



**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF ENGINEERING

MAKE-UP EXAMINATION- JAN 2023

Course Code: PET 2030

Course Name: Occupational Health Safety

Program : B. Tech

Date: 27-01-2023

Time: 01:00 PM - 04:00PM

Max Marks: 100

Weightage: 50%

Instructions:

- (i) Read the all questions carefully and answer accordingly.
- (ii) Question paper consist of three parts, PART A, B & C
- (iii) All questions are mandatory

Part A [Memory Recall Questions]

Answer all the Questions. Each question carries TWO marks.

(10Qx 2M= 20M)

- Q.NO.1. Define the term hazard? (C.O.No.1) [Knowledge]
- Q.NO.2. Illustrate what do you understand by the term incident? (C.O.No.2) [Knowledge]
- Q.NO.3. State the three theories of accident. (C.O.No.4) [Knowledge]
- Q.NO.4. Explain the Public Liability Insurance Act 1991. (C.O.No.3) [Knowledge]
- Q.NO.5. Which Act/Standard will decide how much the limitation of the toxic gases released in residential area? (C.O.No.2) [Knowledge]
- Q.NO.6. How will you prepare the land for drilling in swamp area? (C.O.No.3) [Knowledge]
- Q.NO.7. What is Ambient Air Quality Standards? (C.O.No.4) [Knowledge]
- Q.NO.8. It is noticed that oil spill spreads from one place to another. Explain how does the spreading takes places. (C.O.No.2) [Knowledge]
- Q.NO.9. What do you mean by booms? (C.O.No.4) [Knowledge]
- Q.NO.10. How will you prepare the land for drilling in swamp area? (C.O.No.3) [Knowledge]

Part B [Thought Provoking Questions]

Answer the Questions. Question carries EIGHT marks.

(5Qx8M= 40M)

Q.NO.11. There are many theories that attempt to explain the occurrence of accidents. Consider the Domino theory and explain it in detail with the help of an example of accident.

(C.O.No.1) [Comprehension]

Q.NO.12. Consider a disaster like Bhopal Gas Tragedy. What are all the Laws/ Acts that can be implemented in this accident? Explain the Acts/ Laws in detail. (C.O.No.2) [Comprehension]

Q.NO.13. Imagine a disaster like Deep Water Horizon taking place in Mumbai High Field (Offshore). What are all the Laws/ Acts that can be implemented in this accident? Explain the Acts/ Laws in detail. (C.O.No.2) [Comprehension]

Q.NO.14. Imagine you are the site manager of the drill site. What are the different types of hazard recognition programs will you select, that it is followed in the drill site to reduce the hazard and make it a safe environment for the workers. Explain those programs in detail. (C.O.No.3) [Comprehension]

Q.NO.15. While coming to write the exam from your home, what are the different hazards have you noticed. Identify those hazards and explain what kind of accidents may occur because of it. Also give precautions of the hazards. (C.O.No.2) [Comprehension]

Part C [Problem Solving Questions]

Answer the Questions. Question carries TWENTY marks. (2Qx20M=40M)

Q.NO.15. Compute the risk ranking for the following department of a particular company. If the annual budget of the company is 800,000 \$ how will you split the amount to various department and state your reason for it.

Dept	Hazard Score	Control Score	Control Credit	Property value (\$)	Business Profit (\$)	Business interruption (\$)	Personnel exposure (\$)
A	214	263	124	397	1345	1255	778
B	258	278	367	537	1276	1587	776
C	231	321	288	778	1487	1123	663
D	284	254	169	498	1654	1234	443
E	372	277	210	689	1597	1498	623
F	130	243	184	489	1276	1698	754

(C.O.No.3) [Comprehension]

Q.NO.16.

(a) Deep Water Horizon is one of the biggest offshore disaster. It caused of the largest oil spill. As an offshore HSE officer what are the response strategies and techniques you will apply to control the oil spill.

(b) A fire has broken out in a chemical plant. A part of the chemical plant was destroyed in the fire and many workers were injured. Explain this accident with help of any one appropriate tree analysis.

(C.O.No.2) [Comprehension]