

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 0401

Roll No.

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**B. Tech.**

(SEM. VII) ODD SEMESTER THEORY EXAMINATION  
2010-11

**COMPUTER AIDED MANUFACTURING (CAM)**

Time : 3 Hours

Total Marks : 100

1. Attempt any **four** of the following : **(4×5=20)**
  - (a) Write the difference between ordinary and NC machine tools.
  - (b) What are the positioning system ?
  - (c) What is the difference between point to point and continuous path system ?
  - (d) What are advantages and disadvantages of NC ?
  - (e) What is direct numerical control ?
  - (f) Distinguish between ACC and ACO type of adaptive control.
  
2. Attempt any **two** of the following : **(2×10=20)**
  - (a) Explain the part surface, drive surface and check surface and also write the use of auxiliary statements.
  - (b) Define manual part programming. Write its limitations and also write the various tape formats.

- (c) Write an APT program for end milling of its edges of plate having thickness 20 mm as shown in Fig. (1). Spindle speed = 500 rpm and feed rate = 50 mm/min.

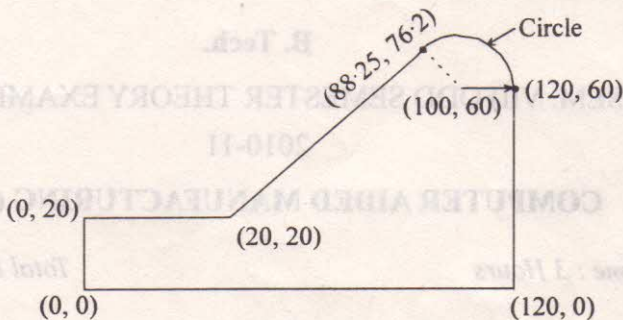


Fig. (1)

3. Attempt any **two** of the following : (2×10=20)
- Describe the working principle of stepping motor. What are its disadvantages ?
  - Discuss helical, parabolic interpolator briefly.
  - Explain the construction and working of d.c. motor.
4. Attempt any **two** of the following : (2×10=20)
- Write short notes on the following :
    - Transfer line
    - Mechatronics.
  - What is CAPP ? What are its types, explain.
  - Explain FMS and also write the advantages and disadvantages of FMS.
5. Attempt any **two** of the following : (2×10=20)
- Explain briefly the various robot programming methods.
  - Write short notes on artificial intelligence. How is it used in intelligent manufacturing ?
  - Explain the various robot configurations.