4/12/13

Roll No. | | | | | | | | | | |

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B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, Nov / Dec 2013

MANUFACTURING ENGINEERING BRANCH

IV Semester

MN 273 MANUFACTURING PROCESSES - I / MF 9251 MANUFACTURING PROCESSES - II

(REGULATIONS 2008)

Time: 3 Hours | Answer ALL Questions | Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. List out any two pattern materials.
2. What is meant by inoculation?
3. What are the major differences between direct and indirect extrusion?
4. State four methods of stretch forming.
5. Distinguish between soldering and welding.
6. What is HAZ in fusion weld?
7. What are the different types of thermoforming?
8. What is GRP?
9. What is "self adjusting feature" in ECM?
10. State any four applications of magnetic pulse forming.

PART B – (5X16=80 Marks)

11 i) Enumerate with neat sketch the principle of reciprocating screw injection moulding process. (8)

ii) Describe with neat sketches rotational moulding process. (8)

12 a i) Explain various pattern allowances. (8)

ii) Enumerate with neat sketch the working of Jolt squeeze moulding machine. (8)

(Or)

From merchants theory, calculate the various components of the cutting forces and the co-efficient of friction at chip tool interface. (8)

ii) Discuss any two cutting tool materials used in machine tools. (8)

(or)

12 b i) What are the various methods available for measuring cutting tool temperature? Explain with neat sketch the principle of tool work thermocouple. (8)

ii) Enumerate various types of wear mechanisms. (8)

13 a i) Compare the applications, accuracies and limitations of 3-jaw and 4-jaw chucks. (8)

ii) Describe with neat sketch, the operation principle of Jig boring machine. (8)

(or)

13 b i) Enumerate with neat sketch the constructional features of a twist drill and label the important features. (8)

ii) Explain with neat sketch the principle of surface broaching. (8)

14 a i) Describe with neat sketches four types of surface grinders. (8)

ii) Enumerate five principal parameters of a grinding wheel. (8)

(or)

14 b i)Explain with neat sketches any two work holding devices used in grinding process. (8)

ii) Describe with neat sketch honing process. (8)

15 a) Discuss various steps in erection and testing of machine tools.

(or)

15 b i) Discuss the various types of multi spindle automatics. (8)

ii) Explain with neat sketch of bar feeding mechanism for automatics. (8)