

Name:  
Enrolment No:



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

**Course: Safety in Engineering Industry**  
**Program: M.Tech (HSE)+ M.Tech (HSE-DM)**  
**Course Code: HSFS 8002**

**Semester: III**  
**Time 03 hrs.**  
**Max. Marks: 100**

**SECTION A**

**Each Question will carry 5 marks**

S. No.	Question	CO
Q 1	List out the safety precaution to be taken in Lathe machine	CO1
Q 2	Explain the principles of guarding	CO2
Q 3	Recall the hazards in soldering operation with relevant to materials used.	CO1
Q 4	Describe the hazards of power press machine operation	CO2
Q 5	Discuss the hazards in paint shop.	CO2
Q 6	List the color coding of any 6 industrial gas cylinders	CO1

**SECTION B**

- Each Question will carry 10 marks**
- Write short/Brief notes**

Q 7	Explain the structure of Acetylene cylinder, list hazards in handling and filling of acetylene cylinder.	CO2
Q 8	You are a welding specialist who is involved in welding pipes laid for petroleum transfer. Every time after welding you have to check the quality of weld, apply a suitable pressure technique to test the pipe elaborating its hazards and safety measures in detail.	CO3
Q 9	List the safety measures to be followed while operating Jointer machine (wood working) and grinding machine (metal working).	CO1
Q 10	Consider you are working in ship building industry, you want to repaint a ship which has some tough coating, solve the situation by opting relevant technique of surface preparation giving more impact on hazards and safety measures of the technique.	CO3
Q 11	Explain Interlock guard, restraint device, pull back device, safety mats with their possible application.  (OR) Describe the hazards in electroplating process and the relevant safety measures to be followed.	CO2

**SECTION-C**

- Question carries 20 marks**
- Instruction: Write long answer**

Q 12	Consider you are working in a NDT facility as a safety officer. Prepare a safety program on how will you detect, measure, control the ionized radiation in your facility consider you are using gamma ray radiation.  (OR) Foundry operations play a very crucial role in manufacturing sector though they possess lot of hazards. Analyze various hazards in foundry process and contrast the various safety measures to be followed.	CO4
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