

Roll No.

Total Pages : 3

209603

May, 2019

B.Tech. - VI SEMESTER

CAM and Automation (ME-306-C)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART-A

1. (a) What is computer assisted part programming? (1.5)
(b) What is the need of CAM software in industries? (1.5)
(c) What do you mean by Automated Guided Vehicles? (1.5)
(d) Name two packages for CAM. (1.5)
(e) Name two packages for Computer assisted process planning. (1.5)

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- (f) Define process and product flexibility. (1.5)
 - (g) What is hybrid CAPP? (1.5)
 - (h) What is Virtual manufacturing? (1.5)
 - (i) What are the uses of robots beside industries? (1.5)
 - (j) What is Computer Integrated Manufacturing? (1.5)

PART-B

- 2. (a) What is CAPP? Explain Retrieval type CAPP and its benefits. (10)
- (b) Discuss in detail the role of robots and AGV's in CIM environment. (5)
- 3. (a) What are the different levels of automation? (5)
- (b) Explain the parts, features and applications of Robots in industries. (10)
- 4. Describe briefly the components of a CNC Machine. Explain point to point and contour positioning systems. Specify the components and features of CNC Turning Center. (15)
- 5. (a) Specify the functions of sensors of robots with their control mechanism. (5)
- (b) What is the need of a CNC part program? Write a simple part program for step turning assuming suitable dimensions. (10)

- 6. (a) Explain the differences between CNC and DNC systems with applications. (5)
 - (b) Discuss Automatic identification methods with examples. (10)
 - 7. Write the differences between FMS & FMC? Describe the Components, advantages and applications of FMS. (15)
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