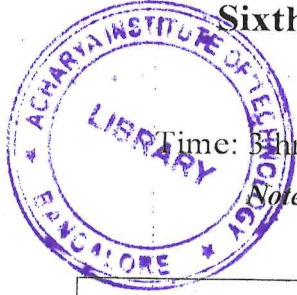


CBCS SCHEME

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BME613D



Sixth Semester B.E./B.Tech. Degree Examination, June/July 2026 Design for Manufacturing and Assembly

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks, L: Bloom's level, C: Course outcomes.

Module – 1				M	L	C
Q.1	a.	Discuss the general design rules for manufacturability.	12	L2	CO1	
	b.	Explain the criteria for material selection.	8	L2	CO1	
OR						
Q.2	a.	Describe the basic principles of designing for economical production.	10	L2	CO1	
	b.	List and explain the selection of materials for design developments in material technology.	10	L2	CO1	
Module – 2						
Q.3	a.	Describe the design features of milling cutters and counter sunk screws.	10	L2	CO2	
	b.	Explain simplification by separation and simplification by amalgamation.	10	L2	CO2	
OR						
Q.4	a.	Discuss the redesign of casting based on parting line considerations.	8	L2	CO2	
	b.	Describe the identification of uneconomical design in casting consideration.	8	L2	CO2	
	c.	List the computer applications for DFMA.	4	L1	CO2	
Module – 3						
Q.5	a.	Describe the development of the assemble process.	10	L2	CO3	
	b.	List and explain the automatic assembly transfer systems.	10	L2	CO3	
OR						
Q.6	a.	Explain the three datum concept of dimensioning.	4	L2	CO3	
	b.	Describe the location tolerance and Run-out Tolerance of GD and T.	8	L2	CO3	
	c.	Discuss control of feature location by true position and profile dimensioning.	8	L2	CO3	

Module – 4

Q.7	a.	Explain the general design guidelines for manual assembly.	10	L2	CO4
	b.	Discuss the development of the systematic DFA methodology.	10	L2	CO4

OR

Q.8	a.	Explain the effect of part symmetry on handling time.	6	L2	CO4
	b.	Discuss the effect of part thickness and size on handling time.	10	L2	CO4
	c.	Describe the effect of weight on handling time.	4	L2	CO4

Module – 5

Q.9	a.	Discuss the environmental objectives and global issues.	6	L2	CO5
	b.	Explain life cycle assessment and weighted sum assessment methods.	10	L2	CO5
	c.	Describe the regional and local issues.	4	L2	CO5

OR

Q.10	a.	Explain the design to minimize the material usage.	8	L2	CO5
	b.	Discuss the design for remanufacture.	6	L2	CO5
	c.	Describe the design to regulations and standard.	6	L2	CO5

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