

<b>Name:</b>	
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, December 2019**

<b>Course: Concept of Fire Safety in Building, Structure Installation</b>	<b>Semester: III</b>
<b>Programme: M Tech- HSE</b>	<b>Max. Marks: 100</b>
<b>Subject Code: HSFS8005</b>	<b>Time: 03 hrs.</b>

**Instructions:**

**SECTION A**

S. No.	Question	Marks	CO
Q 1	Brief of local partition with example.	4	CO1
Q 2	Highlight the relevance of floor area ratio for any building or occupancy.	4	CO3
Q 3	Explain the integrity of structure.	4	CO2
Q 4	Define fire tower and list out its general requirements.	4	CO1
Q 5	Explain the fire modelling and its application.	4	CO3

**SECTION B**

Q 6	Evaluate the probable condition of a massive fire may occurred in a high rise building (residential) if it might be covering the maximum fire areas and maximum loses in structure.	10	CO4
Q 7	Explain the designation of fire zones and its types. Highlight the main features of designation of fire zones.  <b>OR</b> Explain the purpose & functions of building by laws. Discuss how it helps in improving fire safety condition at workplace or if any set backs are available.	10	CO2
Q 8	Evaluate the probable condition of a fire outbreak in a building. Being a HSE expert, enlist the design requirements for smoke management control system in a building or occupancy ensuring smooth evacuation and minimizing loses due to fire.	10	CO4
Q 9	Analyzing the condition of workplace and to continue smooth evacuation, design a hassle free exit and their general requirements.	10	CO3 CO5

**SECTION-C**

Q 10	Describe “stack effect” and its design in a building. Highlights the various characteristics of stack or smoke vents in a building in design prospective.	20	CO5
Q 11	Based on design criteria of fire & life safety, analyze the adequacy of fire safety system design and highlight the various challenges encountered in its execution.  <b>OR</b> Describe the fire zones and its types. Justify the need of fire zones and the role of concern authority.	20	CO2 CO4