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

G:\logo and QP Template\logo 3 Feb 2018 final.tif

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

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| **Code :** | **14ME2004** | **Duration :** | **3hrs** |
| **Sub. Name:** | **MANUFACTURING PROCESSES** | **Max. Marks:** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Explain about Shell casting process. | CO1 | 10 |
| b. | Explain the process of investment casting with neat sketches: List out its advantages and disadvantages. | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Highlight the different types of patterns used in casting processes. | CO1 | 10 |
| b. | Briefly clarify the various defects in casting with relevant sketches. | CO1 | 10 |
|  |  |  |  |  |
| 3. | a. | Explain the various defects in rolling process. | CO1 | 10 |
| b. | Describe the different methods of tube drawing process. | CO3 | 10 |
| (OR) | | | | |
| 4. | a. | Designate the process of injection molding. List out its advantages. | CO3 | 10 |
| b. | Differentiate between open die and closed die forging | CO1 | 10 |
|  |  |  |  |  |
| 5. | a. | Discuss stretch forming and shearing processes in detail: | CO2 | 10 |
| b. | Describe the sheet metal bending process, its types and applications. Also discuss the spring back phenomenon. | CO2 | 10 |
| (OR) | | | | |
| 6. | a. | Discuss stretch forming and shearing processes in detail | CO2 | 10 |
| b. | Describe the steps involved in deep drawing of sheet metal. | CO2 | 10 |
|  |  |  |  |  |
| 7. | a. | Explain the MIG welding process with neat sketch. | CO2 | 10 |
| b. | With neat sketch, describe the working of electron beam welding. | CO2 | 10 |
| (OR) | | | | |
| 8. | a. | Elucidate the TIG welding process with neat sketch. | CO2 | 10 |
| b. | Discuss the various causes and remedies of welding defects. | CO2 | 10 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | With a flow chart explain the various steps involved in the manufacture parts by powder metallurgy and discuss its applications. | CO3 | 20 |