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

B.E / B.Tech- Internal Assessment -II  
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 to build a drone step by step?	CO2	Rem
2.	Compare the 3 types of CAD?	CO2	Ana
3.	Write the principle of photo polymerization?	CO3	App
4.	Write about the uses of vat photo polymerization?	CO3	App
5.	What polymers are used in 3D printing?	CO3	Rem

PART – B (2 x 13=26 Marks)

			CO	Blooms	
6.	(a)	Briefly explain about the concept of design model preparation for AM.	13	CO2	Und
		(or)			
	(b)	What is model slicing? Explain with neat sketches for AM.	13	CO2	Rem
7.	(a)	With neat sketch explain about powder bed fusion process.	13	CO3	App
		(or)			
	(b)	Explain in detail about the properties of photo polymerization materials.	13	CO3	Und
8.	(a)	With neat sketches explain the part orientation and support generation in AM.	14	CO2	App
		(or)			
	(b)	Enumerate the process involved in powder bed fusion mechanism.	14	CO3	Und

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

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**Academic Year 2023-2024 (Odd Semester)**  
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**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)**

		<b>CO</b>	<b>Blooms</b>
1.	What are the design aspects of DFAM?	CO2	Und
2.	Classify the difference between DFAM and DFM?	CO2	Und
3.	What is an example of photo polymerization?	CO3	App
4.	How is powder used in 3D printing?	CO3	Rem
5.	What type of 3D printing process uses a powdered material?	CO3	Rem

**PART – B (2 x 13=26 Marks)**

				<b>CO</b>	<b>Blooms</b>
6.	(a)	Enumerate the detail about tool path system in AM	13	CO2	Und
		(or)			
	(b)	Give detail explanation about design for AM.	13	CO2	App
7.	(a)	Explain the concept of Photo polymerization process in AM	13	CO3	Und
		(or)			
	(b)	Write about Powder fusion mechanism in AM.	13	CO3	App
8.	(a)	List out the design process for drone components in AM.	14	CO2	Rem
		(or)			
	(b)	With neat sketch explain about electron beam melting process.	14	CO3	App

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

