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**B.E/B.Tech (Full-Time) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC2013
MATERIALS SCIENCE AND ENGINEERING BRANCH
THIRD SEMSTER-REGULATIONS 2004/2008**

ML 287/ML9201 FOUNDRY AND MACHINING

Time: 3Hr

Max.Mark:100

Answer ALL Questions

Part –A (10x2=20 Marks)

11

1. What is the purpose of a core?
2. What is importance of refractoriness in system sand?
3. List down the precautions that are to be adopted in the melting of Magnesium alloys.
4. What are cold chamber die casting machines?
5. Compare between orthogonal and oblique cutting.
6. What are the functions of a cutting fluid?
7. Mention the nomenclature of a drill bit.
8. What is meant by reaming?
9. What are the advantages of up milling process?
10. How do you specify a planer?

Part – B (5x16 = 80 Marks)

- 11 With the help of neat diagram explain the Apron, Tumbler gear Mechanism, used in a lathe. 16
- 12a What do you understand by pattern allowance? Discuss the various pattern allowances and their importance. 16

(OR)

- 12b Explain with sketches how a shell mould is made. List the unique advantages of making castings in shell moulds. 16
- 13a Explain the principle of Cupola melting, and describe the sequential steps followed in using cupola. In what ways the melting cupola differs from other types of melting furnaces? State how the metals to charge the cupola are selected. 16

(OR)

- 13b What is full mould casting? Why is it also called expendable –pattern casting? What are the important applications of this process?
- 14a Using Merchant's circle diagram, derive the expression for estimating the cutting force during machining. Mention the assumptions made. 16

(OR)