



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

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|---|---|
| 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

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| 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 Byggghalsan 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

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| 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).