

CONFIDENTIAL

Name of Examination (Please tick, symbol is given)	:	MID		END	✓	SUPPLE	
Name of the College (Please tick, symbol is given)	:	COES	✓	CMES		COLS	
Program/Course	:	B. Tech (Civil)					
Semester	:	VIII th					
Name of the Subject	:	INFRASTRUCTURE SAFETY & MAINTAINENCE					
Subject Code	:	IFEG-480					
Name of Question Paper Setter	:	Dr Vikas Garg					
Employee Code	:	40000986					
Mobile & Extension	:	9690757370					
Note: Please mention additional Stationery to be provided, during examination such as Table/Graph Sheet etc. else mention "NOT APPLICABLE":							
FOR SRE DEPARTMENT							
Date of Examination	:						
Time of Examination	:						
No. of Copies (for Print)	:						

Note: - Pl. start your question paper from next page



UNIVERSITY OF PETROLEUM & ENERGY STUDIES
END SEMESTER EXAMINATION (April -2017)

Program & Branch: B. TECH (CIVIL)

Semester: VIII

Course Title: CONSTRUCTION SAFETY & MAINTAINENCE

Duration: 03 Hrs

Course Code : IFEG - 480

Max. Marks : 100

Note: Answer all questions from section A & B are compulsory. Answer any two questions from section c. Where ever draw neat sketches.

PART – A

- | | |
|---|---|
| 1) What do you understand by ARCTM? | 5 |
| 2) With a flow chart, explain Henrich's injury causation model. | 5 |
| 3) What is pre tender health and safety plan? | 5 |
| 4) What is the importance of evacuation plan during fire? | 5 |

PART – B

- | | |
|---|-------|
| 5) How will you access risk in a project? How it will be controlled at site? Also draw a table in which consequences, number of workers exposed to hazard probability of harm with control measures in place. | 3+4+3 |
| 6) What do you understand by ergonomics? Comment Bygghalsan view on ergonomics. | 5+5 |
| 7) What are the legal aspects of safety as per Indian factories act 1948? | 10 |
| 8) Why is safety gaining such importance in the present-day construction scenario? | 10 |

PART – C

- | | |
|---|-------------|
| 9) A metro tunnel is to be excavated for a length of 2.0 km at a depth of 450 m. This area is prone to water leakage and as well as gas leakage. What are the points to be discussed during training of workers? How will you consider geotechnical risk assessment of ground? How the safety of workers to be ensured for safe work? In case of emergency how the staff will be evacuated from the site. Also discuss record keeping will be done as per OSHA. | (4+4+4+4+4) |
| 10(a) What are methods for repairing of different types of cracks in building? | (10) |
| 10(b) What are the specific precautions to be taken during derricks and hoists? | (10) |

- 11 What are the significant hazards occurs during excavation? How will you prevent trench collapse? What are the precautions to be taken for the adjacent structures during excavation? What are the different slopes to be provided in various types of soil strata? (5+5+5+5).

C

O

Name of Examination (Please tick, symbol is given)	:	MID	END	✓	SUPPLE	
Name of the College (Please tick, symbol is given)	:	COES ✓	CMES		COLS	
Program/Course	:	B. Tech (Civil)				
Semester	:	VI th				
Name of the Subject	:	INFRASTRUCTURE SAFETY & MAINTAINENCE				
Subject Code	:	IFEG-480				
Name of Question Paper Setter	:	Dr. Irika Garg				
Employee Code	:	40000986				
Mobile & Extension	:	969077370				
Note: Please mention additional Stationery to be provided, during examination such as Table/Graph Sheet etc. else mention "NOT APPLICABLE":						
FOR SRE DEPARTMENT						
Date of Examination	:					
Time of Examination	:					
No. of Copies (for Print)	:					

Note: - Pl. start your question paper from next page



**UNIVERSITY OF PETROLEUM & ENERGY STUDIES
END SEMESTER EXAMINATION (MAY -2016)**

Program & Branch: B. TECH (CIVIL)

Semester: VIII

Course Title: CONSTRUCTION SAFETY & MAINTAINENCE

Duration: 03 Hrs

Course Code : IFEG - 480

Max. Marks : 100

Note: Answer all questions from section A & B are compulsory. Answer any two questions from section c. Where ever draw neat sketches.

PART A

1. How risks can be assessed at construction site? 5
2. What are the safety measures to be taken during work at height? 5
3. What are the precautions needed during demolition of structures? 5
4. How will you use bonding with epoxy in cracks? 5

PART B

5. What are the significant hazards occurs during excavation of tunneling? What are the different slopes to be provided in various types of soil strata? (4+4+2)
6. What are the occupational diseases can occur at construction site? (10)
7. What are the basic elements of ISO 14001:2004 for safety in construction? (10)
8. A worker is carrying out a construction work at 10th floor of the building. Suddenly his foot slip and he falls down from the top at ground floor. And caused major injuries in his head. Why this accident was happened? What would be the basic physical control measures? Is management responsible for this accident and what was their role? (2+4+4)

Section C

- 9(a) Discuss pre planning issues for the use of tower crane? Also explain what are control measures to be taken for using tower crane? What are the safety norms for tower crane? (4+4+2)
- 9(b) What are the agenda required for contractor pre start meeting? (10)

- 10 Why people fail at their work? What do you understand by ergonomics? How can ergonomics benefit in construction problems? What are the factors which contribute stress at construction industry? (5+5+5+5)
- 11(a) What do you understand by Scaffolding? What are the specifications of scaffolding? What are the significant hazards occurs while working on the scaffolding? What are the various PPE's is required while working for scaffolding? (3+3+3+3)
- 11(b) What are the mortars repair techniques by using shot create guniting? (8)