



Name:			
Enrolment No:			
UPES			
End Semester Examination, December 2023			
Course: Risk Assessment & Planning (Fire Engg IV)		Semester: VII	
Program: B Tech- Fire & Safety Engineering		Time : 03 hrs.	
Course Code: HSFS4005		Max. Marks: 100	
Instructions: Attempt all questions			
SECTION A (5Qx4M=20Marks)			
Sr. No.	Questions	Marks	CO
Q 1	Enlist the benefits of fire safety training and education at the workplace.	4	CO1
Q 2	Write a short note on mixed occupancies as listed in the NBC 2016.	4	CO1
Q 3	Highlight the role of fire investigators involved during any fire investigations.	4	CO1
Q 4	Discuss the role of fire watchers in an occupancy or workplace.	4	CO1
Q 5	A building component has a fire-resistance rating of 2 hours. Explain what this rating means in terms of fire safety and discuss how it contributes to the overall fire protection of the building.	4	CO2
SECTION B (4Qx10M= 40 Marks)			
Q 6	Discuss the factors that influence the efficiency of evacuation routes in a large stadium. How can the layout of exits be optimized to minimize evacuation time during a mass gathering	10	CO2
Q 7	Evaluate the effectiveness of different Fire Exits designs. What factors contribute to their efficiency? OR Analyze the general design criteria for various types of exits and their impact on evacuation.	10	CO3
Q 8	Describe the process of Fire Investigation. What role does it play in preventing future incidents?	10	CO2
Q 9	Propose a fire safety plan for a high-rise building, considering the specific challenges and requirements.	10	CO3
SECTION-C(2Qx20M=40 Marks)			
Q 10	Develop an inspection checklist for assessing the fire safety compliances of a building of the following details: Height: 16 mtr, Storey: 5, No of Occupants: 450, One side open, One side lake, Two sides buildings, Front road of 30 ft.	20	CO5
Q 11	Consider the UPES premises and categorize it into various classifications of buildings based on their distinct characteristics. Provide a building classification accompanied by the rationale for each category. OR Evaluate the impact of building codes and regulations on the design of evacuation plans. Discuss a specific code requirement related to exits or evacuation and analyze its implications on ensuring occupant safety.	20	CO4