Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2021

Course Name: Concept of Fire Safety in Building **Semester: III**
Programme: M Tech- HSE **Time: 03 Hours**
Course Code: HSFS 8005 **Max. Marks: 100**

SECTION A

1. Each Question will carry 4 Marks
2. Instruction: Complete the statement / Select the correct answer(s)

Sr. No.	Question	CO
Q 1	Enlist the expert panel of building by laws.	**CO1**
Q 2	Differentiate between storage and hazardous building.	**CO3**
Q 3	Brief the general requirements of refuse areas as listed in NBC.	**CO1**
Q 4	Present the need of stages of evacuation.	**CO2**
Q 5	Explain the need of Heat Release Rate in fire phenomenon.	**CO3**

SECTION B

1. Each question will carry 10 marks
2. Instruction: Write short / brief notes

Q 6	Explain the need of fire zoning and their consideration while deciding fire zoning.	**CO3**
Q 7	Discuss most relevant factors to be considered while designing compartmentation.	**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 ensuring smooth evacuation. **OR** Explain the heat release rate for ventilation control fire. Calculate the heat release rate from a ventilation control fire burning inside an enclosure of having a window 2 m wide and 1.5 m high.	**CO4**
Q 9	Explain mass loss rate (MLR) and its applicability. Reflect the resemblance of MLR on fire phenomenon.	**CO2**

SECTION C

1. Each Question carries 20 Marks.
2. Instruction: Write long and appropriate answer.

Q 10	Discuss fire partition and its types. Represent your thought on the purpose of providing partition in a building. **OR** Describe "stack effect" and its design requirements. Highlights the various characteristics of stack or smoke vents in a building according to design prospective.	**CO1**
Q 11	Being an expert, create a safe workplace condition for a 20-floor building towards assuring smooth evacuation.	**CO5**