ME - 804 B.E. VIII Semester Examination, JunE 2015

CAD/CAM/CIM

Time: Three Hours Maximum Marks: 70

Note: 1. Total no of questions 10. 2. One questions from each unit.

3. Internal choice are given: All questions carry equal marks. 4. Attempt any five.

UNIT-I

1. a) Define CIM. Draw and discuss CIM wheel.

b) Explain management information system? What do you mean by MRRMPS?

OR

2. a) Define Productions Activity Control (PAC)? Discuss production process on volume variety axes. b) Explain the tenn concurrent engineering also explain the tenns like CAD, CAE, CAM, CAP, CAPP, CATD and CAQ for supporting the CIM environment?

UNIT-II

3. a) Explain briefly about engineering data management?

b) Explain briefly various graphic transformation required for manipulating the geometric information.

OR

4. a) Discuss the various types of coordinate system used in CAD also discuss MCS, UCS and WCS. b) Discuss various drawing data exchange format likes GKS, PHIGS, CORE, IGES. DXP etc.

UNIT-II

5. a) Discuss basic boundary presentation like spline, Bezier, B-spline and NURBS.

b) Discuss in short on following:

i) Rapid prototyping ii) Polynomial curve

OR

6. a) Differentiate between Constructive Solid Geometry (CSG) and boundary representation.

b) Compare 2D and 3D wireframe modelling with respect to their utility for an engineering industry.

UNIT-IV

7. a) Define "Part programming" state G and M codes used in CNC programming with function. Also state a sample programme for two step CNC turning.

b) Explain advantages to be gained by using CNC compared " toNC.

OR

8. a) Define APT? Explain the types of statement specified in the APT language?

b) Define "Zero Offsetting" in CNC. Discuss about cutter radius and length compensation.

UNIT-V

9. a) Discuss about Production Flow Analysis (PFA).

b) What is an automated guided vehicle? State the advantages of an AGV in manufacturing shop.

OR

10. a) What is Group technology? Explain part classification and

write various coding system. Why is group technology developed.

b) Define robot. Explain the geometric configuration in which robot are available.