

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.

- (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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