List of chapters covered in this sample paper

1. Reproduction in animals.
2. Reaching the age of adolescence.
3. Force and pressure.
4. Friction.
5. Sound.
6. Chemical effects of electric current.
7. Some natural phenomena.
8. Light.
9. Stars and solar system.
10. Pollution of air and water.
SECTION- A (PHYSICS)

I. Choose the correct option. (1x4=4)

1. What will be the charge of a metal cap, when a positive rod is brought near the end of the metal cap of an electroscope?
   a) Positive.
   b) Negative.
   c) Neutral.
   d) None of these.

2. Which of the following is not a planet of the solar system?
   a) Mercury.
   b) Earth.
   c) Sirius.
   d) Saturn.

3. A friction can be defined as ________________.
   a) Magnetic force.
   b) Non contact force.
   c) Non magnetic force.
   d) Contact force.

4. What type of image is formed by a plane mirror?
   a) Real.
   b) Inverted.
   c) Magnified.
   d) Laterally inverted.

II. Give one word answers for the following. (1x4=4)

1. Where are asteroids found in the solar system?
2. Name the scientist who showed and proved that the lightening and the spark produced from our clothes are the same?
3. Name the force which opposes motion?
4. Name the unit used to measure the loudness of sound?

III. Give reasons for the following. (2x2=4)

1. Why do the charged balloons attaches to the wall?
2. Explain why lightning is seen earlier and thunder is heard later?

IV. Answer the following questions. (2x2=4)

1. Define pressure, force and friction with their SI units?
2. Give difference between the following terms?
   i. Regular reflection & Diffused reflection.
   ii. Noise and sound.

V. Answer the following questions. (3x3=9)

1. Define the following terms:
   i. Solar system.
   ii. Constellation with examples.
   iii. Satellites with examples.
2. How is sound produced?
3. Calculate the time period of the vibration if mosquito produces the sound by vibrating its wings at an average rate of 500 vibrations per second?

VI. Answer the following questions. (5)

1. Define atmospheric pressure and name the device used to measure the atmospheric pressure?
2. List out the sources of noise pollution around your city?
3. Explain in detail the functioning of larynx with neat labeled diagram?

SECTION- B (CHEMISTRY)

VII. Choose the correct option. (1x4=4)

1. Which of the following is greenhouse gas?
   a) Nitrogen.
   b) Carbon dioxide.
   c) Sulphur dioxide.
   d) None of the above.

2. Smog is mixture of ________.
   a) Sulphur dioxide and nitrogen dioxide.
   b) Smoke and fog.
   c) Oxygen and nitrogen.
   d) Dust and fog?

3. The rise in Earth’s temperature is called as ________.
   a) Pollution
   b) Global warming.
   c) Acid rain.
   d) All the above.

4. In which place the Ozone hole is largest.
   a) India.
   b) USA.
   c) Antarctica.
   d) Europe.
VIII. Give one word answers for the following. (1x4=4)

1. Name the compound that causes acid rain?
2. What is the percentage of oxygen present in air?
3. Which gas is produced by incomplete combustion of fossil fuels?
4. Which gas is dangerous to our health?

IX. Answer the following questions. (2x4=8)

1. Define air pollution?
2. List out the different ways in which air gets contaminated?
3. How does water pollution affects the life of aquatic animals?
4. What do you mean by marble cancer?

X. Answer the following questions. (3x3=9)

1. Explain the effects of air pollution?
2. Explain how can we reduce water pollution?
3. Describe the effects of pollution caused to the beauty of the Taj Mahal?

XI. Answer the following questions. (5)

1. Define water pollution? Explain the causes of water pollution? (2)
2. What is Van Mahotsav and when it is celebrated? (1)
3. Describe in brief about global warming? (2)

SECTION C (BIOLOGY)

XII. Choose the correct option. (1x4=4)

1. The total number of nuclei present in a zygote is ________.
   a) One.
   b) Two.
   c) Three.
   d) Zero.

2. Name the gland that secretes progesterone hormones?
   a) Pituitary.
   b) Ovaries.
   c) Thyroid.
   d) Pancreas.

3. Reproductive age in women starts when their ________.
   a) Height increases.
   b) Weight increases.
   c) Menstruation starts.
   d) Breasts start developing.
4. Which of the following hormone is responsible for the development of moustaches in males?
   a) Testosterone.
   b) Estrogen.
   c) Progesterone.
   d) Thyroxin.

XIII. Give one word answers for the following. (1x4=4)

1. Name the gland that secretes estrogen hormones?
2. What is the total number of chromosomes present in the nuclei of the cells?
3. Which male organ produces gamete?
4. Which type of fertilization takes place in mammals?

XIV. Give reason for the following. (2x4=8)

1. Why the reproduction is considered as an important process in all living organisms?
2. Why Platypus and Echidna are not considered as oviparous animals?
3. Why the sex hormones regulate secondary sexual characters?
4. Why there is sudden changes observed in the height, weight and other body features in an individual?

XV. Answer the following questions. (14)

1. Explain briefly about the process of fertilization in human beings? (3)
2. List out the common change that occurs during puberty? (3)
3. Give difference between the following terms:
   i. Zygote and embryo.
   ii. Sexual reproduction and asexual reproduction.
4. Define the following terms:
   i. Asexual reproduction.
   ii. Adam’s apple.
   iii. Adolescence.
   iv. Viviparous animals.
   v. Metamorphosis.
   vi. Hermaphrodites.
4. Define the following terms:
   i. External fertilization with examples.
   ii. Hormones with examples.
   iii. Binary Fission.
   iv. Puberty.