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# 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.

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