Roll No. ☐☐☐☐☐☐☐☐☐☐☐          Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Automation & Robotics) (2011 & Onwards)   (Sem.–6)

# COMPUTER INTERGRATED DESIGN AND MANUFACTURING
### Subject Code : BTAR-604
### M.Code : 71067

Time : 3 Hrs.          Max. Marks : 60

INSTRUCTION TO CANDIDATES :
1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

## SECTION-A

1. Answer briefly :

   (i)   How is computers helpful in the design process?

   (ii)  Differentiate between the randon and raster scan type of CRT screens.

   (iii) Write few lines on 'GKS'.

   (iv)  What are the differences between a wireframe model and a solid model?

   (v)   List the different features of a CNC machine.

   (vi)  What does 'flexible tooling' means?

   (vii) What are the advantages of CAPP?

   (viii) In which type of industry is the group technology philosophy most helpful? Give reasons for your answer.

   (ix)  Differentiate between CIM and FMS.

   (x)   What is the role of 'programmer' in computer assisted part programming?

## SECTION-B

2. Discuss the basic principle and working of 'LCD' type of output device.

3. What is a DNC machine? Discuss the different types of DNC machines.

4. What is CIMS? What are the different components of CIMS?

5. What is a part family? With the help of an example, explain the *Opitz* system used for part classification and coding in Group Technology.

6. Discuss the different factors that influence the design of a material handling system in any industry.

## SECTION-C

7. Discuss the following types of solid modelling schemes:

   (a)  B-rep

   (b)  CSG

8. What is AGVS? Discuss in brief its different types.

9. What is automated storage / retrieval system? Discuss the different basic components that form the part of AS/RS system.

**NOTE : Disclosure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC against the Student.**