

C.U.SHAH UNIVERSITY

Winter Examination-2019

Subject Name: Computer Aided Manufacturing

Subject Code: 4TE07CAM1

Branch: B.Tech (Mechanical)

Semester : 7

Date : 13/11/2019

Time : 10:30 To 01:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
-

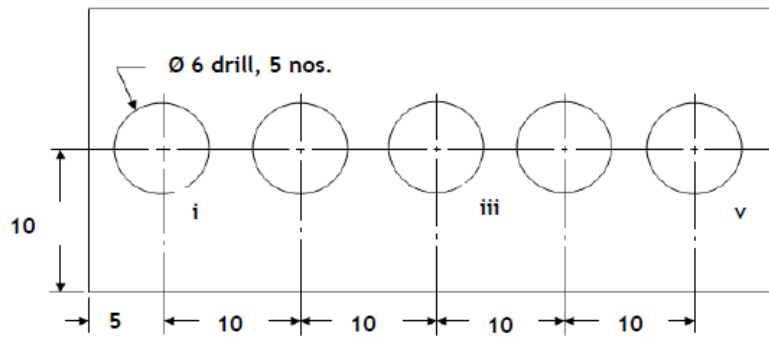
- Q-1 Attempt the following questions: (14)**
- (a) For Functional NC system, andare needed. (1)
 - (b) are the Velocity and Position measuring devices. (1)
 - (c)number system is followed for coding all of the part programs. (1)
 - (d) What do you mean by Part Programming? (1)
 - (e) What is use of Subroutines in Part Programming? (1)
 - (f) List benefits of Group Technology. (1)
 - (g) What are the objectives of MRP 1? (1)
 - (h) List various CAPP systems. (1)
 - (i) Write different types name of Production Planning and Control. (1)
 - (j) What is FMS? (1)
 - (k) Definition of CIM Systems. (1)
 - (l) What do you mean by Expert System? (1)
 - (m) What are objectives of Computer aided Quality Control? (1)
 - (n) logic is used in PLC. (1)

Attempt any four questions from Q-2 to Q-8

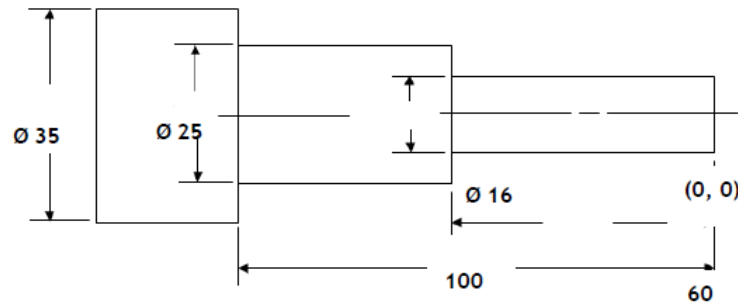
- Q-2 Attempt all questions (14)**
- (a) Explain open and closed loop control system used in a CNC system with a schematic diagram. Discuss about Velocity and Position feedback devices for a closed-loop control system. (07)
 - (b) Explain retrieval type CAPP system with a block diagram. (07)



- Q-3 Attempt all questions (14)**
 What is Do loops? Discuss the Do loops in detail and write a manual program for the component shown below. Used canned drill cycle. All dimensions are in mm.



- Q-4 Attempt all questions (14)**
 (a) Write a short note on Optiz Coding System used in Group Technology. (07)
 (b) Write a manual program for the component shown below. All dimensions are in mm. (07)



- Q-5 Attempt all questions (14)**
 (a) What is Group Technology? What is Part Families? Explain types of methods for grouping part. (07)
 (b) Discuss the salient features of point to point, straight line and contouring CNC systems. (07)

- Q-6 Attempt all questions (14)**
 (a) Explain the FMS layout configurations with neat sketch. (07)
 (b) Explain Contact Inspection and Non Contact Inspection Methods. (07)

- Q-7 Attempt all questions (14)**
 (a) Write a technical note on Concurrent Engineering. (07)
 (b) Draw and discuss the CIM wheel. (07)

- Q-8 Attempt all questions (14)**
 (a) What is MRP? What do you understand by bill-of-materials, master production schedule and inventory record file as required in an MRP system? (07)
 (b) What is PLC? Explain construction and working of PLC? Write an application of PLC in NC. (07)

