

JK LakshmiPat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination, Jan 2022

M.Tech HSE Semester I

Roll No.....

Safety in Construction and Mining CE2204

Time: 2.5 hours

Max. Marks: 30

Instructions to students:

1. Do not write anything other than your roll number on question paper.
 2. Assume suitable data wherever required and mention it clearly.
 3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.
 4. Answer ALL the questions.
 5. Marks of each questions are indicated.
-

Q.1 Draw the "Risk Acceptability Criteria" diagram for mining operation. (02 Marks)

Q.2 What are the different types of apparatus broadly used globally for "rescue and recovery" operation in mines? (02 Marks)

Q.3 Suggest important safety and health measures to avoid accidents when working in confined spaces. (02 Marks)

Q.4 Explain the roles of the advisory committees and expert committees in Building and other Construction Workers '(Regulation of Employment and Conditions of Service) Act, 1996. (02 Marks)

Q.5 Enlist the major provisions in The National Mineral Policy 2019 those which are supposed to give a boost to the mining sector in India. (02 Marks)

Q.6 Analyze the Risk rating and draw the Basic Semi-quantitative Risk Rating Matrix for an underground mine. Take appropriate numeric risk values. (04 Marks)

Q.7 Predict the relationship between likelihood and consequence level for various events of mining operations with the help of suitable Risk Map. (04 Marks)

Q.8 Express with the help of “Risk Profile diagram” the basic outputs of quantitative risk analysis using suitable numeric data. (04 Marks)

Q.9 As a highway Safety engineer how would you facilitate the road safety at various stages of a highway construction project? (04 Marks)

Q.10 Majority of the accidents at construction sites are related to fall of persons working at a higher elevation. Identify the potential hazards associated with the scaffolding works and also suggest the important measures that should be taken to prevent the above hazards. (04 Marks)
