INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)

M.Tech II Semester End Examinations (Regular) - July, 2017
Regulation: IARE–R16
COMPUTER AIDED PROCESS PLANNING
(CAD/CAM)

Time: 3 Hours   **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) Explain the requirement for process planning system. **[7M]**

   (b) Give out the merits and demerits of CAPP system. **[7M]**

2. (a) Explain the methods of automated process planning system. **[7M]**

   (b) Discuss the benefits of generative CAPP system. **[7M]**

UNIT – II

3. (a) Explain the quantitative methods for optimal selection of a manufacturing sequence with examples. **[7M]**

   (b) Explain the structure of group technology and its implementation procedure. **[7M]**

4. (a) Discuss the advantages and applications of group technology. **[7M]**

   (b) Explain the selection of manufacturing sequence. **[7M]**

UNIT – III

5. (a) Explain the reasons for optimal selection of machining parameters. **[7M]**

   (b) Explain different types of approaches with a case study. **[7M]**

6. (a) Explain solving of optimization models of machining parameters. **[7M]**

   (b) Differentiate between mathematical and conventional approach. **[7M]**

UNIT – IV

7. (a) Discuss the advantages and disadvantages of manufacturing tolerance. **[7M]**

   (b) Distinguish between sequential and integrated approach with an examples. **[7M]**

8. (a) Explain briefly the advantages of sequential and integrated approach. **[7M]**

   (b) Discuss the applications of integrated approach over sequential approach. **[7M]**

UNIT – V

9. (a) Explain the concept of NC tool path generation. **[7M]**

   (b) Explain the graphical implementation of machining process. **[7M]**

10. (a) Determine the optimal index position for executing fixed sequence in NC tool path generation.
    [7M]

    (b) Explain the criteria for selection of CAPP in MIPLAN system. **[7M]**

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