

Name:

Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, December 2018**

**Course/Code: Safety in Engineering Industry / FSEG 415**

**Semester: VII**

**Programme: B.Tech.-Fire and Safety Engineering**

**Time: 03 hrs.**

**Max. Marks: 100**

**Instructions: Read the questions properly and give the most relevant answer**

**SECTION A**

S. No.		Marks	CO
Q01	Classify Engineering Industry.	4	CO1
Q02	List the hazards in lubrication of machinery	4	CO2
Q03	Discuss the different hazards and its control measures in hot bending process	4	CO3
Q04	Explain the general safety considerations of manual material handling	4	CO5
Q05	Describe your understanding about fume and list the factors responsible for fume generation in welding operation.	4	CO4

**SECTION B**

Q06	List hazards in handling effluents and its control measures in detail.	10	CO4
Q07	Classify different types of ropes used in material handling and safety precaution to be followed in detail.	10	CO5
Q08	Explain the different types of machinery hazards in detail with example.	10	CO2
Q09	Summaries the hazards and the control measures of hot rolling and cold rolling process. <b>(OR)</b> .Discuss the different types of forming and joining process.	10	CO2& CO1

**SECTION-C**

Q10	a) Explain the principles of Guarding b) Discuss the different types of guarding and guarding devices in detail. c) Illustrate point of operation and identify the type of guarding/guarding device will you use for foot operated machine where metal removal in work piece is happening due to shearing action.	20	CO1,C O3
Q11	Explain in detail the various hazards of foundry operation elaborately and as a safety officer recommend proper control measures for foundry operation. <b>(Or)</b> a) Discuss the various hazards in milling machine and safety precaution that are so specific to milling operation. b) Explain the concept of heat stress and its control measures.. c) Differentiate Brazing, Soldering and Welding and Consider you are a safety personnel, list the safety precautions to be followed in brazing operation.	20	CO2, &CO4

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**SECTION A**

S. No.		Marks	CO
Q01	Illustrate and explain the basic process of casting.	4	CO1
Q02	Discuss the health effects of heat radiation, sources of heat radiation in engineering sector and its control measures.	4	CO2
Q03	List any two hand tools and its safety precautions to be followed.	4	CO3
Q04	List any 8 occupational diseases caused by physical and chemical agents (4 each)	4	CO5
Q05	Differentiate the welding, soldering and brazing	4	CO4

**SECTION B**

Q06	Explain the concept of machining operation, types of machining operation, list the hazards of turning operation.	10	CO3
Q07	Write various safety factors to be inspected while using chain slings and hooks during material handling.	10	CO5
Q08	Classify different types of guarding and guarding devices in detail.	10	CO2 & CO3
Q09	Explain in detail various hazards and the control measures of forging operation <b>(OR)</b> Discuss the hazards and safety precautions to be followed while carrying out hot bending operation.	10	CO2 & CO4

**SECTION-C**

Q10	a) Generate a proper risk assessment for grinding machine considering there is no safety control measures have been adapted and machine is ideally without guards. b) Explain in detail the different types of machinery hazards elaborately with examples wherever necessary.	20	CO1 & CO5
Q11	a) Summarize the process of metal rolling. b) Explain your understanding about hot rolling and cold rolling process. c) Outline various hazards in rolling process and the safety precautions to be followed. <b>(OR)</b> a) Discuss the concept of welding. b) Outline the hazards of welding process and the control measures elaborately. c) Explain the concept of fume list the factors responsible for fume generation.	20	CO3 & CO4