

Government College of Engineering, Aurangabad
(An Autonomous Institute of Government of Maharashtra)
B. E. (Mechanical) Examination
End Semester Examination NOV 2016

ME 404 CAD CAM

Time: Three Hours

Max. Marks: 60

12.11.2016

“Verify the Course Code and check whether you have got the correct question paper”

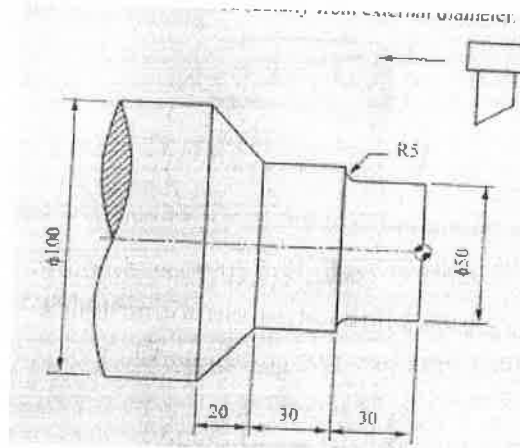
N.B:-

1. All questions are compulsory
2. Figures to the right indicate full marks
3. Assume suitable data if necessary and state it clearly
4. Use of non-programmable calculator is allowed

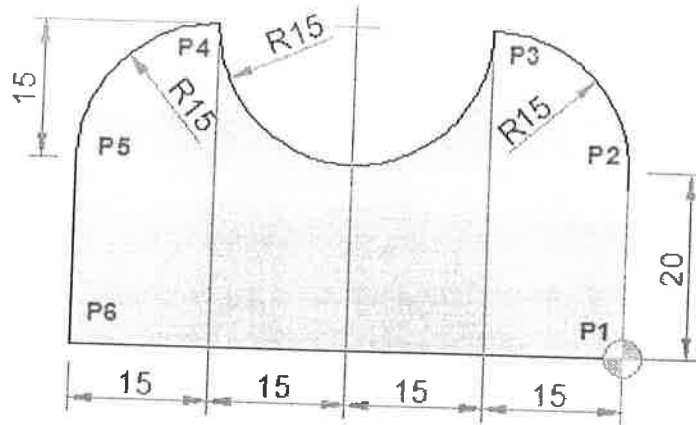
Attempt any ten

(each 6marks)

- 1) A line with original co-ordinate as (0,0) and (1,3) is rotated about first point then it scaled uniformly by scaling factor 3 determine concatenated matrix used for above sequential transformation and find transformed coordinates of line
- 2) What is need of synthetic surfaces? Describe key characteristics of Bezier curves
- 3) Write manual part program for finishing forged component speed and feed on turning centre 200 rpm and 0.35mm/rev assume 1 mm material should be remove radially from external diameter



- 4) Explain canned cycle on Drilling with suitable example
- 5) Differentiate between Plane, Ruled, and Tabulated surfaces
- 6) Elaborate the methodology adopted to scale entity about any arbitrary point
- 7) Differentiate between parametric and non-parametric form of representation of curve
- 8) What are different statements used to write a part program using APT? Describe Motion statement and Auxiliary statement in details
- 9) A point is defined as P (3,7,8) use homogeneous co-ordinate system to perform following operation
 - 1) Find the coordinate of point by rotating point 30° , 90° , 45° in sequence
- 10) Write complete APT part program for component shown in fig no 2. Assume suitable data



- 11) Describe with example cutter length compensation in CNC part program
- 12) Describe structure of part program and fixed zero and floating zero method in programming
- 13) Write note on parametric representation of surfaces