U.S.N.										

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

September / October 2023 Supplementary Examinations

Programme: B.E. **Semester: VII**
Branch: Mechanical Engineering **Duration: 3 hrs.**
Course Code: 20ME7DEADM **Max Marks: 100**
Course: Additive Manufacturing **Date: 21.09.2023**

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may suitably be assumed.

UNIT - I

1	a)	Elaborate the steps involved in AM process.	**10**
	b)	Differentiate between AM and CNC machining.	**10**

OR

2	a)	Describe the classification of AM processes indicating suitable raw materials.	**10**
	b)	Elaborate the various scan patterns w.r.t. Vat Polymerization process.	**10**

UNIT - II

3	a)	Explain the SLS process with neat sketch.	**10**
	b)	The parameters that precise control of extrusion is a complex trade-off. Describe.	**10**

OR

4	a)	With neat sketch describe the electron beam melting.	**10**
	b)	Describe the extrusion-based systems with neat sketch.	**10**

UNIT - III

5	a)	What are all the materials used in material jetting? Describe.	**10**
	b)	Describe the binder jetting process with neat sketch.	**10**

UNIT - IV

6	a)	With neat sketch describe the CAM-LEM process.	**10**
	b)	Describe the laser power DED process with neat sketch.	**10**

UNIT - V

7	a)	With neat sketch elaborate the thermal spray process.	**10**
	b)	The post-processing techniques which are used to enhance components. Describe.	**10**

****