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

MECHANICAL ENGINEERING

VI –Semester

ME385 COMPUTER INTEGRATED MANUFACTURING

(Regulations:-2004)

Time: 3Hours

Answer ALL Questions

Max. Marks: 100

PART-A (10 X 2 =20 Marks)

1. Why do you integrate CAD and CAM?
2. Define CIM.
- 3 What is Capacity Planning?
4. What is Concurrent Engineering?
5. Define Part Family.
6. Differentiate between Pull system of Production and Push system of Production .
7. List the Data Files required for FMS.
8. Where do you apply FMS?
9. What are input interlock and output interlock in Robot control?
10. Sketch a CIM Model used in any industry.

PART-B (5 X 16 = 80 Marks)

11. Discuss in detail about the TEN Automation Strategies with suitable examples.
12. (a) Explain the following types of Computer Aided Process Planning:
 - (i) Retrieval (or) Variant Type (8)
 - (ii) Generative Type (8)

(OR)

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12. (b) The part shown in Figure-1 is made of C45 steel. It is to be produced in batches. Plan the processes and Prepare the Route sheet or process sheet.

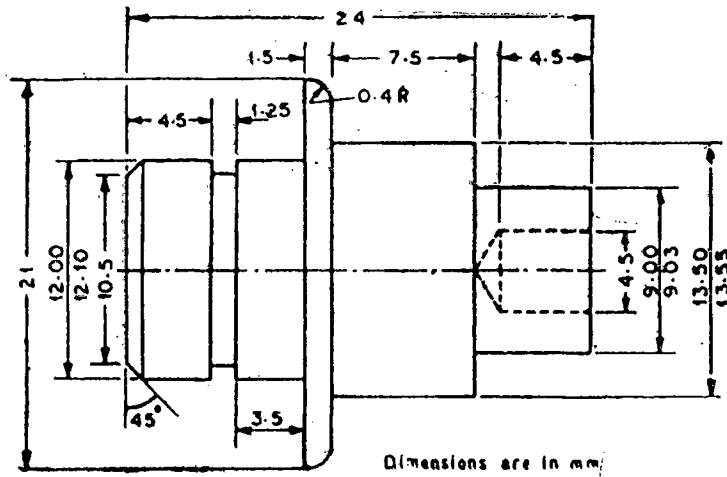


Figure-1

13. (a) Describe the Production Flow Analysis Method used to group parts into families.

(OR)

(b) Discuss about the Seven Forms of wastes in manufacturing as per Lean Production Concept.

14. (a) Discuss about any eight types of machines used in FMS work stations.

(OR)

(b) Describe any four types of Layouts used in FMS with suitable diagrams.

15. (a) Briefly write about the four methods of entering the programming commands in Robots.

(OR)

(b) With the aid of neat sketches, explain the five basic configurations of Industrial Robot.
