


Name:	
Enrolment No:	

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

**Course: Safety in Engineering Industry**

**Semester: III**

**Programme: M.Tech HSE & M.Tech HSE-DM**

**Course Code: HSFS 8002**

**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 different joining process in manufacturing industry.	4	CO2
Q02	List the principles of guarding	4	CO1
Q03	Explain the term fumes with four examples and their effects of human.	4	CO1
Q04	Write about forming process with examples	4	CO2
Q05	Define Zero Mechanical state.	4	CO2

**SECTION B**  
**(SCAN AND UPLOAD)**

Q01	Explain the hazards and safety precautions to be followed while performing hot and cold rolling.	10	CO2
Q02	Write the hazards and safety measures to be followed while handling acetylene cylinder with sketch	10	CO3
Q03	Classify different types of industry Engineering Industry with possible sketch.	10	CO1
Q04	Write the hazards of lathe machine and safety precautions to be followed while handling milling machine.  (Or) Write the hazards and safety precautions be followed while handling Power press.	10	CO3

**PART C**  
**(SCAN AND UPLOAD)**

Q01	<p>a) Foundry operations are considered to be the most hazardous, as a safety engineer develop a plan with reference to the hazards in each stage of casting process.</p> <p style="text-align: center;">(OR)</p> <p>b) Analyze the possible hazards in heat treatment process</p> <p>c) As you are making thick metal plates for Railways there may be a chance of internal defects in the plate so you are consulting a Non Destructive testing firm. Point out the safety measures you have to take to tackle the nuclear radiation.</p>	20	CO4
		10+10	CO4
Q02	a) Your management is planning to implement guarding system for the machines, as an engineer you have to illustrate the different guards and guarding devices available in the market with their possible applications and advantages. One of your employee is asking you the difference between guarding and guarding device convince him with suitable answer.	20	CO4 & CO1