

Model Question Paper
Periodic Classification of Elements (C) - Part I

10th Standard

Science

Reg.No. :

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I. Answer all the questions.

II. Use blue pen only.

Time : 01:00:00 Hrs

Total Marks : 35

5 x 1 = 5

Part-A

- 1) In the modern periodic table, periods and groups are given. Periods and Groups indicate _____
(a) Rows and Columns (b) Columns and Rows
- 2) An element which is an essential constituent of all organic compounds belongs to the _____ group.
(a) 14th group (b) 15th group
- 3) Ore is used for the extraction of metals profitably. Bauxite is used to extract aluminium, it can be termed as _____.
(a) ore (b) mineral
- 4) Gold does not occur in the combined form. It does not react with air or water. It is in the _____ state.
(a) native (b) combined
- 5) The third period contains elements. Out of these elements, How many elements are non-metals?
(a) 8 (b) 5

Part-B

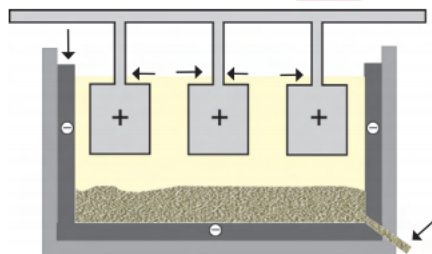
7 x 2 = 14

- 6) Assertion: A greenish layer appears on copper vessels, if left uncleaned. Reason: It is due to the formation of a layer of basic copper carbonate Give the correct option: i) Assertion and reason are correct and relevant to each other. ii) Assertion is true but reason is not relevant to the assertion.
- 7) A process employed for the concentration of sulphide ore is _____. (froth floatation / gravity separation)
- 8) Coating the surface of iron with other metal prevents it from rusting. If it is coated with a thin layer of zinc, it is called _____. (galvanization / painting / cathodic protection)
- 9) Any metal mixed with mercury is called an amalgam. The amalgam used for dental filling is _____. (Ag - Sn amalgam / Cu - Sn amalgam)
- 10) Assertion: In thermite welding, aluminium powder and Fe_2O_3 are used. Reason: Aluminium powder is a strong reducing agent. Does the reason satisfy the assertion?
- 11) Can the rusting of iron nails occur in distilled water? Justify your answer.
- 12) Iron reacts with con. HCl and con. H_2SO_4 , but it does not react with con. HNO_3 . Justify your answer with proper reasons.

Part-C

3 x 5 = 15

- 13) Redraw and label the diagram. Then answer the following questions.



- i) What process does the diagram represent? ii) Why does the graphite rod need to be replaced often? iii) Give reason for the addition of cryolite to electrolyte. iv) Write the overall equation of this process
- 14) A reddish brown metal A when exposed to moist air forms a green layer B. When A is heated at different temperatures in the presence of O_2 , it forms two types of oxides - C (black) and D (red). Identify A, B, C, D and write the balanced equation.
- 15) A silvery white metal on treatment with NaOH and HCl liberates H_2 gas to form B and C respectively. The metal A will not react with acid D due to the formation of a passive film on the surface. Hence it is used for transporting acid D. Identify A, B, C, D and support your answer with balanced equations. Discuss in groups: 1. Why cannot aluminium metal be obtained by the reduction of aluminium oxide with coke?
