Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **17CE2042** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Articulate the Environmental Management Plan (EMP). | CO3 | 5 |
| b. | Explain the steps of risk assessment. | CO1 | 5 |
| c. | Define Fault Tree Analysis by using neat diagram. | CO2 | 5 |
| d. | Sketch the neat workflow diagram of environmental impact assessment. | CO1 | 5 |
| **(OR)** | | | | |
| 2. | a. | Explain the term;  i. Needs of social impact assessment  ii. Environmental monitoring  iii. Mitigation  iv. HAZOP (Hazardous Operability) study. | CO2 | 10 |
| b. | Define the Social Impact Assessment. Explain the tools and types adopted in social impact assessment. Explain the project documentation in social impact assessment. | CO2 | 10 |
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| 3. | a. | Define any three following terms by using neat diagram, wherever is required.  i. Failure Mode Effects Analysis (FMEA)  ii. Checklist methods  iii. EIA in project cycle  iv. Need of EIA | CO2 | 15 |
|  | b. | Articulate the advantage and disadvantage of expert systems. | CO4 | 5 |
| **(OR)** | | | | |
| 4. | a. | Define the risk assessment procedure by suitable flow chart. | CO2 | 5 |
| b. | Define and explain the term (Any three);  i. Baseline data  ii. Terms of References (ToR)  iii. Artificial intelligence and expert systems  iv. Network method  v. Flow chart for EIA process | CO2 | 15 |
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| 5. | a. | Define the environmental impact assessment. Describe in detail about types of EIA. | CO1 | 5 |
| b. | Write a short note on Capacity Development and Training. | CO1 | 5 |
| c. | Define the following terms:  i. Types of analysis of alternative  ii. Screening  iii. Scoping  iv. Types of Impact of EIA | CO1 | 10 |
| **(OR)** | | | | |
| 6. | a. | Explain the basic concepts behind the expert systems. | CO2 | 5 |
| b. | Explain the various types of matrix methods in detail. | CO3 | 5 |
| c. | Define the following terms (any five):  i. Process hazard analysis  ii. Safeguards  iii. Emergency preparedness plan  iv. Types of risk assessment  v. Impact identification in EIA  vi. Limitation of EIA | CO5 | 10 |
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| 7. | a. | Explain the term (any two);  i. Public participation in EIA  ii. Event tree analysis  iii. Environmental Risk Assessment Framework | CO2 | 10 |
| b. | Explain clearly the report preparation of environmental impact analysis. | CO4 | 10 |
| **(OR)** | | | | |
| 8. | a. | Make a appropriate flow diagram of hazards identification techniques. | CO4 | 5 |
| b. | Define the term (any two);  i. Dose response evaluation  ii. Approaches for addressing biological impacts  iii. List of methods of impact prediction (any five) | CO1 | 10 |
| c. | Write a short note on objectives of social impact assessment. | CO2 | 5 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Explain the process of risk management by using neat diagram. Define the steps of risk management. | CO2 | 10 |
| b. | Illustrate the Environmental Management Plan for port and harbor projects. | CO5 | 10 |