





Name: Enrolment No:			
<b>UPES</b> <b>End Semester Examination, May 2023</b>			
<b>Course: Safety in Construction</b> <b>Program: B Tech- Fire &amp; Safety Engineering</b> <b>Course Code: HSFS3005</b> <b>Instructions:</b>		<b>Semester: VI</b> <b>Time : 03 hrs.</b> <b>Max. Marks: 100</b>	
<b>SECTION A</b> <b>(5Qx4M=20Marks)</b>			
Sr. No.	Questions	Marks	CO
Q 1	Brief the role of the advisory committee as listed in BOCW.	04	CO2
Q 2	Explain the safety challenges in blasting work activities.	04	CO2
Q 3	Justify the need for training & education in safety at the workplace.	04	CO3
Q 4	Highlight the hazard and risks in demolition activities	04	CO2
Q 5	In which case, the safety harness is to be discarded.	04	CO1
<b>SECTION B</b> <b>(4Qx10M= 40 Marks)</b>			
Q 6	<p>As shown in the image (given below), do the assessment of the workplace and analyze the workplace safety condition with standard requirements. Share your assessment report with your reporting officer communicating existing conditions and things to be corrected for avoiding any unwanted events in future.</p> 	10	CO4
Q 7	Explain the safety challenges or issues encountered during excavation work activities. Highlight the technological solutions adopted in the last decades to avoid excavation-related accidents.	10	CO3
Q 8	Create standard operating conditions for fragile roof work activities keeping in mind the following: No. of workmen – 60 per day, Duration of work- 40 days, Season- Rainy, Previous work experience – Nil, Height- 20 Mtr.	10	CO5
	Assess the safe system of work in the activities given below and suggest control measures for avoiding adverse impacts on the site.	10	CO3

<p>Q 9</p>	<div style="text-align: center;">  <p><b>OR</b></p>  </div> <p>Being an expert, evaluate the safe system of work for the activities shown above and suggest suitable control measures.</p>		
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**SECTION-C**  
**(2Qx20M=40 Marks)**

<p>Q 10</p>	<p>Develop a lifting plan for the following activity:          Work: Loading U Shape Pre-Cast Concrete Girder (Loading of U shape structure on trailer)          Load to be lifted: 20 MT          Location: Near to the live road and also adjacent to OHE Lines.          Other information: The site condition is such a way that the crane is to be placed almost on the maximum radius and has to sway near the OHE lines.          OR          Create a group risk assessment for the following activities/ details:          Activity: Reinforcement work; (It includes the handling of rebars, cutting and finally binding of rebars at a height of 10m)</p>	<p><b>20</b></p>	<p><b>CO5</b></p>
<p>Q 11</p>	<p>Discuss confined space with examples. Explain in detail the safety challenges and safety precautions to be taken while entering into confined space.</p>	<p><b>20</b></p>	<p><b>CO2</b></p>