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B.E / B.Tech (Full Time) End Semester DEGREE EXAMINATION, APRIL / MAY 2012

Fourth Semester
Mechanical Engineering

71

ME 283 – MANUFACTURING TECHNOLOGY - II

(Regulation 2004)

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What are forces encountered during the orthogonal machining?
2. What is meant by machineability?
3. What are the methods used for generating of taper in a lathe?
4. What is meant by tool layout in automatic lathe?
5. How milling machine is specified?
6. List the various gear generating process.
7. What is meant by push type broaching operation?
8. List the practical application of super finishing process.
9. Write the "M" codes for the following functions :
i) Tool change ii) Spindle stop iii) Coolant on.
10. Write the geometry statements in APT programming.

Part – B (5 x 16 = 80 marks)

11. a) i) How is abrasive selected for a grinding operation? State the reasons for selection. (10)
ii) What are the advantages and limitations of abrasive jet grinding. (6)
 12. a) What are the factors affect the tool life? Discuss in detail. (16)
- OR**
- b) i) What are types of chips formed metal cutting process? State the reasons for formation. (12)
ii) What is the function of cutting fluids in metal cutting process? (4)
 13. a) What are the difference between an automatic lathe and a capstan lathe. Give an example of a component suitable for automatic and capstan lathe. (16)

OR

- b) What are the types of surfaces can be generated in lathe? With the suitable sketches, explain. (16)

14. a) i) With the aid of simple sketch, explain the working principle of hydraulic shapper. (8)
- ii) What are the various types of end mills used in milling? Write their applications. (8)

OR

- b) Describe the following operations : (16)
- a) Reaming b) Boring c) Tapping
15. a) What is Computer Assisted Part Programming (CAPP)? Explain the various activities in CAPP. (16)

OR

- b) Compare the NC and CNC based on construction, advantages, limitations and applications. (16)