TB146150A **Reg. No…….**

Name……....

B. Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2017

SEMESTER VI - CHEMISTRY

CHE6AIC – APPLIED INORGANIC CHEMISTRY

Time: Three Hours **Maximum Marks: 60**

PART A

I. Answer all questions. Each question carries 1 mark.

1. Define the term solubility product.
2. The chief ore of titanium.
3. Control rods used in the thermal reactions.
4. What is meant by ultra phosphates?
5. Define nano materials.
6. What is the product obtained by the hydrolysis of Al_4C_3 ?
7. Give the auto ionisation reaction of liquid SO_2.
8. Give two examples of pseudo halogens.

(8x1 = 8)

PART B

II. Answer any six questions. Each question carries 2 marks.

9. Nickel precipitated as Nickel sulphide, why it is not precipitated in the second group?
10. Distinguish between roasting and calcination.
11. Basic principles behind the carbon dating.
12. What is meant by carbon nano tubes?
13. What are intercalation compounds of graphite with metals?
14. Give some applications of zeolites.
15. Mention the important physical and chemical properties of sodium in liquid ammonia.
16. Give the structure of B_5H_9.
17. What is the difference between one dimensional and two dimensional paper Chromatography?
18. How will you find out the different amino acids in a mixture?

(6x2 =12)

PART C

III. Answer any four questions. Each question carries 4 marks

19. Explain the method for the refining of silicon and germanium and what are the significance?
20. Discuss the structure and properties of (SN)n.
21. What is ceramics? Discuss the important properties of ceramics.

22. Give the evidences of the presences of I^{+} and I^{3+}.
23. Explain the thermogram of calcium oxalate monohydrate.
24. Define the following term with example (a) Eluent (b) Elution (c) Eluate.

(4x4 = 16)

PART D

IV. Answer any two questions. Each question carries 12 marks.

25. Discuss the thermodynamics of the oxidation of metal to metal oxide as the extraction.
26. (a) Discuss the medical applications of radioactive isotopes.
    (b) Briefly describe preparation properties and uses of silicone rubber elastomers.
27. Explain the structure and bonding of diborane.
28. Discuss the principle and applications of ion exchange chromatography.

(2x12 = 24)