


Name:			
Enrolment No:			
UPES End Semester Examination, December 2024			
Course: Legal Aspects of Safety, Health & Environment Program: B. Tech Fire & Safety Engineering Course Code: HSFS 3043		Semester: V Time: 03 hrs. Max. Marks: 100	
Instructions: All questions are compulsory.			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q1	The Factories Act defines the term, “young person”, as: a) a child b) an adolescent c) both (a) and (b) d) None of these	4	CO1
Q2	Assume that you are an officer working with the Chief Controller of Explosives. You visited a fire cracker factory for surprise inspection based on inputs received pertaining to flouting of safety norms. The security at the factory did not allow you to enter and obstructed you from carrying out your duties. Specify the actions you will take as far as “penalty” is concerned in line with the Indian Explosives Act 1884.	4	CO2
Q3	Define hazardous process in line with the Factories Act 1948.	4	CO1
Q4	Evaluate the powers given to the Inspector in the following scenarios: 1. Workers working in a dock where the hazardous chemicals are stored. Workers are not wearing adequate PPE and are involved in handling / loading / unloading of the chemicals. 2. Workers are working in a dock, where construction and repair work on the pavement is being undertaken. Scaffolding, iron bars, cement, sand and gravel are stored. Workers are involved in loading and unloading materials from the ship, they are not involved in any construction activity. Refer to the Dock Workers (Safety, Health and Welfare) Act to answer this question.	4 (2+2)	CO4
Q5	Explain the main difference as far as the powers of the pollution control board are concerned in the following acts. 1. The Air (Prevention and Control of Pollution) Act, 1981 2. The Environment Protection Act, 1986	4	CO3
SECTION B (4Qx10M= 40 Marks)			
Q6	State the penalties applicable for the following situation in line with the factories act 1948 as amended in 1987. Consider that safety culture	10	CO4

	<p>of the organization was below expectations and no action was taken by the management on the recommendations of the safety officer considering that it was a Hazardous Industry category.</p> <p>“A massive fire broke out at the Numaligarh oil refinery in Assam late on Monday night at a critical infrastructure near the oil wells. "A fire broke out at the Numaligarh Refinery Limited's Hydrocracker Unit (HCU) in vessel Number VV-04.”</p>		
Q7	<p>State the following definitions:</p> <ol style="list-style-type: none"> 1. Petroleum Class A 2. Petroleum Class B 3. Petroleum Class C 4. Flash point 5. Motor Conveyance 	10 (2*5)	CO1
Q8	<p>Refer to the Petroleum Act and answer the following questions.</p> <ol style="list-style-type: none"> 1. What is the threshold quantity beyond which storage of Class B and Class C petroleum will require a license. Also state whether any specific condition has to be met by the store management for safety precautions when storing such product in high quantity. 2. State the warning signs that must be included when storing or transporting Petroleum Class A. 	10 (5*2)	CO4
Q9	<p>Refer to the Factories Act 1948, as amended 1987 and answer the following:</p> <ol style="list-style-type: none"> 1. Explain the duties of the Occupier when the factory involves hazardous processes. 2. Explain the duties of the certifying surgeon for Hazardous Industry. <p style="text-align: center;">OR</p> <p>Consider that you are an inspector working with the Chief Inspector of Explosives. You got a tip about a factory manufacturing explosive, however it does not have a license for the same. It is operating with the license of manufacturing electronic goods. You undertake an surprise visit to the factory and raid it. You will file a report to the Chief Inspector considering the following.</p> <ol style="list-style-type: none"> 1. Actions to be taken as explosives were found. 2. Penalties applicable in this scenario. 	10 (5*2)	CO5

SECTION-C
(2Qx20M=40 Marks)

Q10	<p>A large amount of ammonium nitrate stored at the port exploded, causing at least 218 deaths, 7,000 injuries, and US\$15 billion in property damage, as well as leaving an estimated 300,000 people homeless. A cargo of 2,750 tons of the substance (equivalent to around 1.1 kilotons of TNT) had been stored in a warehouse without proper safety measures for the previous six years after having been confiscated by authorities from the abandoned ship MV Rhosus. A fire in the same warehouse preceded the explosion.</p> <p>Considering the above, analyze the following considering the Indian Explosives Act:</p> <ol style="list-style-type: none">1. Actions the inspector was supposed to undertake to ensure such an incident should not have happened.2. The actions the inspector is bound to take after the incident.3. Powers of the Central Government to direct inquiry.4. Penalties / punishment applicable. Consider whether conditions during grant of license were complied with and can the inspector recommend suspension / revocation of license.	20 (5*4)	CO4
Q11	<p>Parali burning, also known as stubble burning, is the practice of setting fire to the leftover straw after harvesting grains like wheat or paddy. It's a common method for clearing fields quickly and cheaply. Parali burning is a major contributor to air pollution in parts of north India. It releases toxic gases like carbon monoxide and fine particulates into the atmosphere, which can cause serious health problems. After considerable efforts, the respective state governments could not control the issue as farmers did not get sufficient incentives to shift to alternate methods of disposing the leftover straw. The problem still persists and has become a major issue affecting the health of a significant population in Northern India.</p> <p>Given the above, in reference to the Air Pollution Act, 1981 and the Environment Protection Act, 1986 analyze the following:</p> <ol style="list-style-type: none">1. Shortcomings in the existing law which have resulted farmers not being penalized for their actions.2. Amendments that you feel should be included in the different sections of the laws which may help prevent the problem.3. Penalties applicable.4. Powers of Pollution control Board officials in tackling the problem. <p style="text-align: center;">OR</p>	20 (5*4)	CO5

Consider the following work environment where workers are involved in working with Hazardous materials. In line with the Factories Act 1948, amended 1987, answer the following questions.

1. Violations by the factory manager in all respects including health and safety of workers.
2. Penalties that are applicable.
3. Duties of the Chief Inspector of Factories after violations are notified to him after an inspection by the Factories Inspector.
4. The Factories Inspector makes a surprise visit **6 months after the management has been convicted by the Court for violations committed**, and finds that the factory is indulging in similar violations. State the penalties applicable in this scenario.

