

GUJARAT TECHNOLOGICAL UNIVERSITY**BE-MINOR - SEMESTER-IV EXAMINATION – WINTER 2022****Subject Code:114AA01****Date:24-02-2023****Subject Name:Fundamental of Fire Engineering****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.
4. Simple and non-programmable scientific calculators are allowed.

	Marks
Q.1 (a) Write different units of Temperature with its conversion	03
(b) Explain law of conservation of energy in brief.	04
(c) Explain heat of combustion with appropriate example in detail.	07
Q.2 (a) Define: Exothermic and Endothermic reaction with suitable example.	03
(b) What is LFL and UFL.	04
(c) Write in detail about Fire Triangle and Tetrahedron Fire	07
OR	
(c) Explain the dependence of LFL and UFL on Pressure and Temperature.	07
Q.3 (a) Write classification of fire in brief	03
(b) Explain general causes of fire in chemical industry	04
(c) With neat diagram, explain construction and working of Portable Fire Extinguisher	07
OR	
Q.3 (a) Explain the advantages of use of fire bucket in industry.	03
(b) Classify different types of fire extinguisher	04
(c) Explain importance of active fire protection system in detail	07
Q.4 (a) Classify different types of fire detection techniques.	03
(b) Explain gas sensing detectors in brief	04
(c) Write in detail about fire fighting in Textile Industry.	07
OR	
Q.4 (a) Write a note on emulsification system for fire fighting	03
(b) Explain steam drenching system in brief.	04
(c) Explain means of fire escape requirements in detail.	07
Q.5 (a) Define fire resistance rating with suitable example.	03
(b) Explain the assessment of damages due to fire accident.	04
(c) Explain internal staircase management for fire prevention.	07
OR	
Q.5 (a) Write a note on Fire detection system	03
(b) Write a note on Smoke control in buildings.	04
(c) Explain fire managements system in residential buildings (Class A)	07
