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

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **14ME2048** | **Duration :** | **3hrs** |
| **Sub. Name :** | **FOUNDRY TECHNOLOGY** | **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. | Discuss about any four types of core prints. | CO1 | 10 |
| b. | Write short notes on (i) draft or Taper allowance and (ii) Distortion allowance provided on castings with sketches. | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Write short notes on (i) Loose pattern (ii) Split pattern (iii) Gated pattern and (iv) Match-plate pattern. | CO1 | 10 |
| b. | Discuss about any four types of core boxes. | CO1 | 10 |
|  |  |  |  |  |
| 3. | a. | Differentiate between green sand moulding and dry sand moulding. | CO1 | 4 |
| b. | With neat sketches, explain the principle of working of: (i) Direct-reading moisture indicator and (ii) permeability meter. | CO2 | 16 |
| (OR) | | | | |
| 4. | a. | Write short notes on the following hand tools used in moulding:  (i) Gaggers and (ii) Riddle. | CO1 | 4 |
| b. | Discuss about the following techniques used in bench moulding:  (i) Three box moulding; (ii) Stack Moulding and (iii) Odd side moulding. | CO1 | 16 |
|  |  |  |  |  |
| 5. | a. | Write short notes electro-slag casting process. | CO2 | 4 |
| b. | Explain the Vacuum Moulding process with suitable sketch. | CO2 | 16 |
| (OR) | | | | |
| 6. | a. | State any four advantages of CO2 moulding process. | CO2 | 4 |
| b. | With a sketch explain the principle of investment casting process. | CO2 | 16 |
|  |  |  |  |  |
| 7. | a. | Discuss about how flaw detection by non-destructive testing is carried out using Magnetic Particle Inspection method. | CO2 | 4 |
| b. | With a sketch explain the working of oil and gas-fired furnace. | CO2 | 16 |
| (OR) | | | | |
| 8. | a. | State any two defects appearing in castings. Give their causes and remedies. | CO2 | 4 |
| b. | Discuss about the following Metallurgical inspection methods:  (i) Chill test; (ii) Fracture test and (iii) Macro-etching test. | CO2 | 16 |
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|  | | **Compulsory**: |  |  |
| 9. | a. | Discuss about the parts of a gating system with a neat sketch. | CO1 | 10 |
| b. | Discuss about some of the typical shapes of a purging basin. | CO1 | 10 |