

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE – SEMESTER – VI EXAMINATION – WINTER 2015**

**Subject Code:162204****Date:14 /12/ 2015****Subject Name: MINE HAZARDS****Time:2:30pm to 5:00pm****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) Explain the coal dust explosion as a mining hazard. **07**  
(b) What are the radiation hazards in radioactive mining? **07**
- Q.2** (a) List out carbon monoxide detectors and explain any two. **07**  
(b) Write a short note on a stone dust barrier. **07**
- OR**
- (b) Describe the coal dust explosion. **07**
- Q.3** (a) Explain neat sketch Coward's diagram. **07**  
(b) What is spontaneous heating and describe various stages. **07**
- OR**
- Q.3** (a) Write a short note on a Rescue station. **07**  
(b) Explain causes of inundation & various precaution measures. **07**
- Q.4** (a) Explain various factors affecting relative inflammability of coal dust. **07**  
(b) Explain :( 1) Methane layering, (2) water blast. **07**
- OR**
- Q.4** (a) What are the physical and chemical characteristics of coal liable to spontaneous heating? **07**  
(b) Explain any three rescue equipment used in Indian mines. **07**
- Q.5** (a) Explain various steps of recovery of flooded mines. **07**  
(b) Explain the working of a side boring apparatus. **07**
- OR**
- Q.5** (a) Write short note on dust formation, danger and its prevention. **07**  
(b) Write short note : **07**  
(1)stink damp  
(2)White damp  
(3)black damp  
(4)after damp

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