

GUJARAT TECHNOLOGICAL UNIVERSITY
B E Sem-VI Examination May 2011

Subject code: 162205

Subject Name: Mine Surface Environment

Date: 23/05/2011

Time: 10.30 am – 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.

- Q.1** (a) What is the land use pattern? Give the assessment of impacts of land use. **07**
(b) What is Acid Mine Drainage? Which are the effects of AMD occurred in mining regions. **07**

- Q.2** (a) Which are the responsible factors for degradation of soil? Explain the reclamation of derelict and degraded lands. **07**
(b) Which factors are responsible to produce acid drainage from a coal seam? Explain the formation of Acid Mine Drainage with reference to the sulphur content of the coal seam. **07**

OR

- (b) Discuss the impacts of mining activities on surface and sub – surface water bodies. **07**

- Q.3** (a) Which are the requirements of landscape planning? Add a note on land capability mapping. **07**
(b) Which environmental problems are found in contour – strip mining? Add a note on stabilizing the debris dumps in this mining operation. **07**

OR

- Q.3** (a) Write a short note on environmental management in mining operation. **07**
(b) What is airborne respirable dust? How it is generated? Explain its harmful physiological effects and control. **07**

- Q.4** (a) Discuss the community stability and species diversity with the reference of ecological environment. **07**
(b) Write a note on underground mining hazards in India. **07**

- Q.4** (a) Which are the anthropogenic changes in ecosystem? Explain with a suitable example. **07**
(b) Write a note on environment aspects of airblast and ground vibrations. **07**

- Q.5** (a) Write a note on primary causes of Flyrock. **07**
(b) How is the intensity of noise measured? In what way is a miner affected by exposure to loud noises over long years? **07**

OR

- Q.5** (a) Which are the economical and sociological impacts of mine environment? **07**
(b) What is demography? Explain how the mine environment affects the human population. **07**
