

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

P. Pages : 2

Time : Three Hours



**NKT/KS/17/7583**

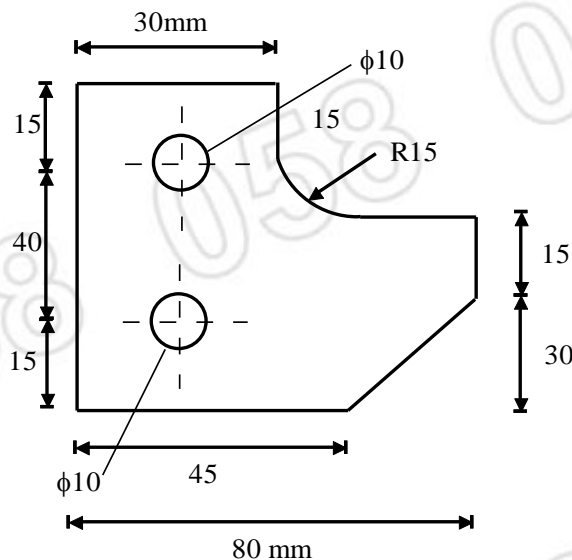
Max. Marks : 80

- 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.

1. a) What is Computer Integrated manufacturing write in brief evaluation of CIM. **6**
- b) What are different types of Automation? Explain in brief the relationship between product variety, production quantity & types of automation with the help of graph. **7**

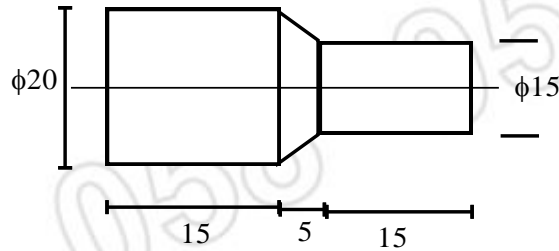
**OR**

2. a) Explain in detail scope and different computerized elements of CIM with the help of CIM wheel. **6**
- b) Explain the concept of concurrent engineering? Give its application & utility in CIM. **7**
3. a) What are the basic components of an NC system. Explain with the help of block diagram. **4**
- b) Write manual part programming the billet size 100 x 100 x 10 material aluminum, depth of cut 2 mm. **10**



**OR**

4. a) Explain the tool pre-setting and qualified tools used in CNC machines. 4  
 b) Write a manual part programming for given object. The raw material available is 20 mm dia bar. 10



Perform the following operation.

- i) Facing ii) Turn to 15 mm diameter over 15 mm length.  
 iii) Taper turning.
5. a) What is GT? Under what conditions GT is most appropriate? What benefit does GT provides in CAD/CAM manufacturing environment? 6  
 b) Write the three method of grouping part families and explain each one in brief. 7  
**OR**
6. a) List the various manufacturing and design attributes considered in GT. 4  
 b) Describe the four types of GT cell configuration with block diagram. 9
7. a) What is FMS? Explain the two category of flexibility. 3  
 b) Describe the major elements and features of FMS also explain functions of each elements. 10  
**OR**
8. a) Explain different types of FMS based on number of machines and level of flexibility. 6  
 b) Explain various types of FMS layout configuration with the help of net diagram. 7
9. a) Discuss Generative type process planning and state its benefits and limitations. 6  
 b) Compare traditional process planning with CAPP. 4  
 c) Contrast production planning with process planning. 4  
**OR**
10. a) Briefly explain various activities carried out under production planning. 6  
 b) State the objectives of material requirement planning. What are the inputs required for carrying out MRP? 4  
 c) Write brief note on MRP - II. 4
11. Write short note on : 13  
 1) CMM 2) CAQC  
 3) Pull system of production control.
- OR**
12. Write short note on : 13  
 i) Manufacturing system control. ii) Shop floor control.  
 iii) Inventory control.

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