



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

(An Autonomous Institution affiliated to VTU, Belagavi)

Fifth Semester, B.E. - Industrial and Production Engineering

Semester End Examination; Dec - 2017/Jan - 2018

Computer aided design and manufacturing

Time: 3 hrs

Max. Marks: 100

*Note: i) Answer FIVE full questions, selecting ONE full question from each unit.
ii) Assume suitably missing data if any.*

UNIT - I

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|---|----|--|----|
| 1 | a. | With a block diagram, explain the influence of computer in manufacturing environment. | 12 |
| | b. | List out the advantages of CAD. | 4 |
| | c. | Discuss in detail disadvantages of CAM. | 4 |
| 2 | a. | With a block diagram, explain the product cycle in computerized manufacturing environment. | 10 |
| | b. | Discuss the advantages and disadvantages of CAD. | 6 |
| | c. | Discuss input, output devices used in CAD. | 4 |

UNIT - II

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|---|----|---|----|
| 3 | a. | Explain the functions of a graphics package. | 10 |
| | b. | With respect to construction geometry, explain the editing of geometry and also list the common editing features available on a CAD system. | 10 |
| 4 | a. | Explain the IGES and STEP methodology. | 10 |
| | b. | Discuss the requirements of product data exchange between dissimilar CAD/CAM systems with suitable examples. | 10 |

UNIT - III

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|---|----|--|----|
| 5 | a. | With neat sketch, explain the different types of N.C. modes. | 10 |
| | b. | With neat sketch, explain the tool presetting. | 10 |
| 6 | a. | With neat sketch, explain working procedure of automatic tool changer (ATC) with single gripper. | 10 |
| | b. | Explain the major categories of CNC turning centres. | 10 |

UNIT - IV

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|---|----|---|----|
| 7 | a. | With a block diagram, explain the steps involved in the development of a proven part program in NC machinery. | 10 |
| | b. | Write a CNC programme for the following component considering suitable parameters. | 10 |

