Name:

Enrolment No:

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

Course: Fire Engineering I (Basics) **Semester: III**
Programme: B.Tech FSE **Course Code: HSFS 2015**
Time: 03 hrs. **Max. Marks: 100**
Instructions: Read the questions properly and give the most relevant answer

SECTION A
(SCAN AND UPLOAD)

S. No.		Marks	CO
Q01	Explain the classes of Fire as per Indian Standard with example.	**4**	**CO2**
Q02	Define the term Heat	**4**	**CO1**
Q03	Write the principle of fire extinguishment by DCP, Water, Aerosol Based Fire extinguisher and Foam.	**4**	**CO3**
Q04	Explain the concept of Fire retardant and list any 4 fire retardant materials/Chemicals	**4**	**CO2**
Q05	Write the concept of purging.	**4**	**CO3**

SECTION B
(SCAN AND UPLOAD)

Q01	Explain the combustion phenomena of a) Wood b) Petrol c) Camphor	**10**	**CO2**
Q02	Analyze any 5 combustion by products with their possible health effects	**10**	**CO4**
Q03	Write the requirements of the below listed passive fire protection system as per National Building code: Egress, Exit Door, refuge area, safe assembly point, Aisle	**10**	**CO3**
Q04	Discuss different types of sprinkler system and an application of water spray system. (OR) Describe the different types of smoke detectors with their possible places of application	**10**	**CO2**

PART C
(SCAN AND UPLOAD)

Q01	a) Explosion is highly dangerous phenomena happening in the world that destroys and kills lot of people. Write the classification of explosion and explain in detail with the support of flow chart. (OR) b) Discuss the below concepts in detail i) Jet fire ii) Pool fire iii) Static electricity, its hazards and control measures. iv) Classification of liquids on basis of flammability as per NFPA	**20**	**CO1**
Q02	a) There is a fire in a home in an apartment and it completely destroyed, killing 2 home occupants and a fire fighter and you have investigated it, point out your findings on chances for the causation of fatality and the different stages of fire with a support of possible pictorial representation considering building fire as a case in an elaborate way.	**20**	**CO4**