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



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

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **14ME2048** | **Duration :** | **3hrs** |
| **Sub. Name :** | **FOUNDRY TECHNOLOGY** | **Max. Marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.**  **No.** | **Sub Div.** | **Questions** | **Course Outcome** | **Marks** |
| 1. | a.  b.  c.  d. | Write short notes on the following:  Core prints.  Mould or cavity.  Core boxes.  Shrinkage allowance. | CO1 | 5  5  5  5 |
| **(OR)** | | | | |
| 2. | a. | Discuss briefly the various functions of a pattern and give common materials used for pattern making. | CO1 | 10 |
| b. | Describe the preparation of making a core. | CO1 | 10 |
|  |  |  |  |
| 3. | a. | Describe the process of molding sand preparation and conditioning. | CO1 | 14 |
| b. | Differentiate between green sand mould and dry sand mould. | CO1 | 6 |
| **(OR)** | | | | |
| 4. |  | Describe the procedure of making a mould with a two piece split pattern. | CO1 | 20 |
|  |  |  |  |  |
| 5. |  | Sketch and describe the working of a hot chamber and cold chamber die casting machines and differentiate between their diecasting processes. | CO2 | 20 |
| **(OR)** | | | | |
| 6. |  | Describe briefly the shell moulding process using neat sketches. State its advantages, disadvantages and generation applications. | CO2 | 20 |
|  |  |  |  |  |
| 7. | a. | Name the steps involved in a metal melting process. Mention the important criterias for selection of a melting furnace. | CO2 | 8 |
| b. | Describe the working principle of coreless induction furnace. | CO2 | 12 |
| **(OR)** | | | | |
| 8. |  | Explain the methods of flaw detection by NDT. | CO2 | 20 |
|  | | **Compulsory:** |  |  |
| 9. |  | Explain the gating system in mould and the factors controlling the gating design. | CO2 | 20 |