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

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

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| **Code :** | **14ME1003** | **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 scavenging? Explain the structure and working of two stroke petrol engine? | CO1 | 10 |
| b. | Explain the working principle of a water tube boiler? | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Classify the steam turbines? | CO2 | 5 |
| b. | Explain the working principle of an impulse turbine with a sketch? | CO2 | 15 |
|  |  |  |  |  |
| 3. | a. | Explain the principle of working of a wind power plant? | CO3 | 10 |
| b. | Explain the principle of working of OTEC power plant? | CO3 | 10 |
| (OR) | | | | |
| 4. | a. | Describe the working principle of geothermal power plant? | CO3 | 10 |
| b. | Discuss the construction and working principle of diesel power plant? | CO3 | 10 |
|  |  |  |  |  |
| 5. | a. | Explain the mechanical properties of engineering materials in brief. | CO4 | 10 |
| b. | Discuss briefly about composite materials? | CO4 | 10 |
| (OR) | | | | |
| 6. | a. | Discuss the properties and applications of stainless steel? | CO4 | 10 |
| b. | Discuss the properties and applications of aluminum and its alloys? | CO4 | 10 |
|  |  |  |  |  |
| 7. | a. | Enumerate the operations which can be performed on milling machine? | CO5 | 10 |
| b. | What is forging? Explain the different type of forging process. | CO5 | 10 |
| (OR) | | | | |
| 8. | a. | Explain the process of tube drawing? | CO5 | 10 |
| b. | Explain the working principle of a 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 |