18|10|13

B.E. (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2013

Common to Mechanical and Industrial

Fourth Semester

ME 283 / ME 9251 – MANUFACTURING TECHNOLOGY II

(Regulation 2004 / 2008)

Time : 3 Hours   Answer ALL Questions   Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. Differentiate between orthogonal cutting and oblique cutting.
2. What is built-up edge?
3. Name the various cutting tools.
4. What are the advantages of automatic lathes?
5. State the function of clapper box in shaping machine.
6. State the applications of planer.
7. Differentiate between push and pull broaching.
8. Define buffing process.
9. State the applications of Numerical control machine tools.
10. What is machining centre?

Part – B (5 x 16 = 80 marks)

11. (a) What is a chip? What are the various types of chips formed during machining? (10) Explain with neat sketches.

    (b) Explain the properties of cutting fluids. (6)

12. a) Name the various taper turning methods? Explain any two methods with neat sketches. (16)

(OR)

    b) (i) Explain the working of semi-automatic lathe with a neat sketch. (8)

    (ii) Differentiate between Capstan and Turret lathe (8)

13. a) (i) Explain the working of a Double housing planer with a neat sketch. (8)

    (ii) Discuss the quick return mechanism of a shaper with a neat sketch. (8)

(OR)

b) (i) Explain the gear forming process with a neat sketch. (8)

(ii) Write a note on various milling cutters (8)

14. a) (i) Explain the centreless grinding operation with a neat sketch. State its advantages and disadvantages. (10)

(ii) How to specify a grinding wheel? Describe with neat sketch. (6)

(OR)

b) Discuss the following with neat sketches (8+8)

(i) Horizontal broaching machine (ii) Abrasive jet grinding

15. a) (i) Explain the constructional details of CNC machines. (8)

(ii) Describe the horizontal and vertical machining centre with neat sketches. (8)

(OR)

b) (i) Differentiate between manual part programming and computer aided part programming. (8)

(ii) State the functions of Training centre (8)