



Name:			
Enrolment No:			
UPES End Semester Examination, May 2024			
Course: Construction Safety & Management Program: M Tech- HSE Course Code: HSFS7003		Semester: VI Time : 03 hrs. Max. Marks: 100	
Instructions: Attempt all the questions.			
SECTION A (5Qx4M=20Marks)			
S. No.	Questions	Marks	CO
Q 1	Highlight the benefits of using “Load Charts” of a crane.	4	CO1
Q 2	Explain the term “Vertigo” and its effect.	4	CO1
Q 3	Name different types of cranes used in construction work activities.	4	CO1
Q 4	Emphasize the legal laws and their need for “third party inspections” of lifting appliances.	4	CO2
Q 5	Enlist the hazards in cofferdams used in construction work activities.	4	CO1
SECTION B (4Qx10M= 40 Marks)			
Q 6	Critique the effectiveness of current safety regulations in minimizing incidents during “work at height” activities. <p style="text-align: center;">OR</p> Select suitable control measures for the excavation with the following details: Dimension: 20m Deep x 10m Wide, Location: Adjacent to a Canal, Shift: Night shift, Excavation type: Top to bottom	10	CO4
Q 7	Being a safety in-charge of your location, examine the pre-requisite condition of worksite when piling activities are planned.	10	CO3
Q 8	With the help of behavioral aspects of safety, solve the complexities of manual material handling and draw a road map to minimize incidents in this operation.	10	CO2
Q 9	Highlight the role and responsibility of the dock inspector and discuss the various ways by which he may put penalties to the organization.	10	CO2
SECTION-C (2Qx20M=40 Marks)			
Q 10	A. A lifting activity is planned for the erection of girders for an upcoming bridge in the middle of the live road. Looking at worksite challenges and vulnerability, develop a lifting plan with the following details:	20	CO5

	<p>(i) Maximum Load to be used: 250 MT (ii) More than one crane to be used at a time to lift the girder (iii) This work is to be done for more than a month.</p> <p style="text-align: center;">OR</p> <p>B. Create a method statement for the trench work (1 m wide * 9 m deep) to be done towards identifying utilities for the upcoming shaft work excavation.</p>		
Q 11	<p>Refer to the image (given below), highlight the non-compliance on safety and develop a safe system of work.</p> <div style="text-align: center;">  </div> <p style="text-align: center;">(Activity: Excavation for laying out piping work)</p>	20	CO4