INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)
M.Tech II Semester End Examinations (Supplementary) - January, 2018
Regulation: IARE–R16
COMPUTER AIDED MANUFACTURING
(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 four types of APT statements with examples.   **[7M]**
   (b) Explain in detail NC programming on CAD/CAM systems.   **[7M]**

2. (a) Explain any five preparatory commands with examples.

                                                                                  [7M]
   (b) Explain the code of part programming in detail.   **[7M]**

UNIT – II

3. (a) Discuss the adaptive control of machining process for turning.   **[7M]**
   (b) Explain with the block diagram adaptive control with optimization (ACO) system. **[7M]**

4. (a) Explain the components of Direct Numerical Control machine(DNC) in detail. **[7M]**
   (b) Give out the differences between open and closed loop system.   **[7M]**

UNIT – III

5. (a) Explain the general structure and functions of post processor with a neat sketch. **[7M]**
   (b) Write about the DAPP based post processor.   **[7M]**

6. (a) Explain about the communication channels and major variables in DAPP based post processor.
                                                                                  [7M]
   (b) Discuss the advantages and disadvantages of DAPP based post processor.

                                                                                  [7M]

UNIT – IV

7. (a) Discuss the applications and functions of Microcontrollers.   **[7M]**
   (b) Explain the PLC programming with applications.   **[7M]**

8. (a) Explain about the internal relays and counters in detail.   **[7M]**
   (b) Explain the structure and principle of operation of Programmable Logic Control(PLC). **[7M]**

UNIT – V

9. (a) Discuss the importance of artificial intelligence in computer aided design. **[7M]**

   (b) Explain briefly about advantages and disadvantages of co-ordinate measuring machine. **[7M]**

10. (a) Discuss the objectives and functions of computer aided quality control. **[7M]**

    (b) Explain in detail about the artificial neural networks. **[7M]**

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