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



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

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| **Code :** | **17ME2006** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MANUFACTURING PROCESSES** | **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. | With neat sketches, explain shell moulding. | CO1 | 10 |
| b. | Discuss the important properties of moulding sand. | CO1 | 10 |
| **(OR)** | | | | |
| 2. | a. | List out the pattern allowances and describe it with required sketch. | CO2 | 10 |
| b. | Briefly explain the various defects in casting with relevant sketches. | CO2 | 10 |
|  |  |  |  |  |
| 3. | a. | Discuss the types of extrusion process in detail with sketches. | CO3 | 10 |
|  | b. | Describe the rolling principle and discuss the various types of rolling mills in detail with sketches. | CO3 | 10 |
| **(OR)** | | | | |
| 4. | a. | Briefly explain the various defects in rolling process. | CO3 | 10 |
|  | b. | Describe the steps involved in extrusion process. | CO3 | 10 |
|  |  |  |  |  |
| 5. | a. | Illustrate the various operation performed in sheet metal with neat sketch. | CO4 | 20 |
| **(OR)** | | | | |
| 6. | a. | Discuss stretch forming and shearing processes in detail. | CO4 | 10 |
|  | b. | Describe the sheet metal bending process, its types and applications. | CO4 | 10 |
|  |  |  |  |  |
| 7. | a. | Explain the MIG welding process with neat sketch. Also discuss its applications. | CO5 | 20 |
| **(OR)** | | | | |
| 8. | a. | Discuss the various causes and remedies of welding defects. | CO5 | 10 |
|  | b. | Discuss the different types of flames in oxy-acetylene welding. Highlight its applications. | CO5 | 10 |
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|  | | **Compulsory**: |  |  |
| 9. | a. | Explain the different processes used for producing metal powders for powder metallurgy applications. | CO6 | 10 |
|  | b. | With mandatory flow chart, explain the various steps involved in the process of powder metallurgy. | CO6 | 10 |