

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

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**

**End Semester Examination, December 2021**

**Course: M.Tech.- PETROLEUM ENGINEERING**

**COURSE CODE: MEEG 844**

**Semester: III**

**Programme: HSE CHALLENGES IN PETROLEUM OPERATIONS**

**Time: 03 hrs.**

**Max. Marks:**

**100**

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

**SECTION A**

S. No.		Marks	CO
Q01	Define an incident. What are direct costs of an accident to industry?	4	CO1
Q02	Identify various types of helmet used in industrial activities.	4	CO2
Q03	Share your knowledge on various work permit systems applicable in oil & gas industries.	4	CO2
Q04	What are the limitations of regulatory agencies? How can you make safety issues effective in your mill?	4	CO2
Q05	Briefly describe Petroleum Act 1934.	4	CO1

**SECTION B –ATTEMPT ANY FOUR QUESTIONS**

Q06	2020 & 2021 are the year's people will try to erase from their memory due to biological hazard (COVID-19). Demonstrate your knowledge on biological hazard and its control options.	10	CO2
Q07	Working in industries is not an easy job; workers are exposed to different work hazard. Describe in detail various physical & chemical hazards. What are common methods of eliminating, minimizing and controlling hazards?	10	CO5
Q08	In coal handling yard, a worker works for 4 hours 25 minutes and he is expose to coal dust, which is hazardous to health. The average exposure during that period is measure as 6.40 mg.m-3. Remaining time he was working on cleaning activities of his workplace average exposure during that period is measure as 1.50 mg.m-3, calculate TWA for 8 hrs. Exposure.	10	CO4
Q.09	Treatment of wastewater generated from industries is a big problem. What are the methods for treatment of wastewater generated from petrochemical plants?	10	CO4
Q.10	What do you understand by Prestart safety review? Explain its advantages.	10	CO3

**SECTION-C**

Q11	Discuss in detail management of solid waste and method applied for the management of oily sludge.	<b>20</b>	<b>CO4</b>
Q.12	List out major toxic gases released from refinery operations. Analyze their property, health effects and recommend treatment/control measures in detail.	<b>20</b>	<b>CO4</b>