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



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

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| **Code :** | **17ME1001** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BASIC MECHANICAL ENGINEERING** | **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. | What is supercharging? Explain the structure and working of two stroke diesel engine. | CO1 | 10 |
| b. | Explain the working principle of a four stroke petrol engine with a sketch. | CO1 | 10 |
| **(OR)** | | | | |
| 2. | a. | Explain the working principle of a fire tube boiler with a sketch. | CO1 | 10 |
| b. | Explain the working principle of a split air conditioning system with a sketch. | CO2 | 10 |
|  |  |  |  |  |
| 3. | a. | Discuss the working principle of a wind power plant with a sketch. | CO3 | 10 |
| b. | Explain the principle of working of gas turbine power plant. | CO3 | 10 |
| **(OR)** | | | | |
| 4. |  | Explain the working principle of a diesel power plant with a sketch. | CO3 | 20 |
|  |  |  |  |  |
| 5. | a. | Explain the mechanical properties of engineering materials in brief. | CO4 | 10 |
| b. | Discuss briefly about composite materials. | CO4 | 10 |
| **(OR)** | | | | |
| 6. |  | Discuss the composition, properties, and applications of plastic materials. | CO4 | 20 |
|  |  |  |  |  |
| 7. | a. | Enumerate the operations which can be performed on lathe machine. | CO5 | 10 |
| b. | Explain the milling process in detail. | CO5 | 10 |
| **(OR)** | | | | |
| 8. | a. | Explain the process of deep drawing. | CO5 | 10 |
| b. | Explain the working of radial drilling machine with a sketch. | CO5 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Explain all the four phases of computer aided design. | CO6 | 10 |
| b. | Explain the activities involved in computer aided manufacturing. | CO6 | 10 |