

Q.27 How is copper extracted from its sulphide ore ? Explain the various steps supported by chemical equations. Draw labelled diagram for the electrolytic refining of copper.

OR

(a) Name two metals which are obtained from their ores by simple heating.

(b) Differentiate between calcination and roasting, taking examples of zinc ores.

Q.28 Decomposition reactions require energy either in the form of heat or light or electricity for breaking down the reactants. Write one equation each for decomposition reactions where energy is supplied in the form of heat, light and electricity.

OR

You might have noted that when copper powder is heated in a china dish, the reddish brown surface of copper powder becomes coated with black substance.

(a) Name the black substance which is formed in the given case.

(b) Why this black substance is formed?

(c) Write the chemical equation for the reaction that takes place.

Q.29 List three techniques that have been developed to prevent pregnancy. Which one of these techniques is not meant for males ? How does the use of these techniques have a direct impact on the health and prosperity of a family ?

OR

Write one main difference between asexual and sexual mode of reproduction. Which species is likely to have comparatively better chances of survival – the one reproducing asexually or the one reproducing sexually ? Give reason to justify your answer.

Q.30 Name the hormones secreted by the following endocrine glands and specify one function of each :

(a) Thyroid

(b) Pituitary

(c) Pancreas

OR

Why does the flow of signals in a synapse from axonal end of one neuron to dendritic end of another neuron take place but not in the reverse direction? Explain.

Q.31 With the help of Mendel's experiments show that:

(a) traits may be dominant or recessive, and

(b) traits are inherited independently.

OR

(a) Write down the number of chromosomes found in humans and draw the flow chart which predict the chances of getting baby boy or girl.

(b) Name any two organisms in which sex is not determined genetically.

Q.32. Give reasons for the following:

(a) Aquatic creatures have high breathing rate as compare to terrestrial organisms.

(b) Bile does not contain any enzyme but it is essential for digestion.

(c) Water enter continuously into the root xylem.

OR

(a) Explain the process of nutrition in Amoeba with the help of diagram.

(b) Write down the balanced chemical equation of Photosynthesis and events of photosynthesis in proper sequence.

Q.33 State the cause of dispersion of white light by a glass prism. How did Newton, using two identical glass prisms, show that white light is made of seven colours ? Draw a ray diagram to show the path of a narrow beam of white light, through a combination of two identical prisms