Reg No.:	Name:

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019

Course Code: MF404

		Course Code: ME404 Course Name: INDUSTRIAL ENGINEERING	
Ma	Max. Marks: 100 Duration: 3 Hours		
		PART A	
		Answer any three full questions, each carries 10 marks.	Marks
1	a)	Explain with an example how a successful product connect with user on the	(3)
		three levels 'useful' 'usable' and 'desirable'.	
	b)	Describe functional design and design for production.	(4)
	c)	Explain function analysis in the context of value engineering with the help of an	(3)
		example.	
2	a)	List the steps of new product development process. Explain the process with an	(3)
		example.	
	b)	What is the use of life cycle cost in value analysis? Explain with an example.	(3)
	c)	What are the benefits and problems of outsourcing?	(4)
3	a)	What is fixed position layout? What are the situations which necessitates the	(4)
		use of these types of layouts?	
	b)	Describe the factors responsible for the replacement of equipment in working	(3)
		condition.	
	c)	What is unit load in material handling? How unit load can be accomplished?	(3)
4	a)	State the symptoms of a bad plant layout.	(3)
	b)	List different equipments used for material handling between fixed points over	(3)
		a fixed path.	
	c)	Describe product layout with a neat sketch and state its advantages and	(4)
		limitations.	
		PART B	
		Answer any three full questions, each carries 10 marks.	
5	a)	With the help of ergonomics motion economy can be ensured in designing a	(3)
		work place layout	
	b)	Write short note on multiple activity chart	(3)
	c)	Define work study and explain its basic procedure	(4)
6	a)	List out various performance rating method	(4)

b) Explain standard time calculation in a job c) Types of allowances in doing a job 7 a) Objectives of labour welfare in an industry 6 Discuss some labour welfare measures undertaken by organisation in recent days c) Define industrial accidents and its effect in productivity 8 a) A trade union is an instrument of industrial democracy explain 6 Describe direct and indirect cost associated with accidents 7 PART C 7 Answer any four full questions, each carries 10 marks. 9 a) What are the major objectives of Production planning and control? How PPC (5) help an industry to enhance its performance? b) Differentiate between production planning and production control (5) 10 a) Differentiate between P system and Q system with the help of a diagram. (5) b) How aggregate planning is done in a manufacturing enterprise? (5) 11 a) What factors influence the choice of manufacturing process from conventional to cellular manufacturing process? b) What are the major advantages and limitations of cellular manufacturing system? c) Differentiate between the Dispatching and Expediting function of PPC. (3) 12 a) What are the major factors affecting quality? Write short notes on each factor stating how this affect the quality? b) Differentiate between Quality control and Inspection. (5) 13 a) Explain how material testing is done in an industry and why testing is important? b) Give a brief description of the destructive tests performed by industries. (4) c) What are the various methods of inspection followed by industries? Write a brief description of any two. 14 a) What are the different phases of a bath tub curve? With the help of a sketch illustrate the important features of each phase. b) State the benefits associated with using non-destructive testing methods. What are the common non-destructive testing methods used for material inspection?	В		H1125 Pages	: 2
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