


Name:			
Enrolment No:			
<b>UNIVERSITY OF PETROLEUM AND ENERGY STUDIES</b> <b>End Semester Examination, May 2023</b>			
<b>Course: HSE in Petroleum Industry</b> <b>Semester: VI</b> <b>Program: B.Tech( Applied Petroleum Engineering with Gas specialization)</b> <b>Time : 03 hrs.</b> <b>Course Code: HSFS3034P</b> <b>Max. Marks: 100</b>			
<b>Instructions:</b>			
<b>SECTION A</b> <b>(5Qx4M=20Marks)</b>			
S. No.		<b>Marks</b>	<b>CO</b>
Q 1	Discuss in brief the Pasadena Texas disaster.	<b>4</b>	<b>CO1</b>
Q2	Elucidate in brief Bhopal gas tragedy disaster.	<b>4</b>	<b>CO2</b>
Q3	Define and describe EPA Environmental Management Plan.	<b>4</b>	<b>CO3</b>
Q4	Define and elucidate Security Vulnerability Analysis.	<b>4</b>	<b>CO5</b>
Q5	What do you mean by AICHE Code of Ethics.	<b>4</b>	<b>CO1</b>
<b>SECTION B</b> <b>(4Qx10M= 40 Marks)</b>			
Q 6	Discuss different aspects of control procedures in industrial hygiene.	<b>10</b>	<b>CO3</b>
Q7	Discuss and describe toxic release and dispersion models.	<b>10</b>	<b>CO4</b>
Q8	Write and explain in details different parameters affecting toxic release and dispersion models.	<b>10</b>	<b>CO3</b>
Q9	Describe and discuss different source models OR Discuss in details flow of liquid through a hole in a tank in source model.	<b>10</b>	<b>CO5</b>
<b>SECTION-C</b> <b>(2Qx20M=40 Marks)</b>			
Q10	Discuss in details the different concepts of fire and explosions as regards chemical process safety. OR Elucidate in details Failure Mode and Effect Analysis.	<b>20</b>	<b>CO6</b>

Q11	Discuss in details HAZAN and HAZOP techniques.	20	CO5
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