


Name: Enrolment No:		
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES Online End Semester Examination, December 2020		
Course Name: Fire Engg. IV (Risk Assessment & Planning) Programme: B Tech- Fire & Safety Engineering Course Code: HSFS 4005		Semester: V Time: 03 Hours Max. Marks: 100
SECTION A		
1. Each Question will carry 5 Marks 2. Write only the short answers.		
Sr. No.	Question	CO
Q 1	Name various classification of building.	CO1
Q 2	Extend your views on design of emergency.	CO2
Q 3	Explain personnel movement used during emergency process.	CO1
Q 4	Comment on “enforcement of legal provisions” for a hospital building.	CO4
Q 5	Name various means of access to be provided in a high-rise building.	CO1
Q 6	Compare emergency and chaotic evacuation.	CO3
SECTION B Each question will carry 10 marks		
Q 7	Explain the requirements of refuge area in a building. Also calculate the minimum required for refuge for four floors of 500 m ² each if the occupant load is 10m ² /person and the occupant density is 0.3m ² /person.	CO1
Q 8	Express your views on the guidelines should be adhered for the life safety and the safe evacuation in a building for disabled people.	CO2
Q 9	Discuss the general requirements for evacuation facilities in occupancies.	CO1
Q 10	Being a fire safety expert, predict the consequences to be available post inspection of an occupancy if following observations are noticed. a. Staircases are not in adequate numbers b. Traffic clearing capacity is as minimum due to least width provided at the exit points c. Floor area ratio is as minimum to the requirements.	CO4
Q 11	Write the expression for occupant serving capacity and egress time (congestion and free walk). Also calculate the occupant serving capacity of the stairs for a six storey building if width of staircase is 1.25 m.	CO3
SECTION C		
1. Each Question carries 20 Marks. 2. Instruction: Write long and appropriate answer.		
Q 12	For a 10 storey building, create an emergency evacuation plan including the emergency control team (chart). OR Top management of an organization is not favorable to put addition budget for deploying external agencies towards assessing fire safety conditions. Being a fire safety officer, write one proposal to your top management indicating the needs of fire safety audit in your organization.	CO5