

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2017****Subject Code: 2162205****Date: 03/05/2017****Subject Name: Mine Surface Environment****Time: 10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

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

**MARKS**

|            |   |           |
|------------|---|-----------|
| <b>Q.1</b> | <b>Short Questions</b>  | <b>14</b> |
|            | 1 What is environment?  |           |
|            | 2 What is the land use pattern?   |           |
|            | 3 What is demography?   |           |
|            | 4 What is Acid Mine Drainage?   |           |
|            | 5 What is land degradation?   |           |
|            | 6 Define air pollution.   |           |
|            | 7 What is airborne repairable dust?   |           |
|            | 8 What are the air pollutants?  |           |
|            | 9 How is the intensity of noise measured?   |           |
|            | 10 Define flora and fauna.  |           |
|            | 11 How air pollution takes place in mining?   |           |
|            | 12 What is landscape planning?  |           |
|            | 13 What are the chemical and physical processes of active treatment?                  |           |
|            | 14 What are the parameters of socio-economic environment?                             |           |
| <b>Q.2</b> | (a) Explain the assessment of impacts of land use.                                    | <b>03</b> |
|            | (b) Discuss the effect of acid mine drainage.   | <b>04</b> |
|            | (c) Explain environmental issues in mineral industries.                               | <b>07</b> |
|            | <b>OR</b>   |           |
|            | (c) Discuss the impacts of mining on surface and sub-surface waters.                  | <b>07</b> |
| <b>Q.3</b> | (a) How airborne dust is generated?   | <b>03</b> |
|            | (b) Explain the various land reclamation method.                                      | <b>04</b> |
|            | (c) Write note on treatment and control of acid mine drainage.                        | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.3</b> | (a) What are the factors responsible for degradation of soil?                         | <b>03</b> |
|            | (b) Discuss the impacts of mining on ground water table.                              | <b>04</b> |
|            | (c) Describe the effects of mining on flora and fauna in brief.                       | <b>07</b> |
| <b>Q.4</b> | (a) Describe the formation of Acid Mine Drainage                                      | <b>03</b> |
|            | (b) Explain harmful physiological effects and its control of airborne repairable dust | <b>04</b> |
|            | (c) Explain the direct and indirect economic impact of mining?                        | <b>07</b> |
|            | <b>OR</b>   |           |
| <b>Q.4</b> | (a) What are the impacts of ecological environment?                                   | <b>03</b> |
|            | (b) Write a short note on landscape planning in mining.                               | <b>04</b> |
|            | (c) Explain measurement and control of air pollution sources.                         | <b>07</b> |
| <b>Q.5</b> | (a) How the mine environment affects the human population.                            | <b>03</b> |
|            | (b) Write a short note on land use pattern.   | <b>04</b> |
|            | (c) Explain the environmental aspects of ground vibrations and air-blast.             | <b>07</b> |

**OR**

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|------------|--|-----------|
| <b>Q.5</b> | <b>(a)</b> What are the socio-cultural effects of mining industry? | <b>03</b> |
|            | <b>(b)</b> Explain natural drainage pattern.                       | <b>04</b> |
|            | <b>(c)</b> Explain gaseous and particulate air pollution sources.  | <b>07</b> |

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