NTK/KW/15–7824

Fourth Semester B. Tech. (Chemical Engg.) (C.B.S.) Examination

INORGANIC PROCESS TECHNOLOGY

Time : Three Hours] [Max. Marks : 80

N. B. : (1) All questions carry marks as indicated.
(2) Due credit will be given to neatness and adequate dimensions.
(3) Diagrams and chemical equations should be given wherever necessary.
(4) Illustrate your answers wherever necessary with the help of neat sketches.

1. (a) Draw a neat flow sheet and explain the production of carbon dioxide gas from fuel oil or Natural gas. 8

   (b) Write a note on Dry Ice. 5

OR

2. Draw a flow chart and explain the process for the production of acetylene by partial oxidation of hydrocarbon feed stock. 13

3. Discuss the various chemical reactions involved in the manufacture of Nitric acid by Ammonia oxidation process and with the help of flow sheet explain the process. 14

OR

4. Explain the process for the manufacture of sulphuric acid by contact process and make the comparison of various catalysts used in the process. 14

5. Draw a well labelled flow diagram for the manufacture of ammorphous carbon electrodes and explain the process in brief. 13

OR

6. Discuss the important properties of Lithophone white pigment and with well labelled flow sheet explain its manufacture. 13

7. Draw and explain a well labelled flow chart for the manufacture of Bromine from sea water and discuss its important applications. 13

OR

8. What is role of chemical engineer in Nuclear Eengineering? Discuss the process of Nuclear fission reactor and its important components. 13

9. Discuss the principle involved in the manufacture of soda Ash and draw a well labelled flow chart and explain manufacture by Solvay's Ammonia soda process. 14

OR

10. Discuss the important applications of chlorates and draw a well defined flow sheet for the manufacture of sodium chlorate from brine. 14

11. Draw a well labelled flow chart for the combine production of super phosphate and triple superphosphate fertiliser and explain the process. 13

OR

12. Draw a well labelled flow chart for the combine production of Ammonium nitrate and nutrolime fertilizers and describe the process giving chemical reactions. 13