



Manipur

SAMPLE PAPER

Class 10



PROPOSED SAMPLE QUESTION SCIENCE

Full Marks: **80**

Pass Marks: **20**

Time: Three hours

General Instructions :

- This question paper carries three sections : A,B and C. Attempt all questions.
- All the questions are to be written in separate answer khatta accordingly.
- Questions carrying 1 mark may be written in one sentence.
- Questions carrying 2 marks may be written in about 30 words.
- Questions carrying 3 marks may be written in about 40 words.
- Questions carrying 5 marks may be written in about 60 words.

SECTION A (CHEMISTRY)

Q. No. 1-4 are very short answer type and each question carries 1 mark.

- Write the formula of an acid that can form acid salt with Calcium Hydroxide. 1
- What are Combination reactions ? 1
- Define water of Crystallization. 1
- Write the structural formula of saturated isomer of 2-butene. 1

Q. No. 5-8 are short answer type and each question carries 2 marks.

- Sodium atom loses an electron to form Sodium ion. Identify the compound formed by Sodium ion and another ion having same number of electrons. Predict the solubility of the compound in water. 2
- Draw a labelled diagram of an experimental setup of Froth Floatation technique of metal ore concentration. 2
- The photochemical decomposition of silver chloride is a redox reaction. Justify it . 2
- Give the common name of sodium hydrogen carbonate . What happens when it is subjected to calcinations? 2

Q. No 9-11 are short Answer type and each question carries 3 marks .

- Two solutions, Hydrochloric acid solution and sodium hydroxide solution are found to have P^H values of 6 and 8 respectively. How will the P^H values change when the solutions are diluted with water ? Give reason. 3
- Describe with an example how less reactive metals are extracted. 3
- What is a homologous series ? Write the structural formula of the first two homologues of alkynes. 3

Q. No. 12 is Long Answer type and it carries 5 marks.

12. Element "A" belongs to 3rd period and group 1 of the Modern Periodic table.
- What is the atomic number of the element ?
 - Which element in the same period has same valency as element A ?
 - Which element in the group is not metal?
 - Which metal in the group is least reactive ?
 - Write the formula of the compound formed by "A" with the most reactive non metal of the period. 5

SECTION B (PHYSICS)

1. State Ohm's law. 1
2. Consider a current flows along a horizontal copper wire in south to north direction. What will be the direction of magnetic field at a point directly above it ? 1
3. Who discovered electromagnetic induction. 1
4. Define pole of a spherical mirror. 1
5. A $10\ \Omega$ thick wire stretched so that its length becomes three times. Assuming that there is no change in its density on stretching, Calculate the resistance of the new wire. 2
6. State Fleming's Right Hand rule. 2
7. What are induced current and e.m.f. ? 1=1=2
8. Draw the image formation ray diagram of a point object placed at the focus of a concave lens. 2
9. Give any three properties of a magnet. 3
10. Write any three different points between a bar magnet and an electromagnet. 3
11. An object is placed at a distance of 10 cm from a convex lens of focal length 15 cm. Find (i)Position of the image (ii)nature of the image (iii)magnification. 1+1+1=3
12. If R_1, R_2, R_3 and R_4 are connected in parallel, obtain the relation of their resultant resistance (R_p). Three resistors of resistances $2\ \Omega$, $4\ \Omega$, and $6\ \Omega$ are connected in parallel across a battery of 12 V. Calculate the total current flowing through the combination. 3+2=5

SECTION C (BIOLOGY)

1. What is reflex action ? 1
2. Define food chain. 1
3. Write the full form of CNC. 1
4. Why are human regarded as omnivores ? 1
5. What is organic evolution ? Who proposed the theory of natural selection ? 2
6. How non bio degradable substances are degraded in nature ? 2
7. How does our body respond when adrenaline is secreted into the blood? 2
8. Construction of big dams is a key factor for the change in the regional environment. Still, India has large number of such dams. Write two points to justify in Indian scenario. 2
9. Draw a neat diagram of human nephron and label Bowman's capsules and tubular part of nephron. 2
10. Describe photosynthesis in three steps. 3
11. Why did Mendel selected garden Pea plant for his experiment ? Explain in three points. 3
12. Identify three major consequences of deforestation. 3
13. Give five points of difference between asexual and sexual reproduction. 5

OR

Explain three types of asexual and two types of two types of sexual reproduction in lower plants by giving examples.
