

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018****Subject Code:2162204****Date:20/11/2018****Subject Name:Mine Hazards****Time: 02:30 PM 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.

		MARKS
Q.1	(a) Explain how fire can produce in mines and its effect in mines.	03
	(b) List out classes of fires and explain all in brief.	04
	(c) Explain causes and precautionary measures in mine inundations.	07
Q.2	(a) Discuss the applications of dust sampling apparatus.	03
	(b) What do you mean by fire? Explain its causes and prevention in surface mines.	04
	(c) List out different types of rescue equipment used in mines. Explain any two with neat sketches.	07
	OR	
	(c) Explain rescue and recovery work in connection with mine fire.	07
Q.3	(a) Discuss the factor affecting the limit of explosibility in fire damp.	03
	(b) Discuss the different methods for reopening sealed off area in mines.	04
	(c) Explain spontaneous heating, its causes and detection in underground mines.	07
	OR	
Q.3	(a) Discuss the uses of fire extinguisher.	03
	(b) Describe the physical and chemical characteristics of coal liable to spontaneous heating.	04
	(c) Explain the reason behind underground fires and its preventive measures.	07
Q.4	(a) Describe the function of rescue station.	03
	(b) Discuss the precautions to be taken while approaching old workings.	04
	(c) List out different types of fire extinguisher. Explain any one with neat sketch.	07
	OR	
Q.4	(a) Discuss the sources of initiation of fire damp explosion.	03
	(b) Describe causes and safety measures in water gas explosion.	04
	(c) List out different types of dust sampling apparatus. Explain any one with neat sketch.	07
Q.5	(a) Discuss the various effects of dust in underground mines.	03
	(b) Explain the water blast danger and its precautions.	04
	(c) Explain firefighting organization.	07
	OR	
Q.5	(a) Describe the problems of radiation in atomic mineral mines.	03
	(b) Discuss the causes and relative inflammability of coal dust explosion.	04
	(c) Explain the reason behind formation of dust in underground mines and their effect on employees.	07
