

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014

Subject Code: 162203

Date: 23-05-2014

Subject Name: Sub Surface Environment

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) Compare underground mine atmosphere with surface atmosphere. 7
Q.1 (b) Explain Kata thermometer. 7
- Q.2 (a) Explain Hygrometer and relative humidity. 7
Q.2 (b) Principal types of mine fans. 7
- OR**
- Q.2 (b) Shortnote: Auxiliary fan 7
- Q.3 (a) Necessity and standard for ventilation. 7
Q.3 (b) Explain Air locking arrangement. 7
- OR**
- Q.3 (a) Chuzy's and Atkinsons equation. 7
Q.3 (b) List out types of extinguishers used in mines and explain any one. 7
- Q.4 (a) Explain Natural ventilation pressure. 7
Q.4 (b) Difference between forcing and exhausting fan. 7
- OR**
- Q.4 (a) Explain geothermal gradient in brief. 7
Q.4 (b) Explain Ascensional and descensional ventilation. 7
- Q.5 (a) Explain Ventilation survey. 7
Q.5 (b) Shortnote: Fans in series. 7
- OR**
- Q.5 (a) Techniques for measurement of air flow. 7
Q.5 (b) Shortnote: Fans in parallel. 7
