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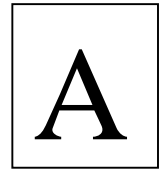
**SNS College of Technology, Coimbatore-35.  
(Autonomous)**

**B.E / B.Tech- Internal Assessment -III  
Academic Year 2023-2024 (Odd Semester)**

**Seventh Semester**

**Aerospace Engineering**

**19ASZ401– 3D Printing for Space Components**



**Time: 1 ½ Hours**

**Maximum Marks: 50**

**Answer All Questions**

**PART - A (5x 2 = 10 Marks)**

		CO	Blooms
1.	How long is the lamination process?	CO4	Und
2.	List out the types of fibers are required for thermal bonding.	CO4	Ana
3.	What is the LOM process?	CO4	Rem
4.	How many models of 3D printers are there?	CO5	Und
5.	Do build a process of bio plotter.	CO5	App

**PART B (13+13+14 =40 marks)**

			CO	Blooms
6.	(a)	Illustrate the construction and working concept of extrusion based sheet lamination process.	13 CO4	Und
		(or)		
	(b)	Enumerate the detail explanation of thermal bonding process in additive manufacturing	13 CO4	App
7.	(a)	Organize the droplet formation technologies in 3D printing with neat sketch.	13 CO5	App
		(or)		
	(b)	Construct the deposition process with neat sketch	13 CO5	App
8.	(a)	Give a detailed explanation of extrusion process followed in rocket parts manufacturing industry.	14 CO4	Cre
		(or)		
	(b)	List out the additive manufacturing materials used in aerospace industry.	14 CO5	Cre

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**Abbreviations:** Rem- Remember: Und- Understand : App-Apply: Ana-Analyze: Eva-Evaluate:  
Cre-Create

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Seventh Semester

Aerospace Engineering

19ASZ401– 3D Printing for Space Components

B

Time: 1 ½ Hours

Maximum Marks: 50

Answer All Questions

PART - A (5x 2 = 10 Marks)

		CO	Blooms
1.	How many types of extruder are there?	CO4	Und
2.	What is the process of film lamination?	CO4	Rem
3.	Discover are three bonding methods?	CO4	Ana
4.	What are the three stages of bio printing?	CO5	Rem
5.	List out the material application in 3D printing technology.	CO5	Ana

PART B (13+13+14 =40 marks)

			CO	Blooms	
6.	(a)	With neat sketch explain the concept of FDM.	13	CO4	Und
		(or)			
	(b)	Illustrate Bio-extrusion process with neat sketch.	13	CO4	Und
7.	(a)	Discover the Bio-plotter concept in 3D printing process.	13	CO5	Rem
		(or)			
	(b)	Summarize about material delivery concept in 3D printing Technology.	13	CO5	App
8.	(a)	Give a detailed explanation of extrusion process followed in satellite parts manufacturing industry.	14	CO4	Cre
		(or)			
	(b)	Categorize a printing process in additive manufacturing industry.	14	CO5	Cre

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Abbreviations: Rem- Remember: Und- Understand : App-Apply: Ana-Analyze: Eva-Evaluate:

Cre-Create