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

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

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| **Code :** | **14ME2035** | **Duration :** | **3hrs** |
| **Sub. Name :** | **INDUSTRIAL SAFETY ENGINEERING** | **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. | Define the term OSHA. | CO1 | 2 |
| b. | List the factors to be considered during identifying the causes of injury. | CO1 | 2 |
| c. | Explain the various responsibilities of principals in safety management. | CO1 | 16 |
| **(OR)** | | | | |
| 2. | a. | Define two hand control method. | CO1 | 2 |
| b. | Write any two differences between accidents and injuries. | CO1 | 2 |
| c. | Explain the various steps involved in Industrial safety efforts that have been referred to as the people safety program. | CO1 | 16 |
|  |  |  |  |  |
| 3. | a. | Define guarding. | CO2 | 2 |
| b. | State the advantages of presence sensing device. | CO2 | 2 |
| c. | List out the various methods used for safeguarding machines in an industry. | CO2 | 16 |
| **(OR)** | | | | |
| 4. |  | Explain in detail the safety requirements recommended in an industry for the use of power press by a safety department. | CO2 | 20 |
|  |  |  |  |  |
| 5. | a. | Define the term MSDS. | CO2 | 2 |
| b. | List out some of the common electrical hazards faced by a worker. | CO2 | 2 |
| c. | Explain in detail the various safety requirements recommended in an chemical industry for handling chemicals. | CO2 | 16 |
| **(OR)** | | | | |
| 6. |  | Explain the various safety principles to be followed during gas welding process and name some protective equipments used. | CO3 | 20 |
|  |  |  |  |  |
| 7. | a. | Name the three health hazards undergone by labour in paint shop. | CO3 | 2 |
| b. | Mention any two problem solving skills of the furnace operator. | CO3 | 2 |
| c. | Enumerate the safety responsibility to be followed in heat treatment process. | CO3 | 16 |
| **(OR)** | | | | |
| 8. | a. | Write short notes on the cancer causing chemicals used in paints. | CO3 | 4 |
| b. | Explain the various safety principles to be followed in sand and shot blasting process. | CO3 | 16 |
|  | | **Compulsory:** |  |  |
| 9. | a. | Discuss the various hazards and elaborate the safety principles to be followed during electroplating process. | CO3 | 10 |
| b. | Define hydro testing and explain the different safety precautions followed during hydro testing. | CO3 | 10 |