

S. B. Roll. No.....

ENGINEERING MATERIALS
3rd Exam/Mech./3053/Jun'2021
(For 2018 Batch Onwards)

Duration: 1.15Hrs.

M.Marks:25

SECTION-A

Q1. Attempt any three questions.

3x5=15

- i. Explain various mechanical properties of metals.
- ii. Explain FCC crystal structure arrangement.
- iii. Discuss the following terms (i) H.S.S. (ii) Stainless steel (iii) Grey cast iron.
- iv. Write the purposes of heat treatment.
- v. Explain different types of annealing process.
- vi. Differentiate thermoplastic and thermo-setting plastic.
- vii. What are the properties and uses of aluminum?

SECTION-B

Q2. Attempt any one question.

1x10=10

- a. Draw stress and strain diagram for ductile material and discuss the behavior of material under load.
- b. Draw Iron- Carbon equilibrium diagram and discuss it in details.
- c. What is heat treatment furnace? Explain various types of heat treatment furnaces.
- d. What are composite materials? Explain various types of composites and discuss the properties of composite materials