

**6TH SEM ./MECH./DIP IN MECH. /MECH(SAND.)/ MECH(IND.INT)  
/2023(S)**

**TH-4 Advance Manufacturing Processes**

Time- 3 Hrs

Full Marks: 80

Answer any five Questions including Q No.1& 2  
Figures in the right-hand margin indicates marks

2 x 10

1. Answer All questions

- a. Define Total productive Maintenance.
- b. Write about the application of Plastics.
- c. Compare Additive Manufacturing and CNC.
- d. Define Web based Rapid prototyping system.
- e. What are the different types of Moulding process?
- f. Differentiate between Modern Machining Processes and Traditional Machining processes.
- g. Write the applications of Ultrasonic machining.
- h. Explain encapsulation process.
- i. Write the application of Electron Beam Machining.
- j. Explain Flexible Manufacturing process.

6 x 5

2. Answer Any Six Questions

- a. Write about the different application of Additive Manufacturing process.
- b. State the layouts of Special Purpose Machining.
- c. Write about the concept and general elements of Special Purpose Machines.
- d. Write about Transfer moulding in detail.
- e. Explain Plasma Arc Machining.
- f. Explain Extruding and Casting in Plastic processing
- g. Write about the rapid prototyping processes.

3. Explain Electro Chemical Machining process in detail. 10

4. Discuss 3-D printing process principle, materials, advantages and limitations. Draw the Diagram where necessary. 10

5. Write about the principle, Material removal rate and application of Laser Beam machining. 10

6. Discuss about different types of machine tool maintenance. 10

7. Write short notes on 4 x 2.5

- a. Repair cycle
- b. Productivity improvement by SPM
- c. Concurrent Engineering
- d. Laminating Plastics