Enroll No………………….

ME-13

B.Tech.–I Sem. (Reg./Ex) & II (Ex.)
Examination, March-2021
Basic Mechanical Engineering

Time: Three Hours

Maximum Marks:70

Note: Attempt any five questions. (Each question carries equal marks)

Q.1 (a) Draw and Explain Stress-Strain curve for Ductile Material.

(b) Explain Mechanical Properties of Engineering Materials- (any-2)

(i) Ductility

(ii) Fatigue

(iii) Hardness

(iv) Malleability

Q.2 (a) Explain Classifications of Engineering Materials.

(b) Draw and Explain Iron-Carbon diagram with phase transformation.

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Q.3 (a) What do you understand by Sinebar. Explain in Detail with working.

(b) Derive Bernoulli's Equation for incompressible fluids and write its assumptions.

Q.4 (a) Describe construction and working of Venier Calipers.

(b) Describe and five operations performed of Lathe Machine.

Q.5 (a) What do you understand by Viscosity of Fluid? Explain.

(b) Explain Construction and working and construction of Single Acting Reciprocating Pump.

Q.6 (a) Explain the statement of Second law of Thermodynamics.

(b) Write the difference between Boiler Mountings and Accessories.

Q.7 (a) Draw and explain Construction and Working of 4-Stroke Petrol Engine.

(b) Explain the difference between S.I. Engine and C.I. Engine.

Q.8 (a) Write short note on the followings- (any-2)

i) Hook's Law

ii) First Law of Thermodynamic

iii) Thermometer

iv) Welding.

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