Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI (NEW) - EXAMINATION – SUMMER 2016

Subject Code:2162207 **Date:17/05/2016**

Subject Name: Mine Ventilation

Time: 10:30 AM to 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)**	What is humidity? How it is determined in mines?	**07**
	(b)	What is the composition of mine atmosphere?	**07**
Q.2	**(a)**	What types of gases are encountered in mines? What is there origin?	**07**
	(b)	What are the physiological effects of gases?	**07**
		OR	
	(b)	How metabolism and respiration happens in mines?	**07**
Q.3	**(a)**	Explain the need of ventilation in mines.	**07**
	(b)	What are the resistances in mine ventilation? How that came be removed?	**07**
		OR	
Q.3	**(a)**	How natural ventilation can be provided in mines? How it works?	**07**
	(b)	Explain the working of booster and auxiliary fans.	**07**
Q.4	**(a)**	Explain the construction and working of mine fans.	**07**
	(b)	Explain Atkinson's equation.	**07**
		OR	
Q.4	**(a)**	How climatic conditions can be controlled in mines?	**07**
	(b)	What factors are responsible for mine temperature?	**07**
Q.5		Write note on any two :	**14**

1. Thermodynamics of ventilation.
2. Air-conditioning in mines.
3. Venturi and Air Jets
4. Air locking in mines.

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