

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, January 2021

Course: M.Tech.-HSE+HSE (DM)

Semester: I

COURSE CODE: HSFS 7003

Programme: Occupational Health and Safety Management

Time: 03 hrs.

Max. Marks: 100

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

SECTION A

S. No.		Marks	CO
Q01	<p>I. Lux is the unit of:</p> <p>a. Noise b. Illumination c. Reflective index d. Glare</p> <p>II. Exposure action limit value of hand-arm vibration is:</p> <p>a. 0.5 m/s² b. 1 m/s² c. 2.5 m/s² d. 5 m/s²</p> <p>III. Which of the following is an administrative control to improve ergonomics:</p> <p>a. Redesigning b. Replacing c. choosing right person to work d. All of the above</p> <p>IV. Which is least safe in terms of ergonomics considered:</p> <p>a. Plane Trolley b. Geared Trolley c. Motorized trolley</p> <p>d. None of the above</p> <p>V. Toxicity of the chemicals depends on:</p> <p>a. size of the particle b. concentration c. both 'a' and 'b' d. None of the above</p>	5	CO1
Q02	Identify various PPE's used in confined space entry operations.	5	CO2
Q03	Decontamination is no more unique activities due to COVID-19. Identify various steps of decontamination process.	5	CO4
Q04	Asbestos is having properties that is required for number of application in industries but at the same time, it is very harmful. Explain in brief its uses and harmful effects.	5	CO2

Q05	Safety videos can play important role in avoiding of occupational diseases/accidents in industries. Justify your opinion.	5	CO4
Q06	Identify industrial hygiene issues in thermal power plant.	5	CO3
SECTION B			
Q07	2019 & 2020 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
Q08	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
Q09	In coal handling yard, a worker works for 4 hours 20 minutes and he is expose to coal dust, which is hazardous to health. The average exposure during that period is measure as 8.40 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.10	Chromium and lead are widely used in industries. Analyze health effects of chromium and lead.	10	CO5
Q.11	Discuss in detail personal hygiene issues and management options.	10	CO5
SECTION-C			
Q12	First aid plays important role in saving of life in industries. Describe in detail various types of first aid treatment for common accidents/illness. Or List out major toxic gases released from any industrial operations. Analyze their property, health effects and recommend treating/control measures in detail.	20	CO5