Name: **Enrolment No:**	UPES UNIVERSITY OF TOMORROW

UPES

End Semester Examination, December 2023

Programme Name: B Tech- Fire and Safety Engineering **Semester : III**

Course Name : Fire Engineering I (Basics) **Time : 03 hrs**

Course Code : HSFS2015 **Max. Marks: 100**

Nos. of page(s) : 1

Instructions: Read the question properly and give the most relevant answer.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Recall LEL and HEL with its significance	**4**	**CO1**
Q 2	Explain Fire suppression theory.	**4**	**CO2**
Q 3	Analyze and classify the term Smoke	**4**	**CO4**
Q 4	Write the ill effects of Carbon monoxide	**4**	**CO3**
Q 5	Outline the concept of flashover and back draft	**4**	**CO4**
	SECTION B **(4Qx10M= 40 Marks)**		
Q 6	Discuss the fire causation theory and classes of Fire in detail with example	**10**	**CO1**
Q 7	Analyze and explain the different smoke detection system	**10**	**CO4**
Q 8	Classify flammable and combustible liquids as per NFPA standard	**10**	**CO2**
Q 9	With illustrations write about the different stages of fire in detail (OR) Prepare a write up on fire retardant coatings with example.	**10**	**CO3**
	SECTION-C **(2Qx20M=40 Marks)**		
Q 10	a) Explain in detail. i) Purging ii) Static electricity. (OR) b) Explain the combustion phenomena of solid, liquid and gases with a example of each in detail.	**(10+10)** **20** **20**	**CO2**
Q11	Explosion has made numerous destructions around the world as a fire safety engineering can you the different types of explosions in detail.	**20**	**CO4**