

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER- V • EXAMINATION – SUMMER 2015

Subject Code: 152205**Date: 19/05/ 2015****Subject Name: Underground coal mining****Time: 02:30pm 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.

- Q.1** (a) Give details on retreating methods of Long wall system **07**
 (b) What is Pneumatic stowing & mechanical stowing? Explain it **07**
- Q.2** (a) Write notes on : (1) Room & pillar method **07**
 (b) Describe behavior of roof during depillaring with caving **07**
- OR**
- (b) What are the precautions against fire during and after depillaring operation? **07**
- Q.3** (a) Explain meaning of following terms : (1) incubation period , (2) Cyclic Long wall and non cyclic long wall methods. **07**
 (b) What are the factors considered for selection of optimum length of a long Wall face? **07**
- OR**
- Q3** (a) Explain with sketch : Barrier and preparatory stopping in Board and Pillar Method of mining.
 (b) Write merit and demerit of pneumatic and hydraulic stowing **07**
- Q.4** (a) What are the disadvantages of stowing methods? **07**
 (b) What do you understand by Barrier and preparatory stoppings? **07**
- OR**
- Q.4** (a) Which Type of machinery is used in u/g mining? And what is cycle of operation? **07**
 (b) What is Pillar extraction and safety? Explain it **07**
- Q.5** (a) How to handling and storage of material on surface and underground face arrangements? **07**
 (b) What do you understand by Organization on a longwall Face? **07**
- OR**
- Q.5** (a) Classify various underground coal mining methods **07**
 (b) Describe depillaring system for a coal seam 5.5 m thick in board & pillar Methods. Also explain sequence of pillars extracted with sketch. **07**
