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B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2012

MANUFACTURING ENGINEERING BRANCH

THIRD SEMESTER

MF 9201 – MANUFACTURING PROCESSES - I

{REGULATIONS 2009}

Time: 3 Hrs

Answers All questions

Max. Marks: 100

PART – A (10 x 2 = 20 Marks)

1. State any eight types of cutting tool materials.
2. State any two differences between orthogonal and oblique cutting?
3. State any two differences between up milling and down milling.
4. State any two differences shaper and planner.
5. What is meant by turning and dressing?
6. List any four advantages of effect of honing.
7. List any four types of gears and mention its field of applications.
8. State any two differences between gear shaping and gear planning.
9. State any four advantages of Automation.
10. What is meant by Adaptive Control?

Part – B

- 11a. (i) Explain any four mechanisms of tool wear with neat sketches. (8)
- (ii) Write a short note on chip formation process in machining. (8)
- 12a. (i) With simple sketch explain various parts of the drill and its nomenclature. (8)
- (ii) Differentiate Capstan and Turret Lathe (8)

OR

12b. (i) Explain the various operations that can be performed in milling machine with neat sketches. (8)

12b (ii) Explain quick return mechanism in shaper with neat sketches. (8)

13a. (i) Explain the various parts and purposes of tool and cutter grinder with simple sketches. (8)

13a. (ii) Explain the standard marking system for grinding wheels. (8)

OR

13b. (i) Explain honing process and the effect of its process parameters with neat sketches. (16)

14a. Explain any four types of gear cutting methods with simple sketches. (16)

OR

14b. Explain the gear grinding and gear lapping processes with single sketches. (16)

15a. (i) Explain the various types of machine tool vibrations. (8)

15a. (ii) Write briefly about erecting and testing of machine tool. (8)

OR

15b. Explain Swiss type automatic screw and feeding mechanism with neat sketches. (16)