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



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

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| **Code :** | **13ME103 / 14ME1003** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BASIC MECHANICAL ENGINEERING** | **Max. Marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Explain the working principle of Babcock and Wilcox boiler with a neat sketch. | CO1 | 20 |
| **(OR)** | | | | |
| 2. | a. | Explain the mechanism of 4 stroke diesel engine with a neat sketch. | CO1 | 15 |
| b. | Differentiate between 2 stroke and 4 stroke engines. | CO1 | 5 |
|  |  |  |  |  |
| 3. |  | Explain with a neat sketch, the working of a nuclear power plant. | CO2 | 20 |
| **(OR)** | | | | |
| 4. |  | Draw a neat diagram and explain the working principle of an ocean thermal power plant. | CO2 | 20 |
|  |  |  |  |  |
| 5. |  | Describe the various steps in metal casting process with neat diagrams. | CO3 | 20 |
| **(OR)** | | | | |
| 6. |  | Explain the working principle of cupola furnace. | CO3 | 20 |
|  |  |  |  |  |
| 7. |  | Explain the concept of arc welding. | CO3 | 20 |
| **(OR)** | | | | |
| 8. | a. | Enlist and explain the properties of non-ferrous metals. | CO3 | 10 |
| b. | Describe the parts of shapping machine. | CO4 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Draw a neat diagram of milling machine and write down its method of operation. | CO4 | 10 |
| b. | Write short notes on CAD and CNC machines. | CO4 | 10 |