SIXTH SEMESTER B.TECH. [ENGINEERING] (09 SCHEME) DEGREE EXAMINATION, APRIL 2016

ME/PTME/AM 09 605—COMPUTER INTEGRATED MANUFACTURING

Time: Three Hours

Maximum: 70 Marks

Part A

Answer all questions.

- 1. What are the advantages of NC system?
- Discuss the advantages of computer aided part programming.
- 3. Write notes on contouring in part programming.
- 4. What are AGVs?
- 5. List out the applications of robots.

 $(5 \times 2 = 10 \text{ marks})$

Part B

Answer any four questions.

- 6. Differentiate open loop and closed loop systems.
- 7. List out any four motion commands used in APT language.
- 8. Discuss about optiz classification system in group technology.
- Discuss in details about safety system in AGVs.
- 10. What are the different components of FMS?
- 11. Discuss different types of sensors used in robots.

 $(4 \times 5 = 20 \text{ marks})$

Part C

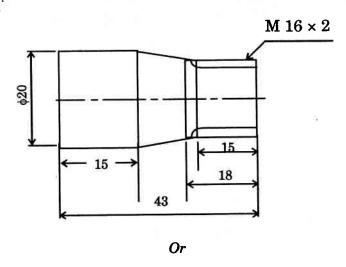
Answer all questions.

12. (a) Briefly describe different classification of NC system.

Or

(b) Describe briefly important design considerations of NC machine tools.

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



- (b) Explain briefly the APT language.
- 14. (a) Describe the concept of part family in group technology.

Or

- (b) Briefly describe the components and the operations of ASRS.
- 15. (a) Explain the components of FMS.

Or

(b) Discuss different types of robot programming.

 $(4 \times 10 = 40 \text{ marks})$