

B.Tech III Year II Semester (R09) Supplementary Examinations May/June 2017

CAD/CAM

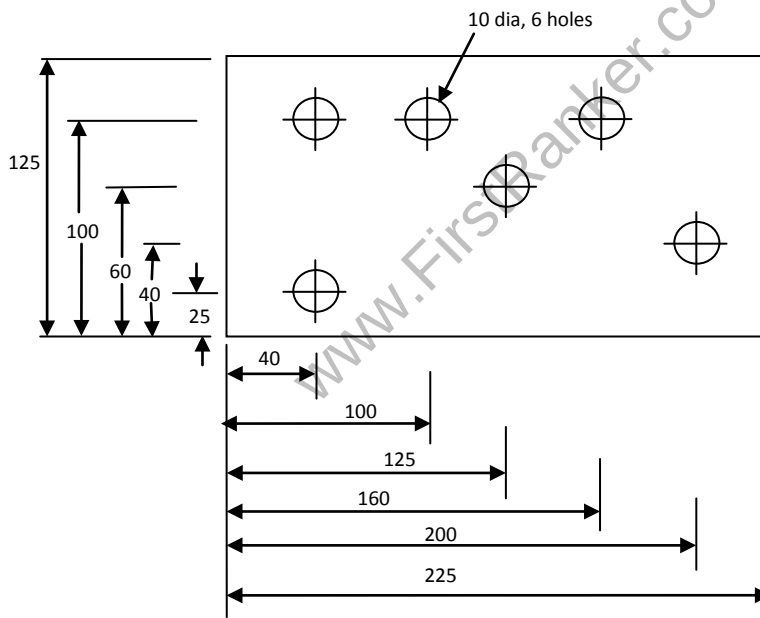
(Common to ME & MCT)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

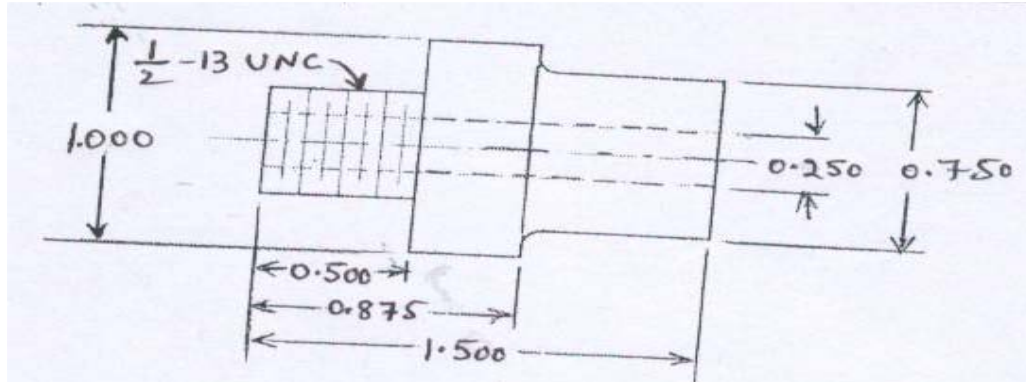
- 1 (a) Briefly explain different activities of product cycle with block diagram.
(b) Discuss the benefits of computer aided design.
- 2 Given a point $P = (2, 4, 8)$ and using homogeneous representation: (i) Calculate the coordinates of the transformed point P^* if P is rotated about X, Y and Z axes by angles 30° , 60° and 90° respectively. (ii) Calculate P^* if P is translated by $d = 3i - 4j - 5k$ and then scaled uniformly by $s = 1.5$.
- 3 (a) Briefly explain curve representation in geometric modeling.
(b) Discuss continuity requirements in geometric modeling.
- 4 (a) List NC words used in manual part programming.
(b) Write the part program to drill the holes in the part shown in figure below. The part is 12.0 mm thick. Cutting speed = 100 m/min and feed = 0.06 mm/rev. Use the lower left corner of the part as the origin in the x-y axis system. Write the manual part program. Use absolute positioning. (Dimensions are in millimeters).



Contd. in page 2

Code: 9A03602

- 5 (a) Explain the following:
- Design and manufacturing attributes.
 - Coding structures used in GT.
- (b) Develop the form code (first five digits) in the OPITZ system for part given (Dimensions are in millimeters).



- 6 (a) Explain the functions performed by FMS computer control system.
- (b) Discuss various FMS layout configurations.
- 7 (a) Draw the CIM cycle and explain the various components of it.
- (b) Briefly explain the scope of CIM.
- 8 (a) Summarize the important effects likely to result from CAQC.
- (b) Briefly explain coordinate measuring machine.
