Code No:**R164103E** **R16** **Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February – 2020

DESIGN FOR MANUFACTURE

(Mechanical Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any FOUR questions from Part-B
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PART–A *(14 Marks)*

1.	a)	What is meant by creativity in design?	[3]
	b)	Give a brief note on on-center design.	[2]
	c)	What is the effect of micro pores on casting properties?	[3]
	d)	What is the prominence of gutter in forging die?	[2]
	e)	Compare uniform wall thickness and uniform thickness in extruded sections.	[2]
	f)	List out the design rules for machining of plastic components.	[2]

PART–B *(4x14 = 56 Marks)*

2.	a)	Discuss the basic principles of designing for economical production.	[7]
	b)	What do you understand from Design philosophy? Explain.	[7]
3.	a)	Briefly discuss the machining rules for hole making operation.	[7]
	b)	Discuss in detail about the general design recommendations for rotational and non- rotational machined parts.	[7]
4.	a)	Explain the basic features of solidification in casting process.	[7]
	b)	How the casting process affects casting principles? Explain.	[7]
5.	a)	Explain the design of brazed joints with neat sketches.	[7]
	b)	Discuss the effect of location of parting line in forging design.	[7]
6.	a)	What do you know about Keeler Goodman forging line diagram? Explain.	[7]
	b)	Explain design considerations affecting drawability.	[7]
7.	a)	Explain the design considerations for blow moulding.	[7]
	b)	Discuss Visco elastic and creep behavior in plastics.	[7]

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