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



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

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| **Code : 17ME2010** |  | **Duration :** | **3 hrs** |
| **Sub. Name : MACHINING 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. | Define tool life: Explain it with Taylor’s tool life equation. Discuss  the various factors affecting tool life. | CO3 | 10 |
| b. | With relevant sketches discuss the different types of chips produced in  metal cutting. | CO3 | 10 |
| (OR | | | | |
| 2. | a. | Describe the characteristics of commonly used cutting tool materials. State their applications. | CO4 | 10 |
| b. | Discuss the different types of tool wear / tool failure. | CO4 | 10 |
|  |  |  |  |  |
| 3. |  | With suitable sketches, explain various operations performed in a lathe. | CO1 | 20 |
| (OR) | | | | |
| 4. |  | Explain the construction and working principle of a shaper. Also discuss the quick return mechanism. | CO2 | 20 |
|  |  |  |  |  |
| 5. |  | How are milling cutters classified? Explain with neat sketches the different types of cutters used in milling with their applications. | CO4 | 20 |
| (OR) | | | | |
| 6. |  | With a  neat sketch,  describe  the constructional features and specifications of a Radial type drilling machine. | CO2 | 20 |
|  |  |  |  |  |
| 7. |  | How grinding wheels are designated? What are the various factors that affect the selection of grinding wheels. | CO5 | 20 |
| (OR) | | | | |
| 8. |  | Explain the following processes in detail with neat sketches: (a) Gear shaping (b) Gear hobbing. | CO1 | 20 |
| **Compulsory**: | | | | |
| 9. |  | Explain the working principle, equipment setup and applications of Electric Discharge Machining (EDM). | CO6 | 20 |