(Please write your Exam Roll No.) Exam Roll No. .

END TERM EXAMINATION

FIRST SEMESTER [B.TECH] DECEMBER 2025 – JANUARY 2026

Paper Code: ES-119 **Subject: Manufacturing Process**

Time: 3 Hours **Maximum Marks: 60**

Note: Attempt all questions as directed. Internal choice is indicated.

Q1 Attempt **any four** of the following questions: **(4x5=20)**

(a) Define Manufacturing. Explain its importance towards technological and social economic development.
(b) What is Riser? Why is it used?
(c) Define any five mechanical properties of metals.
(d) What do you mean by DCSP and DCRP?
(e) Why edge preparation needed in welding?
(f) Explain the characteristics of plastics.
(g) Differentiate between hot working and cold working of metals.
(h) How thermosetting plastics differ from thermoplastics?

Q2 (a) Enlist types of patterns. Discuss any four in detail with sketch. **(5)**
(b) Explain shell casting with neat sketch, also give its advantages, disadvantages and application. **(5)**

OR

Q3 Explain the construction, operation and zones of Cupola furnace with a neat sketch? **(10)**

Q4 (a) Explain flames of oxy-acetylene gas welding with neat sketch. **(6)**
(b) Classify the electrodes with their functions. **(4)**

OR

Q5 (a) Explain with diagram the principle, advantages, limitations and application of GMAW. **(6)**
(b) Explain any four welding defects. **(4)**

Q6 (a) Explain principle of extrusion. Differentiate hot and cold extrusion process. **(6)**
(b) Explain the terms: shearing, bending, drawing and metal spinning. **(4)**

OR

Q7 (a) Define deformation process. Explain principle of rolling of metals in detail. **(6)**
(b) Differentiate between wire and rod drawing operation. **(4)**

Q8 Define powder metallurgy. Explain stages of its process in detail. **(10)**

OR

Q9 Explain the following process: Injection moulding, Blow moulding and Rotational moulding. **(10)**

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