


Name:			
Enrolment No:			
UPES End Semester Examination, December 2024			
Programme Name: B Tech- Fire and Safety Engineering		Semester : III	
Course Name : Fundamentals of Fire Engineering		Time : 03 hrs	
Course Code : HSFS 2022		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 you understanding on flammability range of gas.	4	CO1
Q 2	Explain Fire suppression theory with sketch.	4	CO2
Q 3	Analyze and classify the term Smoke	4	CO4
Q 4	Write the ill effects of Carbon di oxide and carbon monoxide.	4	CO3
Q 5	Outline your understanding about the term Fire rating.	4	CO4
SECTION B (4Qx10M= 40 Marks)			
Q 6	With illustrations write about the different stages of fire in detail.	10	CO1
Q 7	Analyze and explain the different types of fire sprinkler system	10	CO4
Q 8	Classify flammable and combustible liquids as per NFPA standard	10	CO3
Q 9	Explain the method of fire extinguishment in cooking oil fire at kitchen and fire in an electrical transformer with proper justification of extinguishment. (OR) Prepare a write up on fire retardant coatings with example.	10	CO3
SECTION-C (2Qx20M=40 Marks)			
Q 10	Explain in detail. a) Active fire protection system and passive fire protection system with examples b) Importance of fire load calculation and its method of calculation (OR) c) 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 engineer can you explain the different types of explosions in detail.	20	CO4