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Common Course Papers (Multi Courses)

2025-12-17

FOUNDATIONS OF ENGINEERING MODELLING AND APPLICATIONS

SRM UNIVERSITY A.P

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SRM UNIVERSITY – AP, ANDHRA PRADESH

End Term Examination, Dec 2025

[Question Paper ID: 010896]

Subject	: FOUNDATIONS OF ENGINEERING MODELLING	Subject	: FIC 126
Title	AND APPLICATIONS	Code	
Batch	: 2025	Max Marks	: 50
Degree	: B.Tech.	Duration	: 2 hours
Branch	: ME	QP Set	: 2

A (4 × 5 = 20 Marks)

Answer **any 4** Questions

		Marks	CO	BL
1.	Draw a flowchart for Generic method of additive manufacturing process. How additive manufacturing leads to efficient product development?	5	1,2,3	1
2.	Explain the key differences between additive manufacturing (AM) and traditional subtractive manufacturing processes.	5	1,2,4	2
3.	Discuss the major advantages and limitations of the powder metallurgy process?	5	2,3	4
4.	Classify the welding processes depending upon (a) Depending upon the mechanism (b) Depending upon the position of welding (c) the different phases of base and filler material	5	1,2,3	6
5.	Discuss the advantages and limitations of CAD over manual drafting.	5	1,2,3	6
6.	Discuss different types of coordinate systems used in modelling	5	1,2,3	6

B (3 × 10 = 30 Marks)

Answer **any 3** Questions

		Marks	CO	BL
7.	Define Computer-Aided Design (CAD) and explain the applications of CAD in various engineering fields such as mechanical, civil, and electrical.	10	1,2	1
8.	Differentiate between Unidirectional and Aligned methods of dimensioning with neat sketches.	10	2,3,4	1
9.	Discuss the applications of additive manufacturing in various engineering fields such as aerospace, automotive, biomedical, architecture, and robotics. Provide suitable examples.	10	3,4	2
10.	Explain the working principle of the extrusion-based additive manufacturing process and discuss its major advantages and limitations.	10	3,4	5

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