

C 80810

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Name _____

Reg. No. _____

**SIXTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE
EXAMINATION, APRIL 2015**

ME/PTME/AM 09 605—COMPUTER INTEGRATED MANUFACTURING

Time : Three Hours

Maximum Marks



Part A

Answer all questions.

1. List out the cutting conditions of a machining centre.
2. What is program zero ?
3. Describe any *four* post processor commands used in APT.
4. What are the basic elements of an automatic data capture system ?
5. What are the different types of end effectors used in robots ?

(5 × 2 = 10 marks)

Part B

Answer any four questions.

6. Explain the basic principle of operation of a N.C. machine.
7. Explain N.C. co-ordinate system and axes.
8. Describe briefly the features of ASRS.
9. Explain part classification and coding in Group Technology.
10. Describe the sub-systems of FMS.
11. Write short notes on :
 - (a) Work envelope; and
 - (b) Payload capacity.

(4 × 5 = 20 marks)

Part C

Answer all questions.

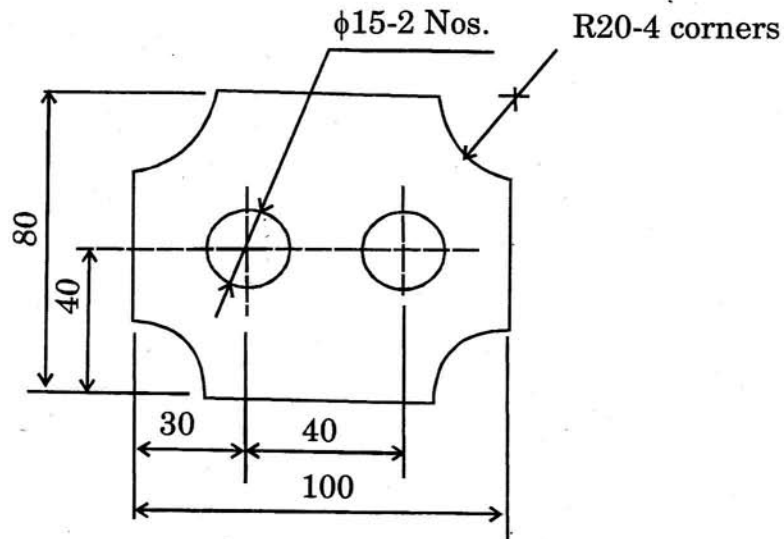
12. (a) Briefly explain the open-loop and closed-loop systems of NC machines.

Or

- (b) Describe briefly on methods of improving machine accuracy of CNC machines.

Turn over

13. (a) Write a part programme in word address format for the component shown in figure below :



- (b) Explain briefly the APT language.
14. (a) Describe briefly the functions of AGVs.
- Or
- (b) Briefly explain the features of OPITZ classification and coding system.
15. (a) Explain briefly the applications and benefits of FMS.
- Or
- (b) Describe the different physical configurations used in industrial robots.

(4 × 10 = 40 marks)