

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019

Course Code: ME476

Course Name: Material Handling & Facilities Planning

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any three full questions, each carries 10 marks.

Marks

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|---|--|------|
| 1 | a) Explain product and process layouts with examples.. | (4) |
| | b) Draw a flowchart of systematic layout patterning plan for a manufacturing industry. | (6) |
| 2 | a) Explain the significance of From-To chart. | (5) |
| | b) Explain largest candidate rule technique for line balancing | (5) |
| 3 | a) Briefly explain automated layout design programme. | (5) |
| | b) Explain any four important environmental aspects for layout design in industry. | (5) |
| 4 | Explain different types of plant services in industries. | (10) |

PART B

Answer any three full questions, each carries 10 marks.

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|---|---|------|
| 5 | Explain environmental causes of accidents. What are the corrective actions to eliminate them? | (10) |
| 6 | What is air pollution? Name the various sources of air pollution. | (10) |
| 7 | Explain the factors that influence the selection of material handling equipment? | (10) |
| 8 | a) List any two functions of material handling. | (2) |
| | b) List any four advantages of a good handling system. | (4) |
| | c) Discuss the application of fork lift truck. | (4) |

PART C

Answer any four full questions, each carries 10 marks.

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| 9 | Explain types of storage systems with examples. | (10) |
| 10 | Explain the basic material handling methods? | (10) |
| 11 | Explain the equipment oriented and material oriented handling systems. | (10) |
| 12 | Explain the design methodology followed for different material handling equipments | (10) |
| 13 | Explain hoppers and crushers used in material handling. | (10) |
| 14 | Explain preventive and breakdown maintenance practices. | (10) |

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
EIGHTH SEMESTER B.TECH DEGREE EXAMINATION(S), OCTOBER 2019

Course Code: ME476

Course Name: Material Handling & Facilities Planning

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any three full questions, each carries 10 marks.

		Marks
1	Explain the factors to be considered while designing a factory building?	(10)
2	a) Explain the general procedure of Systematic Layout Planning	(6)
	b) List the characteristics of process layout	(2)
	c) Define line balancing	(2)
3	a) List and explain any four types of plant services.	(6)
	b) What are the applications of gases and compressed air in factories?	(4)
4	a) Draw a flowchart indicating the technique of using CRAFT for the layout design.	(6)
	b) Explain the principles of lighting in industry.	(4)

PART B

Answer any three full questions, each carries 10 marks.

5	Describe the various steps in the establishment of an industrial pollution control system.	(10)
6	Explain the significance of steam and compressed air in an industry.	(10)
7	How the material handling equipments are classified? Explain the relationship of material handling to plant layout.	(10)
8	Explain the following with neat sketches. i) Conveyor systems (ii) Elevators (iii) Cranes and Hoisting equipments	(10)

PART C

Answer any four full questions, each carries 10 marks.

9	Classify types of storage systems. Explain with neat sketches types of AS/RS systems and their applications	(10)
10	Describe the procedure for establishing or improving material handling system	(10)
11	Explain the function oriented material handling systems.	(10)
	b) Explain the methods to minimise cost of material handling	(5)
13	a) Explain the importance of maintenance.	(5)
	b) How does corrective maintenance differ from preventive maintenance?	(5)
14	Explain the factors considered in designing the material handling equipments?	(10)
