

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2020****Subject Code:2162204****Date:22/01/2021****Subject Name:Mine Hazards****Time:02:00 PM TO 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Discuss the different types of classes of fires.	03
	(b) Describe the physical and chemical characteristics of coal liable to spontaneous heating.	04
	(c) Define: Spontaneous Combustion. Describe symptoms of spontaneous heating.	07
Q.2	(a) Discuss the factor affecting the limit of explosibility in fire damp.	03
	(b) Describe causes and safety measures in water gas explosion.	04
	(c) List out different types of fire extinguisher. Explain form type fire extinguisher with neat sketch.	07
Q.3	(a) Explain how fire can produce in mines and its effect in mines.	03
	(b) Describe the water blast danger and its precautions.	04
	(c) Explain the reason behind underground fires and its preventive measures.	07
Q.4	(a) Describe the function of rescue station.	03
	(b) Write note on design and construction of Water Dams.	04
	(c) Explain the reason behind formation of dust in underground mines and their effect on employees.	07
Q.5	(a) Describe the various uses of Stone Dust Barriers.	03
	(b) Discuss the different methods for reopening sealed off area in mines.	04
	(c) Explain classification of dust sampling apparatus. Explain any one with neat sketch.	07
Q.6	(a) Discuss the sources of initiation of fire damp explosion.	03
	(b) Discuss the difficulties faces during reopening of sealed off area.	04
	(c) Explain rescue and recovery work in connection with mine fire.	07
Q.7	(a) Discuss the precautionary measures of Mine Inundation.	03
	(b) Discuss the precautions to be taken while approaching old workings.	04
	(c) Explain the reason behind surface fires and its preventive measures.	07
Q.8	(a) Discuss the uses of fire extinguisher.	03
	(b) Discuss the causes and relative inflammability of coal dust explosion.	04
	(c) Explain firefighting organization.	07
