

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III • EXAMINATION – WINTER 2013

Subject Code: 132202**Date: 07-12-2013****Subject Name: Mine Development****Time: 02.30 pm - 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) What is Head gear? Describe various attachment of headgear. **07**
(b) Explain: (1) Adit (2) Shaft (3) Incline. **07**

Q.2 (a) Write merits and demerits of inclined shaft. **07**
(b) Explain various types of shaft lining. **07**

OR

(b) Explain any one conventional method for vertical raise in the metal mines. **07**

Q.3 (a) Explain various blasting patterns used for drifting. **07**
(b) Describe comparison of inclined system and shaft system. **07**

OR

Q.3 (a) Explain shaft centering arrangement in shaft sinking with sketch. **07**
(b) Explain: (1) Road header (2) Gathering arm conveyor. **07**

Q.4 (a) Explain vertical development method of raising by raise climbers. **07**
(b) Describe trackless mucking transportation. **07**

OR

Q.4 (a) Explain: Rocker shovel. **07**
Q.4 (b) Explain: Side Discharge Loader. **07**

Q.5 (a) Describe ventilation and drainage pattern in drifting. **07**
(b) Describe various factors affecting size, gradient and shape of drives and tunnels. **07**

OR

Q.5 (a) Explain: load haul dump machine. **07**
(b) Write short note on long hole raising with its applicability, merits and demerits. **07**
