

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VI (New) EXAMINATION – WINTER 2019****Subject Code: 2162202****Date: 04/12/2019****Subject Name: Underground Metal Mining****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

| | | MARKS |
|------------|--|--------------|
| Q.1 | (a) Write a short note on lead-zinc deposit of India. | 03 |
| | (b) Describe the different working methods adopted in Khetri Copper Complex. | 04 |
| | (c) Write the application and preparation of top slicing method. | 07 |
| Q.2 | (a) Write a short note on Burn cut drilling pattern with cross-sectional diagram. | 03 |
| | (b) Describe the classification of stoping methods. | 04 |
| | (c) Write a note on Zawar group of mines.(Name of mines with their specification and their methodology of working) | 07 |
| | OR | |
| | (c) Draw a general layout of underground metal mining and explain its terminology. | 07 |
| Q.3 | (a) Name different conventional secondary breaking methods. Explain any one. | 03 |
| | (b) Write a note on material of backfill and their procurement. | 04 |
| | (c) Describe the sub-level open stoping with neat sketch. | 07 |
| | OR | |
| Q.3 | (a) Write the application of sub level open stoping. | 03 |
| | (b) Name the different tertiary crusher. Explain any one. | 04 |
| | (c) Describe the mechanical method of secondary breaking. | 07 |
| Q.4 | (a) Write the advantages and disadvantages of shrinkage mining method. | 03 |
| | (b) Describe the application of room and pillar mining. | 04 |
| | (c) Explain the VCR method with figure. | 07 |
| | OR | |
| Q.4 | (a) Explain the preparation of hydraulic backfill material. | 03 |
| | (b) Write a note on Jaw crusher. | 04 |
| | (c) Explain the shrinkage stoping with pillars. | 07 |
| Q.5 | (a) Describe the pneumatic method of back filling. | 03 |
| | (b) Write the advantages and disadvantages of square set mining method. | 04 |
| | (c) Write a note on cut & fill method. | 07 |
| | OR | |
| Q.5 | (a) Explain the mechanical method of back filling. | 03 |
| | (b) Write a note on Cone crusher. | 04 |
| | (c) Name the different caving method. Explain any one. | 07 |
