

SCIENCE CLASS 8

Project by Ravi Prakash Singh
RPS Tutorials

Crop Production and Management

- Q.1. What is agriculture?
- Q.2. What is farming?
- Q.3. What is a crop?
- Q.4. Name the different types of crops.
- Q.5. How can crops be classified?
- Q.6. The crops have been classified into which categories?
- Q.7. Describe Rabi crops.
- Q.8. Describe Kharif crops.
- Q.9. Which agricultural practices are followed for growing crops?
- Q.10. What is tilling or ploughing?
- Q.11. How is turning helpful?
- Q.12. Which are the main implements used for ploughing in the field?
- Q.13. What is a plough?
- Q.14. What is a hoe?
- Q.15. What is a cultivator?
- Q.16. What is sowing?
- Q.17. How can we check the quality of seeds?
- Q.18. What is transplantation?
- Q.19. Why is transplantation useful?
- Q.20. What are seedlings?
- Q.21. What is manure?
- Q.22. What is manuring?
- Q.23. What are fertilizers?
- Q.24. What are the harmful effects of fertilizers?
- Q.25. How is crop rotation helpful?
- Q.26. What is rhizobium?
- Q.27. How is irrigation helpful to crops?
- Q.28. What is irrigation?
- Q.29. Which are the sources of water for irrigation?
- Q.30. What are the traditional methods of irrigation?
- Q.31. What are the modern methods of irrigation?
- Q.32. Describe the sprinkler system?
- Q.33. Describe drip irrigation? How is it useful?
- Q.34. What is harvesting?
- Q.35. What are weeds? What is weeding?
- Q.36. Why is weeding necessary?
- Q.37. What are the methods of weeding?
- Q.38. What is a harrow or nanke?
- Q.39. Name some weedicides?
- Q.40. Name one insect used as a biological weeding agent.
- Q.41. How can we protect crops from stray animals?

- Q.42. Name some common pests?
- Q.43. Who are pests?
- Q.44. How is the chemical control of pests done?
- Q.45. What are pesticides?
- Q.46. What are insecticides?
- Q.47. What are fungicides?
- Q.48. What is winnowing?

Microorganisms

- Q.1. What are microorganisms? What is the other name for microorganisms?
- Q.2. Who is known as the father of bacteriology?
- Q.3. Who gave the germ theory of diseases?
- Q.4. Who designed several techniques of handling bacteria?
- Q.5. What are the characteristics of microorganisms?
- Q.6. What is the study of microorganisms called?
- Q.7. Where is bacteria found?
- Q.8. What is the size of a bacteria?
- Q.9. Bacteria is classified into how many types on the basis of shapes?
- Q.10. What is a fungi?
- Q.11. Name a unicellular fungus?
- Q.12. Name some multicellular fungi?
- Q.13. How do fungi obtain food?
- Q.14. How do fungi reproduce?
- Q.15. What is algae?
- Q.16. Name some unicellular algae?
- Q.17. Name some multicellular algae?
- Q.18. What is a protozoa?
- Q.19. Name some common protozoans?
- Q.20. How do protozoa move?
- Q.21. What is a virus?
- Q.22. Which diseases are caused by viruses?
- Q.23. What are virions?
- Q.24. How do viruses obtain their food?
- Q.25. What are the uses of microorganisms?
- Q.26. Which bacteria promotes the formation of curd?
- Q.27. What are the uses of bacteria?
- Q.28. What is the commercial use of microorganisms?
- Q.29. What is fermentation?
- Q.30. What are antibiotics?
- Q.31. Name some antibiotics?
- Q.32. Explain how a vaccine works?
- Q.33. Which diseases can be prevented by vaccination?
- Q.34. Who discovered the vaccine for smallpox?
- Q.35. What are communicable diseases?
- Q.36. Give examples of communicable diseases?
- Q.37. How do carriers of disease causing microbes work?
- Q.38. Which mosquito carries the parasite of malaria? What is the parasite called?
- Q.39. Name some common human diseases caused by microorganisms? State which kind of microorganisms cause these diseases?
- Q.40. State different diseases of microorganisms and their modes of transmission?

- Q.41. What are the preventive measures for tuberculosis, measles, chicken pox and polio?
- Q.42. What are the preventive measures for cholera and typhoid?
- Q.43. What is the preventive measure for Hepatitis A?
- Q.44. What is the preventive measure for malaria?
- Q.45. What is anthrax?
- Q.46. Name some common plant diseases and which microorganisms cause them?
- Q.47. What is food poisoning?
- Q.48. What is a mucor?
- Q.49. Give some methods of food preservation?
- Q.50. How is sun drying useful for food preservation?
- Q.51. What is salting?
- Q.52. Name three chemicals used for food preservation?
- Q.53. What is pasteurization? Who discovered it?

Synthetic Fibres and Plastics

- Q.1. What are fibres? What is made from fibres?
- Q.2. What are natural fibres?
- Q.3. What are synthetic fibres?
- Q.4. What is a polymer?
- Q.5. What is called a cellulosic polymer?
- Q.6. Which country probably discovered silk?
- Q.7. Which is the strongest natural fibre?
- Q.8. Describe silk?
- Q.9. Which material is known as artificial silk?
- Q.10. What are the properties of rayon fibre?
- Q.11. What are the uses of rayon?
- Q.12. Which was the world's first fully synthetic fibre?
- Q.13. Who developed nylon?
- Q.14. How was nylon produced in 1930?
- Q.15. What are the properties of nylon?
- Q.16. Why NYLON is named so?
- Q.17. What are the uses of Nylon?
- Q.18. What is polyester?
- Q.19. Name the different varieties of polyester?
- Q.20. What are the properties of polyester?
- Q.21. What are the uses of polyester?
- Q.22. Which fibre is combined with natural fibres and man made fibres to make wrinkle free fabrics?
- Q.23. What is the mixture of polyester and cotton called?
- Q.24. What is the mixture of polyester and wool called?
- Q.25. What is the full form of PET?
- Q.26. What is the use of PET?
- Q.27. Acrylic is made from what?
- Q.28. Acrylic is used as an alternative of what?
- Q.29. What are the advantages of synthetic fibres?
- Q.30. What are the disadvantages of synthetic fibres?
- Q.31. What is the difference between natural and synthetic fibres?
- Q.32. What are the disadvantages of plastics?
- Q.33. What are the advantages of plastics?
- Q.34. What are the properties of plastics?
- Q.35. What measures can be adopted to reduce plastic pollution?

Metals and Non Metals

- Q.1. What are the uses of copper, silver, gold, iron, aluminium and mercury?
- Q.2. What are elements?
- Q.3. How many elements are known till today?
- Q.4. How many elements occur naturally?
- Q.5. How are elements classified?
- Q.6. What are minerals?
- Q.7. What are ores?
- Q.8. Which non-metals are found in the free state?
- Q.9. Which gases occur only in a free state in nature?
- Q.10. State the physical properties of metals and non-metals?
- Q.11. What do you mean by lustrous?
- Q.12. What is ductility? Which metals are ductile?
- Q.13. What is malleability? Which metals are malleable?
- Q.14. State the chemical properties of metals and non metals?
- Q.15. What is electropositivity? Which is electropositive, metals or nonmetals?
- Q.16. What is electronegativity? Which is electronegative, metals or nonmetals?
- Q.17. Which compound is formed by iron with oxygen at high temperature?
- Q.18. Which compound is known as Philosopher's wool?
- Q.19. Which coloured flame is produced when zinc is strongly heated with oxygen?
- Q.20. What is produced by the reaction of non metals with oxygen?
- Q.21. Which coloured flame is produced when sodium metal is heated with oxygen?
- Q.22. Which compound is produced when sodium metal is heated with oxygen?
- Q.23. What happens when magnesium is heated with oxygen?
- Q.24. Which compound is produced when copper is heated with oxygen?
- Q.25. What is the nature of oxides of metals?
- Q.26. What is produced by the reaction of nonmetals with oxygen?
- Q.27. What is produced when sulphur burns in oxygen?
- Q.28. Which acid is produced when sulphur is dissolved in water?
- Q.29. Which compound is produced when phosphorus burns in oxygen?
- Q.30. Explain the reaction of metals with water?
- Q.31. What happens when sodium and potassium is reacted with water?
- Q.32. What happens when magnesium reacts with hot water or steam?
- Q.33. What happens when calcium reacts with water?
- Q.34. What happens when iron reacts with water?
- Q.35. What happens when zinc reacts with steam?
- Q.36. Does copper react with water?
- Q.37. Do non metals react with water?
- Q.38. What happens when metals react with dil.HCL and dil. H_2SO_4 ?
- Q.39. Do non metals react with dilute acids?
- Q.40. What happens when zinc reacts with sodium hydroxide?
- Q.41. What happens when tin reacts with sodium hydroxide?

- Q.42. What happens when aluminium reacts with sodium hydroxide and water?
- Q.43. What happens when aluminium reacts with sodium hydroxide?
- Q.44. What is a reactivity series or activity series? Write it.
- Q.45. What is the displacement reaction? Give an example.
- Q.46. What happens when zinc reacts with copper sulphate solution?
- Q.47. What happens when iron reacts with copper sulphate solution?
- Q.48. What happens when copper reacts with silver nitrate solution?
- Q.49. What happens to the blue solution of copper sulphate when zinc is added to it?
- Q.50. What happens to the blue solution of copper sulphate when iron is added to it?
- Q.51. What happens to a colourless solution of silver nitrate when copper is added to it?
- Q.52. What is rust? Explain the reaction of iron with moist air.
- Q.53. What happens when copper is reacted with moist air?
- Q.54. What are the uses of metals?
- Q.55. What are the uses of non metals?

Coal and Petroleum

- Q.1. What are natural resources?
- Q.2. What natural resources include?
- Q.3. Natural resources are classified into which two classes?
- Q.4. What are inexhaustible natural resources? Give examples.
- Q.5. What are exhaustible natural resources? Give examples.
- Q.6. Name three fossil fuels.
- Q.7. What is coal? Give its uses.
- Q.8. Where are coal mines located in India?
- Q.9. Explain the formation of coal?
- Q.10. What is carbonisation?
- Q.11. What are the constituents of coal?
- Q.12. Which are the three varieties of coal? Give their carbon content.
- Q.13. What is obtained by the destructive distillation of coal?
- Q.14. What is a coal tar? Which substances are manufactured with it?
- Q.15. What is the substitute of coal tar for metalling the roads?
- Q.16. What is a coke? What are its uses?
- Q.17. What are the constituents of coal gas?
- Q.18. What are the uses of coal gas?
- Q.19. Name two useful forms of carbon?
- Q.20. What is petroleum?
- Q.21. Name three fuels obtained from petroleum?
- Q.22. Explain the formation of petroleum?
- Q.23. Where was the first oil well drilled?
- Q.24. Where is crude oil or petroleum found in India?
- Q.25. Which are the various constituents of petroleum? Give their uses.
- Q.26. What is natural gas?
- Q.27. What is the full form of PNG?
- Q.28. Where is PNG supplied in India?
- Q.29. What is the full form of CNG?
- Q.30. What are the uses of natural gas?
- Q.31. What are the uses of CNG?
- Q.32. What makes CNG an ideal fuel?
- Q.33. Where are natural gas wells found in India?
- Q.34. What is the full form of PCRA?
- Q.35. Which tips are given by PCRA to save petrol/diesel?

Combustion and Flame

- Q.1. What is the scientific term for burning?
- Q.2. What is combustion?
- Q.3. Which are the two types of substances divided on the basis of combustion?
- Q.4. What are combustible substances? Give examples.
- Q.5. What are non-combustible substances? Give examples.
- Q.6. Which gas is called a supporter of combustion?
- Q.7. How is heat and light produced in the Sun?
- Q.8. What is the ignition temperature?
- Q.9. Which conditions are necessary for combustion to take place?
- Q.10. What are inflammable substances? Give examples.
- Q.11. How many types of combustion are there?
- Q.12. When does a spontaneous combustion occur?
- Q.13. Give examples of spontaneous combustion?
- Q.14. Where is sodium stored to prevent spontaneous combustion?
- Q.15. Where is potassium stored to prevent spontaneous combustion?
- Q.16. When does a rapid combustion occur? Give examples.
- Q.17. What is an explosion? Give examples.
- Q.18. How can fire be controlled?
- Q.19. What is the job of a fire extinguisher?
- Q.20. How does the fire brigade control the fire?
- Q.21. Where water cannot be used to extinguish fire?
- Q.22. Name two simplest fire extinguishers?
- Q.23. Describe a soda acid type fire extinguisher?
- Q.24. Give the reaction of sodium bicarbonate and sulphuric acid.
- Q.25. Describe a CO₂ fire extinguisher?
- Q.26. What are the colours of burning flame?
- Q.27. Where is the yellow flame found?
- Q.28. Where is the blue flame found?
- Q.29. What is a flame?
- Q.30. How are flames classified?
- Q.31. What is a luminous flame? Where is it found?
- Q.32. What is a non-luminous flame? Where is it found?
- Q.33. What is paraffin wax?
- Q.34. Which are the four zones of a candle flame? Explain the four zones?
- Q.35. What is fuel? Give examples?
- Q.36. Why does the wick of a candle not burn?
- Q.37. Give examples of solid fuels?
- Q.38. Give examples of liquid fuels?
- Q.39. Give examples of gaseous fuels?
- Q.40. What is the full form of LPG?
- Q.41. What is the full form of CNG?

- Q.42. What are the characteristics of good fuel?
- Q.43. Which fuels fulfill most of the criteria of a good or ideal fuel?
- Q.44. What is calorific value?
- Q.45. What are the harmful effects of burning fuels?
- Q.46. Which respiratory disease is caused by the unburnt carbon particles?
- Q.47. Which gas causes respiratory problems?
- Q.48. What is acid rain? How is it harmful?

Conservation of Plants and Animals

- Q.1. Mention the important functions of forest?
- Q.2. Which useful products are provided by forests?
- Q.3. Name the variety of habitats present in India.
- Q.4. Which region of India is designated as the two of the world's twenty five hotspots of global biodiversity?
- Q.5. What are the various factors leading to extinction of wild species and depletion of biodiversity?
- Q.6. What causes deforestation?
- Q.7. Who are exotic species?
- Q.8. Why is there a need for conservation of biodiversity?
- Q.9. Wildlife is needed for breeding programmes in which areas?
- Q.10. What is flora?
- Q.11. What is fauna?
- Q.12. What forms the flora of Himachal Pradesh?
- Q.13. What forms the flora of Rajasthan?
- Q.14. What forms the fauna of Rajasthan?
- Q.15. What are endemic species?
- Q.16. Which animal is endemic to Gir forests in Gujarat?
- Q.17. Himalayan weasel is endemic to which region?
- Q.18. Snow leopard is endemic to which region?
- Q.19. What is endemic to flora of Panchmarhi biosphere reserve?
- Q.20. What does conservation of biodiversity imply?
- Q.21. What are the man-made causes of deforestation?
- Q.22. What are the natural causes of deforestation?
- Q.23. What are the consequences of deforestation?
- Q.24. What measures should be taken for forest conservation and measurement?
- Q.25. What is afforestation?
- Q.26. What is wildlife?
- Q.27. What are the various factors responsible for wildlife destruction and depletion?
- Q.28. Which species are called threatened species?
- Q.29. What is the full form of IUCN?
- Q.30. The threatened species has been classified into how many categories by IUCN?
- Q.31. Which are endangered species? Give examples of it.
- Q.32. Which are vulnerable species? Give examples of it.
- Q.33. Which are rare species? Give examples of it.
- Q.34. What is a Red Data Book?
- Q.35. What is a sanctuary?
- Q.36. How many wildlife sanctuaries are there in India?
- Q.37. What is a biosphere reserve?
- Q.38. A biosphere reserve is divided into how many zones?
- Q.39. How many biosphere reserves are there in the world? How many are situated in India?

Q.40. Panchmarhi biosphere reserve consists of what?

Q.41. Name some projects started by the Government of India to save endangered species?

Q.42. Write a few lines about Project Tiger and Gir Lion Project.

Cell : Structure and Functions

- Q.1. What are cells?
- Q.2. Who are unicellular organisms? Give examples.
- Q.3. Who are multicellular organisms? Give examples.
- Q.4. Explain the discovery of cells.
- Q.5. Explain the structure of the cell.
- Q.6. What are the constituents of protoplasm?
- Q.7. Name the elements found in protoplasm.
- Q.8. Which compounds are formed by the combination of elements inside protoplasm?
- Q.9. What is a plasma membrane?
- Q.10. What are the functions of plasma membranes?
- Q.11. What is a cytoplasm?
- Q.12. Which structure is called the brain of the cell?
- Q.13. Name the parts of the nucleus.
- Q.14. What is a nuclear membrane?
- Q.15. What is nucleoplasm?
- Q.16. Which structures are present in the nucleoplasm?
- Q.17. What are chromosomes?
- Q.18. What are the functions of the nucleus?
- Q.19. Is the cell wall present in an animal cell?
- Q.20. Name the organelles and give their function?
- Q.21. What is a cell wall?
- Q.22. What is the function of a cell wall?
- Q.23. What are vacuoles?
- Q.24. What is mitochondria?
- Q.25. What is endoplasmic reticulum?
- Q.26. What are lysosomes?
- Q.27. What are centrioles?
- Q.28. What is the Golgi Complex?
- Q.29. Name three types of plastids found in plant cells.
- Q.30. What is the function of chloroplasts?
- Q.31. What is the function of chromoplast?
- Q.32. Where are leucoplasts present?
- Q.33. What are levioplasts?
- Q.34. What are genes?
- Q.35. Give the difference between a plant cell and an animal cell.
- Q.36. Draw the structure of an animal cell.
- Q.37. Draw the structure of a plant cell.

Reproduction in Animals

- Q.1. What is reproduction?
- Q.2. Why is reproduction important?
- Q.3. What are species?
- Q.4. How many modes of reproduction are there in animals?
- Q.5. What is asexual mode of reproduction?
- Q.6. What is the sexual mode of reproduction?
- Q.7. Name three animals which produce asexually?
- Q.8. What is binary fission? Which animals show this?
- Q.9. What is budding? Which animals show it?
- Q.10. Name the first cloned animal?
- Q.11. What is cloning?
- Q.12. What are the special sex cells produced by each parent in sexual reproduction called?
How are they known separately in each sex?
- Q.13. Who is known as unisexual?
- Q.14. Who is known as bisexual organisms? What is the other name for it?
- Q.15. What is fertilization?
- Q.16. Which is the first cell of the new organism?
- Q.17. What is external fertilization?
- Q.18. Where do we find external fertilization?
- Q.19. What is internal fertilization?
- Q.20. Where do we find internal fertilization?
- Q.21. Explain the development of embryos.
- Q.22. Where does the development of chick takes place?
- Q.23. Which kind of fertilization takes place in hens?
- Q.24. Explain how hens give birth to their babies?
- Q.25. Describe the male reproductive system.
- Q.26. What is the location of testes?
- Q.27. Which process leads to the production of gametes known as sperms in male?
- Q.28. Where is the sperm discharge in males?
- Q.29. What is Penis?
- Q.30. Describe the female reproductive system?
- Q.31. What is the location of ovaries in females?
- Q.32. How many eggs are released every month by either of the two ovaries?
- Q.33. What are the muscular tubes which join the uterus and the ovaries called?
- Q.34. What is the uterus?
- Q.35. What is vagina?
- Q.36. Explain the development of human embryos?
- Q.37. What is implantation?
- Q.38. What is a fetus?
- Q.39. What is in vitro fertilization?
- Q.40. Which baby is called a test tube baby?

- Q.41. Who are called viviparous animals? Give examples.
- Q.42. Who are called oviparous animals? Give examples.
- Q.43. Give examples where fertilization of egg takes place outside the body?
- Q.44. Give examples where fertilization of egg takes place inside the body?
- Q.45. Explain the life cycle of a frog.
- Q.46. What is metamorphosis?

Reaching the age of adolescence

- Q.1. Which are the four stages of growth?
- Q.2. What is puberty?
- Q.3. What is adolescence?
- Q.4. What is the age of puberty in boys and girls?
- Q.5. Which kind of changes are seen at puberty in females?
- Q.6. Which kind of changes are seen at puberty in males?
- Q.7. What is Adam's apple?
- Q.8. Which glands are called ductless glands?
- Q.9. What are the male gonads called? What does it secrete at puberty?
- Q.10. What are the female gonads called? What does it secrete at puberty?
- Q.11. What are secondary sexual characters?
- Q.12. Which are the secondary sexual characters in human male?
- Q.13. Which are the secondary sexual characters in females?
- Q.14. What are hormones?
- Q.15. Which are the male hormones and what changes does it produce?
- Q.16. Which are the female hormones and which changes does it produce?
- Q.17. How do we calculate the full height of any child or man?
- Q.18. Which gland is responsible for maturing of ova into ovaries and formation of sperms in the testes?
- Q.19. Which kind of mental, intellectual and emotional maturity is seen at puberty?
- Q.20. Name various endocrine glands and what is their location in the body?
- Q.21. Which gland is responsible for growth hormone?
- Q.22. Which gland is responsible for maintaining a steady level of glucose or sugar in the blood?
- Q.23. Which disease is caused by the lack of insulin?
- Q.24. Which gland is responsible for maintaining blood pressure and heart rate when the body experiences stress? Which hormone is secreted by it?
- Q.25. Which gland is responsible for controlling the rate at which food is oxidized by the cells to produce energy?
- Q.26. Which disease is caused by lack of thyroxine?
- Q.27. Which hormone controls the secondary sexual characteristics of male?
- Q.28. Which hormone controls the secondary sexual characteristics of female?
- Q.29. Which hormone maintains pregnancy?
- Q.30. When does adolescence become capable of reproduction?
- Q.31. Why does menstruation occur?
- Q.32. Describe the cycle of menstruation?
- Q.33. How many chromosomes are present in a human cell?
- Q.34. What are autosomes?
- Q.35. Describe sex chromosome.
- Q.36. How many chromosomes are present in the egg and the sperm?
- Q.37. How chromosomes decide the sex of a child?

- Q.38. Which element is needed to make hemoglobin?
- Q.39. Name some iron rich foods.
- Q.40. Which diet is called a balanced diet?
- Q.41. Which virus causes AIDS?
- Q.42. How is HIV transmitted from person to person?

Force and Pressure

- Q.1. What brings an object at rest to motion and an object in motion to rest?
- Q.2. What actions can be performed with the help of force?
- Q.3. What is a force?
- Q.4. What is the SI and CGS unit of force?
- Q.5. Which effects are produced by a force?
- Q.6. What are the states of motion?
- Q.7. Name the two types of forces.
- Q.8. What are contact forces? Give its examples.
- Q.9. What is muscular force? Give its examples.
- Q.10. Describe force of friction. Give its examples.
- Q.11. What is the direction of frictional force?
- Q.12. What are non-contact forces? Give its examples.
- Q.13. Describe magnetic force.
- Q.14. Describe electrostatic force.
- Q.15. How will you demonstrate magnetic force?
- Q.16. How will you demonstrate electrostatic force?
- Q.17. What is gravitational force? What is gravity?
- Q.18. What is pressure?
- Q.19. Pressure depends on what factors?
- Q.20. What is atmospheric pressure?

Friction

- Q.1. What is the force of friction?
- Q.2. Give examples of the force of friction.
- Q.3. Give an example of contact force.
- Q.4. What is the cause of the force of friction?
- Q.5. Which factors affect the force of friction?
- Q.6. Which factors do not affect friction?
- Q.7. What is static friction?
- Q.8. What is sliding friction?
- Q.9. Which is greater, static friction or sliding friction?
- Q.10. What is rolling friction?
- Q.11. 'Friction is necessary evil'. Comment on this statement.
- Q.12. Give an account of the advantages of friction.
- Q.13. Give an account of disadvantages of friction.
- Q.14. What are the two methods of increasing friction?
- Q.15. Give examples where friction is increased.
- Q.16. What are the methods to reduce friction?
- Q.17. What are lubricants?
- Q.18. What is done to reduce friction where oil can not be used as lubricant?
- Q.19. Can we reduce friction to zero?
- Q.20. What is drag?
- Q.21. On what factors does the frictional force on an object in a fluid depend?

Sound

- Q.1. Name different musical instruments.
- Q.2. Describe sound.
- Q.3. What is the sound?
- Q.4. How is sound produced?
- Q.5. What is the relation of amplitude to sound?
- Q.6. How is sound produced in humans?
- Q.7. How does frequency of sound depend on vocal cords?
- Q.8. How do birds produce sound?
- Q.9. Name the three families of musical instruments?
- Q.10. Describe stringed instruments. Give its examples.
- Q.11. Describe wind instruments. Give its examples.
- Q.12. Describe percussion instruments. Give its examples.
- Q.13. Describe ghana vadya. Give its examples.
- Q.14. Why does sound need a medium for propagation?
- Q.15. How will you show that sound travels in water?
- Q.16. How will you show that sound travels through solids?
- Q.17. How will you show that sound needs medium for propagation?
- Q.18. Describe the structure of the ear.
- Q.19. How do our ears function?
- Q.20. What is vibration?
- Q.21. Who discovered the simple pendulum and in which year?
- Q.22. Describe a simple pendulum.
- Q.23. What is oscillation?
- Q.24. What is the time period?
- Q.25. What is amplitude?
- Q.26. What is frequency?
- Q.27. What is loudness and how is it related to amplitude?
- Q.28. What is pitch and how is it related to frequency?
- Q.29. What is the range of frequency of audible sound to humans?
- Q.30. What is ultrasonic sound?
- Q.31. What is subsonic sound?
- Q.32. Which animal can hear sounds of frequencies higher than 20,000 Hz?
- Q.33. What is a musical sound?
- Q.34. What is a noise?
- Q.35. What is noise pollution? Name some sources of noise pollution.
- Q.36. What are the harms of noise pollution?
- Q.37. How can noise pollution be controlled or minimized?
- Q.38. What is hearing impairment?
- Q.39. What is the full form of ASL?

Chemical Effects of Electric Current

- Q.1. What is electric current?
- Q.2. Give three effects of electric current.
- Q.3. What are conductors?
- Q.4. Name three good metal conductors.
- Q.5. What are insulators?
- Q.6. Give three examples of insulators.
- Q.7. How to find out whether a substance is conductor or insulator?
- Q.8. What are electrolytes?
- Q.9. What is electric conduction in electrolytes called?
- Q.10. What is the full form of LED?
- Q.11. What can be added to distilled water to make it a conductor?
- Q.12. What is the heating effect of electric current?
- Q.13. What is the magnetic effect of electric current?
- Q.14. Which phenomenon did William Nicholson show with electric current?
- Q.15. What is the chemical effect of electric current?
- Q.16. Give an example of the chemical effect of electric current.
- Q.17. What is electrolysis?
- Q.18. What are the two categories of conductors?
- Q.19. What are metallic conductors? Give examples.
- Q.20. What are electronic conductors? Give examples.
- Q.21. What are electrolytic conductors? Give examples.
- Q.22. Do electrolytes conduct electricity in solid states?
- Q.23. What are non-electrolytes? Give examples.
- Q.24. What are cations and anions?
- Q.25. What is an electrode?
- Q.26. What are cathode and anode?
- Q.27. What is an electrolytic cell?
- Q.28. What is electroplating?
- Q.29. What is the use of electroplating?
- Q.30. Name some objects plated with chromium and why?
- Q.31. Why are tin cans plated with tin on iron?
- Q.32. How are bridges and automobiles prevented from corrosion and rusting?
- Q.33. Describe the electroplating process carried out with copper sulphate solution and copper plates?

Some Natural Phenomena

- Q.1. Who and when showed that lightning and the spark from our clothes are the same phenomena?
- Q.2. Which object attracts light objects when rubbed with fur?
- Q.3. What are charged objects? Give examples of charged objects.
- Q.4. How can we say that there are two kinds of charges?
- Q.5. The charges of the same kind _____, while charges of different kinds _____.
- Q.6. Describe equal and opposite charges.
- Q.7. What is the sure test of charge on a body?
- Q.8. How does the imbalance of electrons give charge to a body?
- Q.9. What are the different ways of charging a body?
- Q.10. Explain the process of electric discharge in clouds.
- Q.11. What are the do's and don'ts outside the house during a thunderstorm?
- Q.12. What are the do's and don'ts inside the house during a thunderstorm?
- Q.13. What is a lightning conductor? How does it work?
- Q.14. What is an earthquake?
- Q.15. Can earthquakes bring tsunamis?
- Q.16. What is seismology?
- Q.17. What is the Richter Scale?
- Q.18. What is the cause of an earthquake?
- Q.19. What are seismic or fault zones? Give examples of such areas?
- Q.20. What are the 'Quake Safe' measures?
- Q.21. Which steps should we take in the event of an earthquake if we are at home?
- Q.22. Which steps should we take in the event of an earthquake if we are outdoors?

Light

- Q.1. What makes things visible?
- Q.2. Name some luminous objects.
- Q.3. Name some non-luminous objects.
- Q.4. What is reflection of light?
- Q.5. Describe
 - a. Incident Ray
 - b. Reflected Ray
 - c. Point of Incidence
 - d. Normal
 - e. Angle of Incidence
 - f. Angle of Reflection
- Q.6. What are the laws of reflection?
- Q.7. What happens when the incident ray is normal to the plane of the mirror?
- Q.8. What happens when the angle of incidence is 45° ?
- Q.9. What is regular reflection? Give its other name.
- Q.10. What is irregular reflection? Give its other name.
- Q.11. What kind of image is formed by the plane mirror?
- Q.12. What are the characteristics of an image formed by a plane mirror?
- Q.13. What are multiple reflections?
- Q.14. If two mirrors make an angle θ between them and the object is placed in between the two mirrors and the number of images is n then what is the relation between n and θ ?
- Q.15. What is a periscope?
- Q.16. Periscope works on what principle?
- Q.17. What is a Kaleidoscope?
- Q.18. How does a Kaleidoscope work?
- Q.19. What is dispersion of light?
- Q.20. Name the seven colors found in the dispersion of light?
- Q.21. Who first observed dispersion?
- Q.22. Which colored light deviates the most?
- Q.23. Which colored light deviates the least?
- Q.24. Name a natural phenomenon showing dispersion.
- Q.25. What are eyes?
- Q.26. Explain the structure of the eye?
- Q.27. What is a blind spot in the eye?
- Q.28. The image persists on the retina for how many seconds?
- Q.29. How is an object perceived as moving by our eye?
- Q.30. What is myopia? What is the other name for it?
- Q.31. How can myopia be removed?
- Q.32. What is a hypermetropia? What is the other name for it?
- Q.33. How can hypermetropia be removed?
- Q.34. What is a cataract? How can it be cured?

Q.35. How can we take proper care of our eyes?

Q.36. What is a braille system?

Q.37. Who was Louis Braille?

Q.38. Describe the Braille System?

Q.39. Give an account of different personalities who achieved in different fields even being blind?

Stars and the Solar System

- Q.1. What are stars?
- Q.2. Which is the brightest object in the night sky?
- Q.3. How does the moon shine?
- Q.4. Name some celestial objects?
- Q.5. When is the whole disc of the moon visible?
- Q.6. What is the new moon?
- Q.7. What is the crescent moon?
- Q.8. Describe the phases of the moon?
- Q.9. Who were the first two men to land on the moon?
- Q.10. Describe the surface of the moon?
- Q.11. Name the nearest star to the Earth.
- Q.12. Why are the stars not visible in the daytime?
- Q.13. Which star does not change its position?
- Q.14. What is a constellation?
- Q.15. Describe Ursa Major and give its other names?
- Q.16. What is the direction of movement of constellations?
- Q.17. Describe Orion?
- Q.18. Describe cassiopeia?
- Q.19. Name the eight planets in order of distance from the sun?
- Q.20. How do planets shine?
- Q.21. What is the period of revolution?
- Q.22. What is a natural satellite?
- Q.23. What is the period of revolution of mercury?
- Q.24. One day of mercury is equivalent to how many days on Earth?
- Q.25. What is the period of revolution of Venus?
- Q.26. Which planet is known as morning star and evening star?
- Q.27. Which is the hottest planet of the solar system?
- Q.28. Which is the most shiny planet in the solar system?
- Q.29. Which is the nearest planet to the earth?
- Q.30. Which is Earth's twin?
- Q.31. Which planet rotates anticlockwise or from east to west?
- Q.32. Why is life possible on Earth?
- Q.33. What is the color of earth from space?
- Q.34. What is responsible for change in seasons on Earth?
- Q.35. What is the period of revolution of Mars?
- Q.36. What is the other name of Mars?
- Q.37. What is the reason for the redness of mars?
- Q.38. Which is the highest mountain on Mars?
- Q.39. Name one volcanic mountain on Mars.
- Q.40. Which is the biggest volcanic mountain of the solar system?
- Q.41. How many satellites does Mars have? Name them.
- Q.42. Name the biggest and the heaviest planet of the solar system.

- Q.43. What is the period of revolution of Jupiter?
- Q.44. What is the period of rotation of Jupiter?
- Q.45. How many satellites does Jupiter have?
- Q.46. Which is the biggest satellite of the solar system?
- Q.47. Which is the second biggest planet of the solar system?
- Q.48. What is the period of revolution of Saturn?
- Q.49. How many satellites does Saturn have?
- Q.50. Which is the biggest satellite of Saturn?
- Q.51. Which satellite of Saturn revolves in the opposite direction?
- Q.52. Which planet is known as the Globe of gases?
- Q.53. What is the period of revolution of Uranus?
- Q.54. What is the direction of the revolution of Uranus?
- Q.55. Which planet is called the Reclining Planet?
- Q.56. How many satellites does Uranus have?
- Q.57. Name the biggest and smallest satellite of Uranus.
- Q.58. Name the farthest planet from the sun.
- Q.59. What is the period of revolution of Neptune?
- Q.60. What is the color of Neptune?
- Q.61. How many satellites does Neptune have?
- Q.62. Name the biggest satellite of Neptune.
- Q.63. What are asteroids?
- Q.64. Where is the asteroid belt present?
- Q.65. What are comets?
- Q.66. Describe Halley's comet.
- Q.67. What are meteors?
- Q.68. What is a meteorite?
- Q.69. What are artificial satellites?
- Q.70. Name the areas where artificial satellites are useful.
- Q.71. What is the purpose of scientific satellites?
- Q.72. What is the purpose of weather satellites?
- Q.73. What are communication satellites?
- Q.74. What are the uses of navigational satellites?
- Q.75. What is the purpose of military satellites?
- Q.76. Which nation launched the first artificial satellite and when?
- Q.77. Name India's first indigenously built satellite?
- Q.78. Name the first experimental remote sensing satellite built by India?
- Q.79. Name the first satellite successfully launched by the indigenous launch vehicle SLV.
- Q.80. What is CARTOSAT-2B?
- Q.81. Name one geostationary satellite.
- Q.82. What is GHRCES?
- Q.83. What is INSAT-3B?

Pollution of Air and Water

- Q.1. What makes life possible on Earth?
- Q.2. Name two harmful gases.
- Q.3. What is air pollution?
- Q.4. What is water pollution?
- Q.5. Name some air pollutants.
- Q.6. What are the causes of air pollution?
- Q.7. How is automobile emissions a cause of air pollution?
- Q.8. How does lead enter the atmosphere?
- Q.9. Which pollutants are released by the combustion of coal?
- Q.10. Which gases are the cause of acid rain and smog?
- Q.11. What are the natural causes of air pollution?
- Q.12. What are air pollutants?
- Q.13. What is the full form of SPM?
- Q.14. What is SPM?
- Q.15. What are the two types of Particulate matter?
- Q.16. How are coarse particles formed?
- Q.17. How are fine particles formed?
- Q.18. What kind of diseases are caused by fine particulate matter?
- Q.19. How is carbon monoxide produced?
- Q.20. How is carbon monoxide harmful to human beings?
- Q.21. What is the full form of CFC?
- Q.22. What are the contents of CFC?
- Q.23. How is CFC harmful to human beings?
- Q.24. How is CFC harmful to the atmosphere?
- Q.25. Where is CFC used by humans?
- Q.26. When is CO₂ considered a pollutant?
- Q.27. How is CO₂ harmful to living organisms?
- Q.28. What is the cause of the greenhouse effect?
- Q.29. What are the causes of sulphur dioxide?
- Q.30. How is sulphur dioxide harmful to humans?
- Q.31. How is sulphur dioxide harmful to plants?
- Q.32. Name the major reason for acid rain.
- Q.33. How does nitric oxide enter the atmosphere? How does it affect the air?
- Q.34. How is ozone harmful to humans?
- Q.35. How is lead harmful to humans?
- Q.36. What is acid rain?
- Q.37. What are the sources of gases which cause acid rain?
- Q.38. Which damages are caused by acid rain?
- Q.39. Describe the project 'Save Taj'.
- Q.40. What is the greenhouse effect?
- Q.41. Which gases are the greenhouse gases?

- Q.42. What are the harmful results of the Greenhouse Effect?
- Q.43. What are the useful applications of Greenhouse?
- Q.44. What are Water Pollutants?
- Q.45. What are the sources of water pollution?
- Q.46. What is domestic sewage? How is it harmful to us?
- Q.47. How is agricultural runoff a cause of water pollution?
- Q.48. What is eutrophication?
- Q.49. What are Industrial Effluents?
- Q.50. Which metals are present in the effluents of industries?
- Q.51. How do industrial effluents affect the body of a person?
- Q.52. What is thermal pollution?
- Q.53. Which diseases are caused by microbial pollutants?
- Q.54. What are the steps to prevent water pollution?
- Q.55. What is potable water?
- Q.56. What are the properties of potable water?
- Q.57. Why should the water be purified?
- Q.58. What is chlorination?
- Q.59. How can water be purified at home?
- Q.60. Give an account of how Kanpur is polluting Ganga?