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

B.E. MATERIALS SCIENCE AND ENGINEERING
III Semester

ML9201 Foundry and Machining Processes
(Regulation 2008)

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What are all the pattern materials?
2. Name any four defects in casting with the simple sketches.
3. Write a Short note on testing of moulding sands.
4. What are all the safety consideration made in melting practices?
5. Write a Short note on BUE .
6. What are all the various types of chip formation in single point cutting tool?
7. Short note on cutting tools used in Lathe.
8. Draw the drilling tool and nomenclature.
9. Write Short notes on UP mill and Down mill.
10. Compare Planning and shaping machine.

Part – B (5 x 16 = 80 marks)

11. Explain the investment casting and Die casting methods with neat Sketch.
12. a) Explain with the neat sketch of various types of Patterns. (8)
(ii) Pattern material (4)
(iii) Pattern allowance (4)

OR

b) (i) Sketch and explain the sand casting technique (10)
(ii) explain centrifugal casting (6)

13. a) i) Sketch and Explain the various Cutting forces acting in Single point cutting tool

OR

- b) ii) Explain a) Tool life b) Cutting fluid c) Tool wear and failure

14. a) i) Briefly explain the Thread cutting process (8)
ii) Briefly explain a) Counter Boring b) Counter sinking (8)

OR

- b) i) Sketch and explain the Taper turning attachment working principle (8)
ii) Briefly explain a) Reaming b) Tapping (8)

15. a) i) Explain the various types of milling operation (8)
ii) Explain any one type of Broaching Operation in detail (8)

OR

- b) i) Draw the various types of milling cutter (8)
ii) What are all the types of quick return mechanism available in shaper, explain any one in detail (8)