C 61490 (Pages : 2) Name.....

Reg. No.....

SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, APRIL 2014

(2009 Scheme)

ME/PTME/AM 09 605—COMPUTER INTEGRATED MANUFACTURING

(Regular/Supplementary/Improvement)

Time : Three Hours Maximum : 70 Marks

Part A

Answer **all** *the questions.*
Each question carries 2 *marks.*

1. How do you determine the spindle speed and the feed of machining ?
2. Describe any *four* important G-codes used in part programming.
3. What are the check surface modifiers used in APT ?
4. What are the different operations performed by ASRS ?
5. List out the benefits of FMS.

(5 × 2 = 10 marks)

Part B

Answer any **four** *questions.*
Each question carries 5 *marks.*

6. Explain different tool holding devices used in CNC machines.
7. Explain the various steps involved in computer aided part programming.
8. Distinguish between point-to-point and contour programming in NC system.
9. Discuss different types of AGVs.
10. Write short notes on :
    (a) Barcode technology ; and
    (b) Optical character recognition.
11. Discuss different types of drives used in robot control.

(4 × 5 = 20 marks)

Turn over

Part C

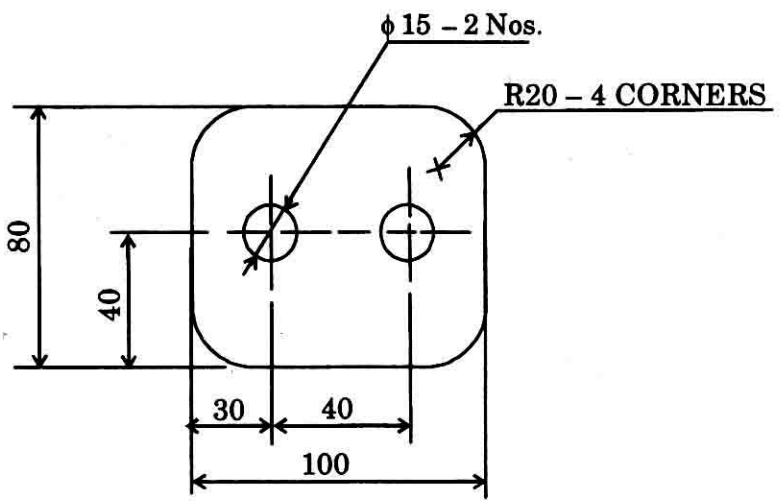
Answer section (a) **or** *section (b) of each question.*
Each question carries 10 *marks.*

12. (a) Describe briefly the important design considerations of CNC machine tools.

Or

(b) Discuss the features of CNC machine tools.

13. (a) Write an APT part programme of the job given in the figure below.



Or

(b) What are G-codes and M-codes in part programming ? Explain with suitable example.

14. (a) Briefly describe the vehicle management and safety system used in AGVs.

Or

(b) Explain briefly, group technology.

15. (a) Explain briefly the material handling and storage systems used in FMS.

Or

(b) Discuss different classification of robot sensors.

(4 × 10 = 40 marks)