B.E. Eighth Semester (Mechanical Engineering) (C.B.S.)
Elective - II : Computer Integrated Manufacturing

P. Pages : 3

**KNT/KW/16/7583**

Time : Three Hours

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0222

Max. Marks : 80

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Notes : 1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.
10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What is Computer Integrated Manufacturing? Give a brief explanation about computerised element of a CIM system. **6**

b) What are different types of Automation? Explain in detail with automated manufacturing system based on product variety and production volume with graph. **7**

OR

2. a) Explain various segments of CIM in detail. **7**

b) Explain the concept of concurrent engineering? Give its application and utility in CIM. **6**

3. a) What is Numerical Control? With the help of neat sketches explain the closed loop and open loop NC system. **5**

b) Write a manual part programming on lathe as shown in figure. **9**
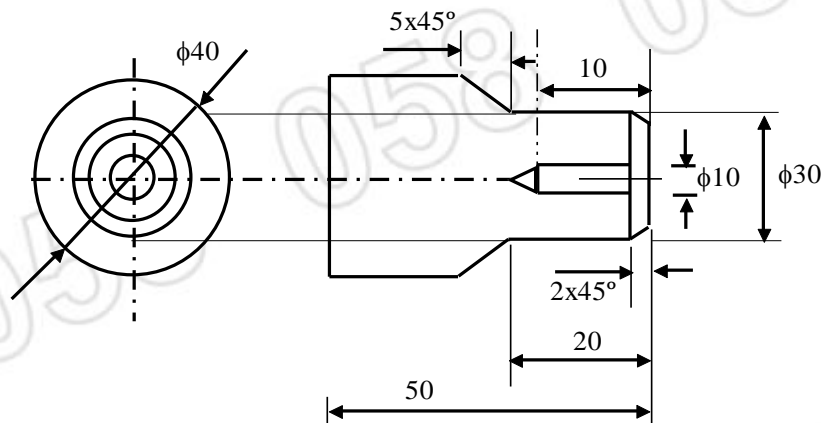
Note : 1) All dimensions are in mm
2) Assume suitable data

OR

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4. a) Explain CNC system. State its advantages and disadvantages. **4**

b) Write a manual part programming on milling. Use suitable Cutter for drilling & slot milling operation. **10**

Note : All Dimensions are in mm
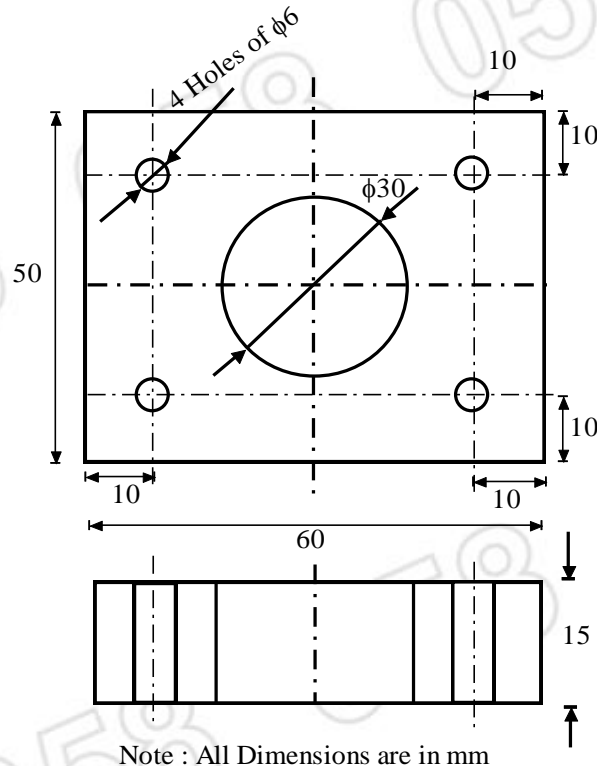
5. a) 'GT is the best approach for all modern manufacturing situation'. Comment. **6**

b) Why coding and classification system of components is necessary in advance manufacturing system? State the benefits of these system. **7**

OR

6. a) Write short note on opitz classification system. **6**

b) What is production flow analysis? Explain its procedural steps. **7**

7. a) What is FMS? Describe the various flexibilities criteria in FMS. **6**

b) Explain basic components of FMS in detail. **7**

OR

8. a) Briefly Explain the FMS layout configurations giving their typical application areas. **7**

b) Explain the important factors to be considered in the planning of a fully automated FMS. **6**

9. a) What is CAPP? Explain the retrieval and generative system. **7**

b) Discuss Master Production Scheduling (MPS). State its function. **7**

OR

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10 Write brief notes on **any three :** 14

    a) Capacity requirement planning.

    b) ERP

    c) Manufacturing Resources Planning

    d) Aggregate production planning.

11. a) Why pull manufacturing should be adopted in industry? Give necessary conditions for pull production system. **7**

    b) Explain in brief CAQC? State its application. **6**

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OR

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12. a) Explain the various configuration of co-ordinated measuring machine. Draw neat sketches. **7**

    b) What is shop floor control? Explain in detail. **6**

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