

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – SUMMER 2013****Subject Code: 152205****Date: 29-05-2013****Subject Name: Underground Coal Mining****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) Define the factors influencing the selection of mining methods. **07**
(b) Explain Board and Pillar method with illustrative diagram. **07**
- Q.2** (a) Describe origin, rank of coal and distribution of coal in India. **07**
(b) Describe briefly the retreating long wall method of mining. **07**
- OR**
- (b) What are the merits and demerits of advanced long wall method. **07**
- Q.3** (a) Explain the characteristics of roofs and floors affects the underground working in coal mines. **07**
(b) Write the classification on underground coal mining method. **07**
- OR**
- Q.3** (a) Describe the working of (i) Load haul dumper and (ii) Side discharge loader. **07**
(b) Explain the pneumatic stowing and its advantages. **07**
- Q.4** (a) Explain hydraulic profile and rate of stowing. **07**
(b) What is stowing? List out its methods and advantages of stowing. **07**
- OR**
- Q.4** (a) Explain general arrangement of a sand stowing with its diagram. **07**
Q.4 (b) Explain barrier and preparatory stowing. **07**
- Q.5** (a) Describe the support system used in long wall method of mining. **07**
(b) Explain the working of panels in underground mining. **07**
- OR**
- Q.5** (a) Give the factors affecting on coalification. **07**
(b) Describe the extraction of pillars in contiguous seam. **07**
