

Roll No. ....

**24008**

**B. Tech 1st Sem. (Common for All  
Branches) Examination – December, 2018**

**BASICS OF MECHANICAL ENGG.**

**Paper : ME-101-F**

***Time : Three Hours ]***

***[ Maximum Marks : 100***

***Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.***

***Note : Attempt five questions in all, selecting one question from each Section. Question No. 1 is compulsory.***

**1. Explain the following :**

**4 × 5 = 20**

(a) Explain the CNC System.

(b) Explain Rope drive and Belt drive with sketch.

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(c) What are human comfort conditions ? Explain.

(d) Explain Enthalpy, Entropy and internal energy of system.

**SECTION – A**

2. Explain the various operations performed by the Lathe machine also explain its parts with neat sketch. 20
3. Explain the throttling calorimeter in detail with neat sketch. 20

**SECTION – B**

4. What is Psychrometry ? Explain different psychrometric process with diagram. 20
5. Explain construction and working of a Kaplan Turbine with help of neat sketch. 20

**SECTION – C**

6. Explain the single plate clutch in detail with neat sketch. 20

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7. Explain the Stress-Strain diagram for Ductile and Brittle material and also explain Hook's law. 20

**SECTION – D**

8. What is NC system ? Explain different component of NC system. 20
9. What is difference between NC and CNC system ? Explain their relative advantages and disadvantages. 20

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