


Name: Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES Supplementary End Semester Examination, May 2022			
Course Name: Fire Protection Equipment & Design Programme: B Tech- Fire & Safety Engineering Course Code: HSFS 3003		Semester: IV Time: 03 Hours Max. Marks: 100	
SECTION A			
1. Each Question will carry 4 Marks 2. Write only the short answers.			
Sr. No.	Question	CO	
Q 1	Distinguish active and passive fire protection systems in a building.	CO2	
Q 2	Explain water hammer and name its one application.	CO2	
Q 3	Name 10 different components of hydrant system.	CO1	
Q 4	Explain the purposes of knotting.	CO2	
Q 5	Write a short note on extension ladder.	CO1	
SECTION B			
Each question will carry 10 marks			
Q 6	Explain the need of fire services ladder and the various difficulties faced while using this ladder.	CO3	
Q 7	Discuss in detail of required personal protective equipment's used in firefighting purposes.	CO2	
Q 8	Create a fire safety inspection checklist for high-rise building ensuring the adequacy of controlling any adverse fire situation. <p style="text-align: center;">OR</p> Develop safe system of work for planning and designing of automatic fire suppression system.	CO5	
Q 9	A fire was noticed near to the coke oven areas into a steel manufacturing unit. Evaluate the condition of expected fire and suggest your strategy to control over the situation avoiding huge losses.	CO4	
SECTION C			
1. Each Question carries 20 Marks. 2. Instruction: Write long answer.			
Q 10	a. Discuss in detail of breathing apparatus and their types. b. Detail the various design parameters required for selection and usage of breathing apparatus.	CO1	
Q 11	Explain the purpose of providing stand pipes. List out their types and brief the Class II & Class III standpipes. <p style="text-align: center;">OR</p> Explain in detail of various types of ladders used in fire service and highlight their features.	CO3	