B.Tech. 2nd Semester F-Scheme Examination,
May–2018
BASICS OF MECHANICAL ENGG.
Paper–ME–101–F
(Common for all Branches)

Time allowed : 3 hours]   *[Maximum marks : 100*

Note : *Attempt any **five** questions from **eight** questions. At least **one** question from each section. Q. No. 1 is **compulsory**.*

1.   (a)   What is CNC machines.   2×10=20

     (b)   Write name of three important Properties of steam.

     (c)   Define manufacturing system.

     (d)   What is Zeroth law of thermodynamics ?

     (e)   Name the different Types of stress.

     (f)   Define vapour compression refrigeration system.

     (g)   What do you mean by Slip in Belt ?

     (h)   What are extensive and intensive property ? Give examples.

     (i)   Name the different elements of NC machine.

     (j)   What is Hydraulic Turbine ?

Section–A

2.   What do you understand by Entropy ? Discuss First law of thermodynamics.   20

3. What is Saturation temperature ? Derive expression for Enthalpy, entropy and specific volume for Wet and Dry steam. 20

Section–B

4. Explain vapour compression refrigeration system in detail. 20

5. (a) What are the difference between Francis and Kaplan trubine ? 10

   (b) Explain the concept of Centrifugal pumps. 10

Section–C

6. Explain Length of cross belt drive with the help of figures. 20

7. Derive Bending Equation in details. 20

Section–D

8. Explain in detail the Lathe machine. 20

9. Explain the concept of NC machine with its Merits demerits and Applications. 20