


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

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, December 2020**

**Course: Remediation Services and site restoration**

**Semester: VII**

**Program: B.Tech (FSE)**

**Course Code: HSFS 4013**

**Time: 03 hrs.**

**Max. Marks: 100**

**Instructions: Please read all the questions**


**SECTION A**

- 1. Each question carry 5 Marks**
- 2. Instruction: Select the correct option**

S. No.		CO
Q 1	Define major accident hazard unit as per Indian Legislations?	CO1
Q 2	Remember the information to be furnished to the concerned authority at the time of a “major accident”?	CO1
Q 3	Describe the salient features of major hazard installation. Discuss the Onsite emergency plan? Who should make the Onsite emergency plan?	CO1
Q 4	What is meant by the term TREM CARD? Who should have the TREM CARD	CO1
Q 5	Interpret and compare the criterion for Hazardous chemicals in Indian Legislation and also differentiate the terms LD50 and LC 50? Which rule states about disclosure of information?	CO1
Q 6	Illustrate the significance of the term “APELL”	CO2

**SECTION B**

- 1. Each question carry 10 Marks**
- 2. Instruction: Write short/brief notes**

<p>Q 7</p>	<p>Illustrate and infer the deviations in the below mentioned diagram with respect to EIP, HAZCHEM Code, Class label and others.</p>  <p style="text-align: center;">OR</p> <p>Explain the following HAZCHEM codes:</p> <p>i). 3YE <span style="float: right;">iii)2PE</span></p> <p>ii)3E <span style="float: right;">iv)2Z</span></p>	<p style="text-align: center;">CO3</p>
<p>Q 8</p>	<p>Propose the requirements of Emergency Plan as per Indian Factory Act, MSIHC Rules &amp; Chemical Accidents (Emergency planning Preparedness and response) Rules?</p>	<p style="text-align: center;">CO4</p>
<p>Q 9</p>	<p>Discuss with suitable example for the given potentially hazardous natural phenomena for following :</p> <p>a) Tsunami                      b) Earthquake                      c) Flood</p>	<p style="text-align: center;">CO3</p>
<p>Q 10</p>	<p>Define the elements of ON site Emergency Plan and also briefly explain the constitution of crisis alert system?</p>	<p style="text-align: center;">CO4</p>
<p>Q 11</p>	<p>Investigate the root causes of the Major industrial disasters</p> <p>a) Texas Refinery                      b) Tianjin Disaster</p>	<p style="text-align: center;">CO5</p>
<p><b>SECTION-C</b></p> <p><b>1. Each question carry 20 Marks</b></p> <p><b>2. Instructions: Write long answer.</b></p>		
<p>Q 10</p>	<p>Illustrate and point out the meaning of the term “APELL”. Identify and distinguish the salient features of ISO 14001 and OHSAS 18001 with respect to preparation of emergency plan. Develop the EIP of a chemical having MSDS as stated below</p>	<p style="text-align: center;">CO5</p>

OR

1) Identify the following Class labels:



2) Describe and analyze the Emergency information panel as per central motor vehicle rules. Also infer and illustrate the emergency procedures in case of truck/tanker accident.