16002(D) \_ 0 DEC 2016

## B. Tech 1st Semester Examination Workshop Technology (CBS) ME-103

Time: 3 Hours Max. Marks: 40

The candidates shall limit their answers precisely within the answerbook (40 pages) issued to them and no supplementary/continuation sheet will be issued.

- **Note:** Attempt five questions in all and question no. 8 is compulsory and is short answer type. Missing data, if any, can be assumed suitably. All questions carry equal marks.
- 1. (a) What should be the properties to be good engineering material?
  - (b) Write down the properties and applications of stainless steel. (8)
- 2. (a) Compare the hot and cold working processes.
  - (b) Describe the process of hot extrusion of tubes. (8)
- Explain the various characteristics of foundry sands. Also explain the composition of foundry sands. (8)
- 4. (a) List down the marking and measuring tools and describe with sketches any three of them.
  - (b) Explain in brief Dowel, lap and grooved joints. (8)
- 5. Explain the working of a lathe machine. What are the various operations that may be performed on lathe? (8)

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- 6. (a) Classify the common welding processes.
  - (b) Explain in brief the various types of flames in welding process.(8)
- 7. (a) Compare the NC and CNC machines.
  - (b) Explain the commonly used fitting tools. (8)
- 8. (a) Classify the engineering materials.
  - (b) Mention any two applications of forming.
  - (c) What are the additives for sands?
  - (d) Sketch the centre bit.
  - (e) Explain the working principle of planer.
  - (f) What is brazing?
  - (g) Define a manufacturing system.
  - (h) Write any two comparison of metals and non metals. (8×1=8)