Code No: I1510/R16

M. Tech. I Semester Regular Examinations, January-2017

DESIGN FOR MANUFACTURING AND ASSEMBLY

[Common to Machine Design (15) and Mechanical Engg. Design (14)]

Time: 3 Hours **Max. Marks: 60**

Answer any FIVE Questions
All Questions Carry Equal Marks

1.	a	What is DFMA? How the development of DFMA is been progressed?	6
	b	Differentiate between DFA, DFM and DFMA.	6
2.	a	Explain the effect of part symmetry on handling time.	6
	b	Explain the effect of part thickness and weight on handling time.	6
3.	a	Briefly discuss the product design considerations in machining with neat sketches.	6
	b	Discuss the applications of design for machining rules.	6
4.	a	List out and explain the effect of casting discontinuities on the properties of a casted product.	6
	b	Briefly explain the design guidelines for extruded sections with neat sketches.	6
5.	a	Discuss the general design recommendations for forging operation.	6
	b	Explain the effect of thermal stress in weld joints.	6
6.	a	Discuss the importance of pre and post treatment of welds.	6
	b	Sketch and explain how to choose parting line in forging design.	6
7.	a	Briefly explain the factors that effect drawability.	6
	b	Explain component design for blanking operation.	6
8.		Write a brief note on the following: a) Multi station assembly system b) Automated assembly system	12

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