

Reg No.: _____

Name: _____

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.

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|---|--|------|
| 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.

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|----|---|------|
| 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) |

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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

- | | | |
|---|--|------|
| 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) |
