



M.E DEGREE EXAMINATIONS: DEC 2015

(Regulation 2014)

Third Semester

INDUSTRIAL ENGINEERING

P14IETE33 : Facilities Location and Design

Time: Three Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Consider the following sequence and select the correct sequence in facilities planning. CO1 [K₁]
 1. Locational planning 2. Layout planning 3. Regional planning 4. Country planning
 a) 4-3-1-2 b) 1-2-3-4
 c) 4-3-2-1 d) 3-2-1-4
2. Problem of choosing a site for setting up business or factory is _____. CO1 [K₁]
 a) Layout analysis b) Locational analysis
 c) Economic analysis d) Replacement analysis
3. A classical example of continuous production industry is CO1 [K₁]
 a) Automobile industry b) Ship building
 c) Pesticide industry d) Pump industry
4. Matching type item with multiple choice code CO2 [K₂]

List I	List II
A. Suzuki	i. India
B. Tata	ii. Japan
C. Ford	iii. Germany
D. Mercedes Benz	iv. United states of America

	A	B	C	D
a)	i	ii	iii	iv
b)	ii	iii	i	iv

c)	iv	iii	i	ii
d)	ii	i	iv	iii

5. Production flow analysis was introduced by CO_L [K₁]
- a) Burbridge b) Masaaki Imaai
c) FW. Taylor d) Henry ford
6. AGV stands for CO_L [K₁]
- a) Automatic geared vehicle b) Automated guided vehicle
c) All unit gallop vanguard d) Aisle guide vagon
7. Assertion (A): Container management is the corner stone of Material handling [CO₃] [K₃]
Reason (R): Material handling contributes only to less than 10% of manufacturing cost
- a) both A and R are individually true and R is the correct explanation of A b) both A and R are individually true but R is not the correct explanation of A
c) A is true but R is false d) A is false but R is true
8. When no storage is performed break bulk operations are similar to _____ CO₄ [K₃]
- a) Forward storage b) Stock piling
c) Backward storage d) Consolidation
9. Consider the following statements. State which of them are incorrect? CO₅ [K₃]
1. Economic detriment of stockpiling comes from the need of seasonal storage
2. Efficiency of a production system totally depends on its layout
3. Unit load principle eases material handling
4. Plant location is a strategic decision which cannot be changed once taken
- a) 1 b) 2,3
c) 1,3 d) 2,4
10. A large shipment in warehousing enjoys _____ transportation costs. CO₅ [K₂]
- a) medium b) high
c) low d) optimal

PART B (10 x 2 = 20 Marks)

11. Define logistics. CO₁ [K₁]
12. Cite industrial examples of facilities. CO₂ [K₂]
13. Review the characteristics of a good layout. CO₂ [K₂]

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| 14. Draw the P-Q comparison chart with respect to different layouts. | CO ₂ | [K ₃] |
| 15. Choose examples of industrial applications of decision trees. | CO ₂ | [K ₂] |
| 16. Operationalize the role of part families in manufacturing. | CO ₃ | [K ₂] |
| 17. Recognize the importance of material handling. | CO ₁ | [K ₄] |
| 18. Differentiate processing and postponement. | CO ₄ | [K ₂] |
| 19. Recall the warehouse operating principles. | CO ₄ | [K ₁] |
| 20. Define a contract warehouse. | CO ₅ | [K ₁] |

PART C (6 x 5 = 30 Marks)

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| 21. Underline the quantitative factors in facilities location. | CO ₁ | [K ₁] |
| 22. Discriminate the location strategies with respect to services and manufacturing. | CO ₃ | [K ₂] |
| 23. Determine the steps involved in capacity planning decisions. | CO ₃ | [K ₃] |
| 24. Explain the importance of measuring available capacity. | CO ₄ | [K ₁] |
| 25. Record the benefits of warehousing. | CO ₅ | [K ₁] |
| 26. Interpret the role of computers in warehousing operations. | CO ₅ | [K ₃] |

PART D (4 x 10 = 40 Marks)

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| 27. Identify the various factors influencing plant layout. | CO ₂ | [K ₁] |
| 28. Infer the procedure involved in production flow analysis. | CO ₄ | [K ₄] |
| 29. Generalize the working definition of material handling. | CO ₃ | [K ₄] |
| 30. Correlate the service benefits achieved through warehousing. | CO ₅ | [K ₄] |
