearly when we enter a darkened cinema hall from bright sun shine but our vision improves after sometime.
14. Explain shortly about cells of retina.
15. What is Lateral Inversion? Explain with the help of an example.
16. What is meant by persistence of vision?
17. Name any five food items rich in vitamin A.
18. What is 'blind spot' in the eye?
19. Explain why an Owl can see well in the night whereas an Eagle can see well during day.
20. Explain shortly about Braille system of Dot patterns.

FIVE MARKS

1. Explain about luminous and non luminous objects
2. Explain with suitable diagrams the regular and diffused reflection of light.
3. (i) State laws of reflection of light.
(ii) Draw a ray diagram to show reflection of light from a plane mirror and label it.
4. Explain about image formation by a plane mirror with suitable diagram. State the characteristics of the image.
5. Draw the diagram of human eye. What are the functions of i) Iris ii) Eye lens iii) Ciliary Muscles iv) Retina v) Optic Nerve.
6. Explain the activity of 'Bird in cage'. Why is it performed?
7. i) Explain an activity to demonstrate blind spot.

- ii) Write any five points of how should we care of our eyes.
8. Explain about Braille system . Discuss about the achievements of visually challenged Indians.
9. What is the principle of working of Kaleidoscope? How will you make it of your own?

Stars and the Solar System

One Mark

1. Name the star which remains fixed at the same place in the sky in the north.
2. Name the unit which is used to express distances between the various celestial bodies.
3. Name the constellation which looks like a large ladle.
4. Give another name of Ursa Major Constellation.
5. In which season of the year is the constellation Orion visible in the sky?
6. Name the biggest planet of the solar system.
7. Name the smallest planet of the solar system.
8. Which force keeps the members of the solar system bound to the sun?
9. Name the planet having well developed system of rings around it?
10. Name the two planets which show phases like the moon
11. Which planet is known as red planet?
12. Where do asteroids found in between?
13. Name the star which can be located by using Ursa Major Constellation?
14. Pole Star is a member of the solar system (T/F).
15. Name the first artificial satellite launched by India?
16. Which celestial body is seen as a bright streak of light coming down the night sky?
17. Name two planets which can be seen as “Morning Star” and “Evening Star”.
18. The _____ are commonly called shooting stars?
19. Name the body, from which scientists can get valuable information about the materials of which various planets are made.
20. Name the star (after the sun) which is closest to earth.

Three Marks

1. What is meant by celestial objects? Name any three celestial objects.
2. Why does pole star appear to be stationing in the sky?
3. What is meant by constellation? Name any two.
4. What are planets? How many Planets are there in the solar system?
5. Which is the smallest planet in solar system? Why is it difficult to observe it?
6. Define light year. How much time does light take to reach us from the sun and from alpha centaury?
7. Why phases of the moon occur?
8. Write short note about Moon's surface?
9. Draw Orion and how to locate the nearest star to it?
10. Write short note on Brihaspati.
11. When was Halley's Comet appeared before? When will it expected to appear again?
12. What is a meteorite? How is it helpful for the scientists?
13. What is an artificial satellite? Name few of them which India launched.
14. What are the interesting facts about Saturn?

15. Differentiate inner planets and outer planets?
16. What are natural satellites? Which planets in solar system have their own satellites?
17. From when Pluto was no longer consider as a planet and why?
18. What is the consequences of earth's tilted axis?
19. When does a comet become visible to us? What is a superstition about comet?
20. What is the difference between Meteor and meteorite?
21. Do all the stars in the sky move? Explain.

Five Marks

1. What is a planet? Name all the planets of the solar system in the order of their increasing distance from the sun? Explain any two features about each planet.
2. Explain how you can locate the pole star with the help of Ursa Mayor Constellation?
3. Define Constellation. Name the four famous constellations with their diagram.
4. Draw the diagram of cassiopia and Leo Major constellation, to show the position of main stars in it. What are the number of main starts in both?
5. Draw a diagram of the Orion constellation to show the position of prominent starts in it. Explain how the position of Sirius star can be located.
6. Explain about Meteors and Meteorites. Mention about Meteor Showers.
7. Explain about Asteroids and comets.
8. Explain about the phases of the moon. What causes phases of the moon
9. What are Inner planets? Explain few features about each.
10. What are Outer planets? Explain few features about each.

Lesson : Pollution of Air and Water

I) Very short answer type questions

- 1) Name a gas present in the atmosphere which is mainly responsible for causing global warming.
- 2) Name two gases present in polluted air which can cause acid rain.
- 3) Name all the major pollutants of air.
- 4) Name air pollutants combines with the haemoglobin of our blood.
- 5) Name the various air pollutants discharged by motor vehicle exhausts.
- 6) Which gas in the upper atmosphere prevents UV radiations of the sun from reaching the earth?
- 7) Name any two diseases caused by drinking polluted water containing sewage.
- 8) Name any four toxic metals whose compounds are present in industrial wastes.
- 9) Name any two types of chemicals used in agriculture which cause water pollution.
- 10) The use of excessive fertilizers in the fields leads to the deficiency of important substances in water of a nearby lake. Name the substance.
- 11) Which gases are emitted from auto-exhaust?
- 12) Which is the major source of air pollution in metro cities?
- 13) Why should sewage not be dumped into the rivers?
- 14) What is potable water?
- 15) What are greenhouse gases?
- 16) Name four pollutants which cause water pollution.
- 17) What substances are commonly used in Indian villagers to purify water?
- 18) How do pesticides enter your body?
- 19) List some manmade sources of air pollution.
- 20) What is eutrophication?

II) Short answer type questions

- 1) What is Ganga action plan? When and why was it launched?
- 2) Name any four pollutants which cause water pollution. State any three ways of controlling water pollution.
- 3) How do industries cause water pollution?
- 4) How can you help reduce air pollution at the individual level?
- 5) Explain the differences between pure air and polluted air.
- 6) What is 'green house effect'? State its importance for us.
- 7) Name two green house gases? Which one of them produces the maximum greenhouse effect?
- 8) What depletes ozone layer in the atmosphere? What are the harmful effects of the depletion of ozone layer on us?
- 9) Name one source and one harmful effect of each of the following air pollutants:
a) Sulphur dioxide b) Nitrogen oxides c) Carbon mono oxide d) CFC
- 10) Explain why, even clear, transparent and odourless water may not always be safe for drinking.
- 11) Explain why, hot water released by power plants and industries is considered a pollutant.
- 12) Why does the increased level of nutrients in the lake water affect the survival of aquatic organisms?
- 13) Explain how, the use of pesticides in agriculture causes water pollution.
- 14) a) Describe the threat to Taj Mahal monument due to air pollution.
b) State any two ways of controlling air pollution.
- 15) a) What is potable water? Name any two methods to make water safe for drinking.
b) State two ways in which you can conserve water at home by preventing its wastage
- 16) List four sources of water pollution.
- 17) State the harmful effects of air pollution.
- 18) What is bioconcentration of pesticides?
- 19) What is SPM? Why SPM pollutant is considered very dangerous?
- 20) Write a short note on Ganga action plan

III) Long answer type questions

- 1) a) What is meant by water pollution? What are the different ways in which water gets polluted?
b) State the harmful effects of water pollution.
- 2) a) What is air ? Write the names of various constituents of air.
b) What is air pollution? What are the main sources of air pollution?
- 3) What is smog? How is smog formed? What are its harmful effects?
- 4) What is acid rain? How is acid rain caused? What are the harmful effects of acid rain?
- 5) What is global warming? What are the likely harmful effects of global warming?
- 6) Describe different methods of purifying water in the city.
- 7) Explain the various ways of purifying water and removing soluble and insoluble impurities.
- 8) Describe the different means of purification of water at home.
- 9) Discuss effects of air pollution on climate, plants and animals.
- 10) Plants can be grown in glasshouses in cold climatic conditions. How?