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

PAPER ID : 0401 Roll No. | | | | | | | | | | |

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.

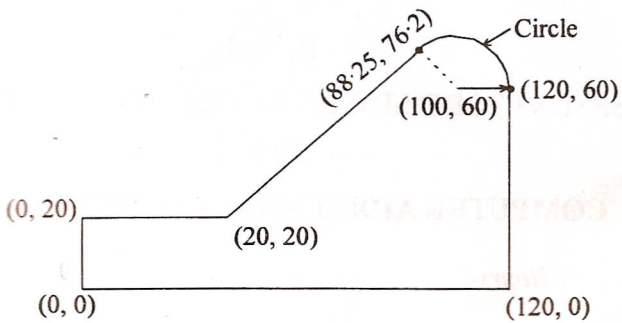

Fig. (1)

3. Attempt any **two** of the following : **(2×10=20)**

   (a) Describe the working principle of stepping motor. What are its disadvantages ?

   (b) Discuss helical, parabolic interpolator briefly.

   (c) Explain the construction and working of d.c. motor.

4. Attempt any **two** of the following : **(2×10=20)**

   (a) Write short notes on the following :

   (i) Transfer line

   (ii) Mechatronics.

   (b) What is CAPP ? What are its types, explain.

   (c) Explain FMS and also write the advantages and disadvantages of FMS.

5. Attempt any **two** of the following : **(2×10=20)**

   (a) Explain briefly the various robot programming methods.

   (b) Write short notes on artificial intelligence. How is it used in intelligent manufacturing ?

   (c) Explain the various robot configurations.