



CBCS SCHEME

18MT44

Fourth Semester B.E. Degree Examination, Dec.2023/Jan.2024 Manufacturing Technology

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is manufacturing? Describes the classification of patterns with appropriate sketches. (10 Marks)
- b. Explain in detail any four types of pattern allowances. (10 Marks)

OR

- 2 a. Demonstrate the Jolt squeeze machine and explain. (08 Marks)
- b. Show the graphical representation of Gating system labeling all the components. (07 Marks)
- c. Describe the desirable properties of sand moulding. (05 Marks)

Module-2

- 3 a. Classify metal working based on working temperature and explain them. (04 Marks)
- b. Write the advantages and disadvantages of metal forming. (06 Marks)
- c. What is Forging? Explain open die and close die Forging with a neat sketch. (10 Marks)

OR

- 4 a. Name the types of Rolling and explain the variables in rolling. (05 Marks)
- b. Discuss the common defects in rolled product. (05 Marks)
- c. What are the classifications of tube drawing with neat sketch? Explain tube drawing with floating mandrel and with moving mandrel. (10 Marks)

Module-3

- 5 a. With a neat sketch, explain Direct and Indirect extrusion process. (06 Marks)
- b. Describe with a neat sketch, Atomic hydrogen welding process. (08 Marks)
- c. State the advantages and limitations of welding process. (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

OR

- 6 a. Explain various forms of punching with neat sketch. (any four) (06 Marks)
b. Write the parameters affecting drawability. (04 Marks)
c. Elaborate with sketch, Flux Shielded Metal Arc Welding (FSMAW). (10 Marks)

Module-4

- 7 a. Distinguish between conventional and non conventional machining process. (06 Marks)
b. What are the specific advantages and disadvantages of Laser Beam Machining? (04 Marks)
c. With a neat sketch, explain the working principle and operations of USM process. (10 Marks)

OR

- 8 a. Explain the derived properties of abrasive materials used in AJM. (06 Marks)
b. Discuss various types of lasers used in LBM process. (06 Marks)
c. Explain the process parameters and process characteristics of PAM process. (08 Marks)

Module-5

- 9 a. Explain any two CNC machining centers. (10 Marks)
b. What are the fundamental steps involved in developing CNC part programs? (10 Marks)

OR

- 10 a. Mention the advantages, disadvantages and applications of CNC machines. (10 Marks)
b. Explain computer-aided part programming system (APT) with simple block diagram. (10 Marks)
