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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Second Semester, M. Tech - Mechanical Engineering (MCIM)

Semester End Examination; June - 2016

Flexible Manufacturing Systems

Time: 3 hrs

Max. Marks: 100

Note: i) Answer FIVE full questions, selecting ONE full question from each unit.

ii) Missing data may suitably assume.

UNIT - I

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|------|--|----|
| 1 a. | Define FMS. Explain the basic components of FMS. | 10 |
| b. | Explain different types of FMS. | 10 |
| 2 a. | Explain FMS project development steps. | 10 |
| b. | With a sketch explain FMS layouts. | 10 |

UNIT - II

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|------|--|----|
| 3 a. | Explain different types of AGVS. | 10 |
| b. | Explain briefly analysis of AGVS. | 10 |
| 4 a. | Explain Automated storage and retrieval system. | 10 |
| b. | How do you Analyze AS/RS determining the transaction cycle time? | 10 |

UNIT - III

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|------|---|----|
| 5 a. | With a sketch explain DNC system. | 10 |
| b. | Briefly explain Tool management system. | 10 |
| 6 a. | Explain the types of work stations. | 10 |
| b. | With a block diagram, explain the working of CMM. | 10 |

UNIT - IV

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|------|--|----|
| 7 a. | Define Group technology, give reasons for adopting group technology. | 10 |
| b. | Explain the production flow Analysis. | 10 |
| 8 a. | Explain the benefits of group technology. | 10 |
| b. | Explain petri net modelling technique. | 10 |

UNIT - V

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|-------|--|----|
| 9 a. | How do you justify FMS based on economical and technological aspect? | 10 |
| b. | Explain FAS. | 10 |
| 10 a. | Explain with an example the HNH FMS. | 10 |
| b. | Explain scheduling procedure of FAS. | 10 |

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