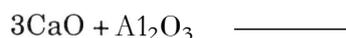




10. Complete the following equation :



11. What is the substance added for the setting of cement ?

12. What is the main component in crown glass ?

(12 x 4 = 3 weightage)

II. Answer all the *nine* questions. Each question carries 1 weightage.

13. What do you mean by a **flexidentate ligand** ?

14. Write the IUPAC name of  $\text{K}_4[\text{Fe}(\text{CN})_6]$ .

15. Write an example of a complex showing  $d^2 sp^1$  hybridization.

16. What is Wilkinson's catalyst ?

17. What is haemoglobin ?

18. Describe **cytochromes**.

19. How will you prepare gallium nitrate **nanowire** ?

20. Write the preparation of **ZrS<sub>2</sub> nanotubes**.

21. What is pyrex glass ?

(9 x 1 = 9 weightage)

III. Answer any *five* questions. Each question carries 2 weightage.

22. On the basis of **VB** theory, explain the hybridised state of  $\text{Ni}(\text{CO})_4$ .

23. Draw and explain the crystal field splitting in tetrahedral complexes.

24. Explain the use of **organosilicon** compounds in medicine.

25. Write a note on the application of **organometallic** compounds as catalysts.

26. Write briefly on anti-cancer drugs.

27. Explain the application of **nanotechnology** in biology.

28. Write a short note on phosphate fertilizers.

(5 x 2 = 10 weightage)

IV. Answer any *two* questions. Each question carries 4 weightage.

29. Explain the geometrical isomerism in coordination compounds.
30. How will you classify silicates ? Explain their structure.
31. Write in detail about the manufacture of glass.

(2 x 4 = 8 weightage)