

CBCS SCHEME

USN

--	--	--	--	--	--	--	--	--	--

18ME35A



Third Semester B.E. Degree Examination, June/July 2025 Metal Cutting and Forming

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. With a neat sketch, explain a single point cutting tool nomenclature. (12 Marks)
- b. Explain the following :
i) Cutting speed
ii) Depth of cut
iii) Metal removal rate
iv) Feed (08 Marks)

OR

- 2 a. With a sketch, explain the parts of lathe. (12 Marks)
- b. List and explain any four operations carried out on lathe. (08 Marks)

Module-2

- 3 a. With a neat sketch, explain the following :
i) Reaming
ii) Boring
iii) Counter boring
iv) Counter sinking (08 Marks)
- b. With a sketch, explain horizontal milling machine. (12 Marks)

OR

- 4 a. What is indexing? Explain compound indexing. (10 Marks)
- b. Explain the construction of a shaping machine with a sketch. (10 Marks)

Module-3

- 5 a. Define tool wear. Explain the different forms of tool failure. (10 Marks)
- b. Explain the factors affecting tool life. (10 Marks)

OR

- 6 a. Explain the different types of cutting fluids and their applications. (10 Marks)
- b. With a neat sketch, explain crater wear and flank wear. (10 Marks)

Module-4

- 7 a. Explain different types of forging defects. (10 Marks)
- b. Explain hot working and cold working mentioning its advantages and disadvantages. (10 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

- 8 a. With a neat sketch explain wire drawing and tube drawing processes. (10 Marks)
- b. List the types of rolling mills. Explain any two types of rolling mills. (10 Marks)

Module-5

- 9 a. With a neat sketch explain embossing and coining operation. (10 Marks)
- b. With a neat sketch explain
- i) Compound dies ii) Progressive dies (10 Marks)

OR

- 10 a. Define the following :
- i) Bending force ii) Bending allowance (10 Marks)
- b. Define the following :
- i) Blanking
- ii) Punching
- iii) Forming
- iv) Drawing (10 Marks)
