



- Notes :
1. Due credit will be given to neatness and adequate dimensions.
 2. Assume suitable data wherever necessary.
 3. Diagrams and Chemical equation should be given wherever necessary.
 4. Illustrate your answers wherever necessary with the help of neat sketches.
 5. Marks are indicated in right margin.

1. a) Describe in brief the various steps involved in mineral processing state advantages of mineral processing. **10**
- b) Discuss, how mineral processing helps in conserving the mineral deposits of India. **6**

OR

2. What are the various types of Gyratory crushers? Explain with neat sketch modern suspended spindle Gyratory. Crusher. State also characteristics of Gyratory crusher. **16**
3. a) State and explain the purpose of industrial screening? **16**
Name the type of screening surfaces.
Explain with neat sketch the following.
 - i) Grizzly
 - ii) Vibrating screens.

OR

4. a) Give the classification of classifiers. Describe any one sizing classifier with neat sketch. **8**
- b) What is sampling? How sampling is important in mineral processing plant & how you will collect samples in mineral processing plant? **8**
5. a) What are the various types of washers which are used in mineral processing plant. **5**
- b) What is hand sorting of ores? **3**
- c) Explain any one method of leaching. **8**

OR

6. a) What is jigging? Explain construction, working and uses of jigging system know to you. **9**
- b) What is Heavy Media separation & how it is achieved? State and explain types of media employed in D.M.S. or HMS. **7**
7. a) Outline the importance of flotation in mineral concentration. **4**
- b) Name the different factors involved in flotation cell selection & explain their importance. **8**

- c) Write a note on "frother" 4

OR

8. a) Explain with neat sketch high intensity Dry magnetic separator. 8
- b) Discuss the principles and application of electrostatic separation. 8
9. a) Describe the application of Thickeners in water reclamation. 8
- b) What is palletization? 8
How palletization is carried out?

OR

10. Write short notes on:- 16
- i) Chance process.
- ii) Bradford coal breaker.
- iii) Washability curves.
- iv) How sheet for Manganese ore.
