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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY  
07 THRISSUR CLUSTER

FIRST SEMESTER M.TECH. DEGREE EXAMINATION MARCH 2021

Department of Production Engineering

Manufacturing Systems Management

07PE6103 ADVANCED OPERATIONS MANAGEMENT

Time:3 hours

Max.Marks: 60

Answer all six questions. Part 'a' of each question is compulsory.

Answer either part 'b' or part 'c' of each question

Q.no.	Module 1	Marks
1a	What are the various world class manufacturing practices?	4
	<b>Answer b or c</b>	
b	List and explain the steps in strategy formulation process.	5
c	Explain the factors affecting productivity. Suggest some ways for improving the productivity.	5
Q.no.	Module 2	Marks
2a	Explain about the general procedure for making location decisions.	4
	<b>Answer b or c</b>	
b	Define Process Design and briefly explain the factors affecting process design	5
c	What are the phases in service design process?	5
Q.no.	Module 3	Marks
3a	Explain the applications and benefits of FMS.	4
	<b>Answer b or c</b>	
b	Describe how a product layout differs from a Process layout?	5
c	What are the various automated material handling systems that are commonly used? Explain.	5

<b>Q.no.</b>	<b>Module 4</b>	<b>Marks</b>
<b>4a</b>	Explain the MRP system. Discuss different inputs and outputs of MRP.	<b>4</b>

**Answer b or c**

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| <b>b</b> | Explain pure and mixed strategies of aggregate planning. | <b>5</b> |
| <b>c</b> | Write short notes on CRP and ERP.                        | <b>5</b> |

<b>Q.no.</b>	<b>Module 5</b>	<b>Marks</b>
<b>5a</b>	What is Kanban aspect of JIT system? What are the two types of kanban?	<b>5</b>

**Answer b or c**

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|----------|--|----------|
| <b>b</b> | What are the benefits and risk of small lot size? Explain how lot size reduction can be accomplished in JIT. | <b>7</b> |
| <b>c</b> | Contrast push and pull scheduling.   | <b>7</b> |

<b>Q.no.</b>	<b>Module 6</b>	<b>Marks</b>
<b>6a</b>	Explain the concept of 5S methodology. What are its benefits?	<b>5</b>

**Answer b or c**

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| <b>b</b> | Why do we implement the lean manufacturing? And mention the benefits of implementing lean manufacturing.               | <b>7</b> |
| <b>c</b> | With aid of an example, mention the situations under which agile manufacturing paradigm is required to be implemented. | <b>7</b> |