


Name:			
Enrolment No:			
UPES End Semester Examination, May 2024 Course: HSE Challenges in Petroleum Operations Semester: II Program: M.Tech PE Course Code: HSFS7022			
		Time : 03 hrs.	Max. Marks: 100
<ul style="list-style-type: none"> • Instructions: <u>All Questions are compulsory.</u> • <u>You have internal choice only for Question No. 6 and 10</u> 			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q. 1	List the environmental concerns related to petroleum operations.	[4]	CO1
Q.2	Define Hazchem.	[4]	CO1
Q.3	List the various steps that are adopted to achieve excellence towards HSE in oil and gas industry.	[4]	CO1
Q.4	Explain Process hazard analyses (PHAs)	[4]	CO2
Q.5	Identify the relation between HSE Management & Hierarchy of an organization.	[4]	CO2
SECTION B (4Qx10M= 40 Marks)			
Q .6	Describe the Petroleum Act , 1934 OR, Describe the Indian Boilers Act, 1923	[10]	CO1
Q.7	Discuss in detail the basic safety rules to be followed in petroleum installations.	[10]	CO2
Q.8	Illustrate the various measures that are taken to minimize the risks in confined	[10]	CO2

	space of oil and gas operations.		
Q.9	Describe the occupational hazards in petroleum operations.	[10]	CO2
SECTION-C (2Qx20M=40 Marks)			
Q.10	(i) List the causes for oil spill. (ii) Describe in detail the oil spill cleanup techniques by using containment methods. <p style="text-align: center;">OR</p> (i) Describe in detail the oil spill cleanup techniques by using surfactants, dispersants, emulsifiers, and solidifiers. (ii) Assess the sustainable approach to control oil spill.	[4+16] [16+4]	CO3
Q.11	(i) Explain Environmental impact assessment (EIA) (ii) Describe the various solid waste disposal methods in oil and gas installations.	[2 +18]	CO4