

[03 - 4121]

IV/IV B.E. DEGREE EXAMINATION.

First Semester

Mechanical Engineering

Elective III — COMPUTER NUMERICAL CONTROL
AND COMPUTER AIDED MANUFACTURING

(Effective from the admitted batch of 2006-2007)

Time : Three hours

Maximum : 70 marks

Answer any FIVE questions.

1. (a) What are the basic components of NC machine? Explain.
(b) Discuss the methods to improving the machine accuracy in NC.
2. (a) What are the methods to develop the part families in group technology concept? Explain.
(b) What are the benefits and limitations of Group Technology?
3. (a) Define CAPP. Discuss briefly the different types of CAPP systems.
(b) What is MRP-I? How does it benefit the management of a factory?

4. (a) Define the material handling system. Explain the principles of effective Material handling.
(b) Describe the advantages to be gained by the use of automated guided vehicle in machining shop.
5. (a) What are the factors to be considered to integrate the automate storage systems?
(b) What are the industrial applications of robots?
6. (a) Explain the various non- contact inspection methods.
(b) How to use sensor technologies for automated inspection in manufacturing industries?
7. (a) What are the benefits of computer – integrated manufacturing?
(b) Explain the principle components of FMS.
8. Write a short notes of the following:
 - (a) Design attributes in GT
 - (b) Robot configurations
 - (c) Principle of AS/RS
 - (d) Data files of FMS.

[2534/II/11]