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16/11/13 AN

Reg. No. :

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Question Paper Code : 31563

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Fourth Semester

Mechanical Engineering

ME 2252/ME 43/10122 ME 403/ME 1252 A/080120016 — MANUFACTURING
TECHNOLOGY – II

(Common to Industrial Engineering, Industrial Engineering and Management and
Mechanical and Automation Engineering)

(Regulation 2008/2010)

(Common to PTME 2252 Manufacturing Technology II for B.E. (Part-Time)
Third Semester Mechanical Engineering – Regulation 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State any two differences between orthogonal and oblique cutting.
2. Name the different types of tool wear.
3. Name the specifications of a centre lathe.
4. What is the need of automatic lathes?
5. State the differences between upmilling and downmilling.
6. Draw the nomenclature of a standard drill.
7. State the difference between turning and dressing of a grinding wheel.
8. Name the process parameters involved in the lapping process.
9. What is meant by numeric control? State their advantages.
10. State the differences between CNC and DNC.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Write a short note on different tool wear mechanism in metal cutting. (8)
(ii) Write a short note on cutting fluids in metal cutting. (8)

Or

- (b) Write briefly about different cutting tool materials used in metal cutting. (16)

12. (a) Explain with neat sketches the working principle of taper turning operation using a form tool and by swiveling the compound rest. (16)

Or

- (b) (i) State the differences between capstan and turret lathes. (10)
(ii) Write a short note on automatic screw type machines. (6)

13. (a) (i) State the difference between shaper and planer. (10)
(ii) State the difference between horizontal and vertical spindle column and knee type milling machines (use simple sketches). (6)

Or

- (b) (i) Write a short note on BTA deep hole drilling. (8)
(ii) Write briefly about tool and cutter grinder. (8)

14. (a) Explain with simple sketches the working principles and process parameters of honing process. (16)

Or

- (b) Write briefly about broaching machines and its operations with neat sketches. (16)

15. (a) Write briefly about machining centers. (16)

Or

- (b) Write briefly about open loop, closed loop and adaptive control systems in CNC machine tool. (16)