

# CBCS SCHEME

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21MR32

## Third Semester B.E. Degree Examination, June/July 2023 Manufacturing Processes

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Choose proper moulding process to make precise and intricate shape components. (10 Marks)  
b. Distinguish between Balanced core and Hanging core. (10 Marks)

**OR**

- 2 a. Explain the baking type core making process, with neat sketch. (10 Marks)  
b. With neat sketch, explain working of indirect arc electric furnace. (10 Marks)

### Module-2

- 3 a. Distinguish between Explosive welding and Thermit welding. (10 Marks)  
b. Explain Laser welding with neat sketch. (10 Marks)

**OR**

- 4 a. Explain the Eddy current inspection. (10 Marks)  
b. Show and explain the formation of different zones in welding. (10 Marks)

### Module-3

- 5 a. Distinguish between Capstan lathe and Turret lathe. (10 Marks)  
b. Explain different Operations on lathe. (10 Marks)

**OR**

- 6 a. Explain classification of drilling and boring. (10 Marks)  
b. Define : i) Milling ii) Shaping iii) Planning iv) Slitting v) Indexing. (10 Marks)

### Module-4

- 7 a. What is the need for Unconventional Machining Process? (10 Marks)  
b. Identify the mechanism of material removal, transfer media and energy source of LBM. (10 Marks)

**OR**

- 8 a. List the applications and advantages of :  
i) EBM ii) LHM iii) WJM iv) ECM v) EDM. (10 Marks)  
b. Identify the mechanism of material removal , transfer media and energy source of WJM. (10 Marks)

### Module-5

- 9 a. Define : i) Rolling ii) Forging iii) Drawing iv) Bending v) Spinning. (10 Marks)  
b. Explain the process of Cold forming. (10 Marks)

**OR**

- 10 a. Explain the types of dies with its applications. (10 Marks)  
b. Write a short note on 3D – printing and Rapid prototyping. (10 Marks)

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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.