

E 9755

(Pages : 2)

Reg. No.....

Name.....

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, NOVEMBER 2014

First Semester

Vocational Course – INDUSTRIAL ASPECTS OF INORGANIC AND ORGANIC CHEMISTRY

(For B.Sc. Chemistry Model II)

[2013 Admission onwards]

Time : Three Hours

Maximum : 60 Marks

Part A

Answer all questions.

Each question carries 1 mark.

1. Mica is _____.
2. Formula of Copper Glance is _____.
3. Graphite is used as a lubricant, it is due to its _____.
4. Purest form of Iron is _____.
5. TEL is added in petrol as a _____ agent.
6. Main compound in Natural gas is _____.
7. Froath floatation process is used for the purification of _____ type of ores.
8. Chemical formula of cellulose is _____.

(8 × 1 = 8)

Part B

Answer any six questions.

Each question carries 2 marks.

9. What are dimensionless groups? Explain.
10. Discuss the principles involved in the extraction of Magnesium from Magnesita.
11. What is clay? What are the different types of clays? Explain.
12. Explain the following related to petroleum industry :
 - (a) Aromatization.
 - (b) Isomerization.
13. What do you mean by Dimensional Analysis?

Turn over

14. How is Furfural synthesized?
15. What is starch? How do starch differs from Cellulose chemically?
16. What are the main fractions obtained by the distillation of coal? Explain.
17. How will you extract Aluminium from its ore?
18. Explain Hydrometallurgy.

(6 × 2 = 12)

Part C

Answer any **four** questions.

Each question carries 4 marks.

19. Explain the working of (i) Plunger pumps ; and (ii) Self priming pumps.
20. What are the different types of coal? Give its structure and main properties.
21. Discuss the methods used for the extraction of Chromium from its ore.
22. Write a short note on Refining of Petroleum.
23. What are silicates? Give a short account of different types of silicates, its structures and applications.
24. Write a short notes on Zeolites.

(4 × 4 = 16)

Part D

Answer any **two** questions.

Each question carries 12 marks.

25. Give a short account of methods used for refining of metals with suitable examples.
26. Write a short note on starch and cellulose and industrially important materials derived from them.
27. Give a short account of Pipes and Valves used in transportation of fluids.
28. Explain various unit operations in Chemical Engineering.

(2 × 12 = 24)