


Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2020

Programme Name: B Tech ADE	Semester : VIII
Course Name : CAD/CAM	Time : 03 hrs
Course Code : ADEG 424	Max. Marks : 100
Nos. of page(s) : 02	

Instructions:

SECTION A

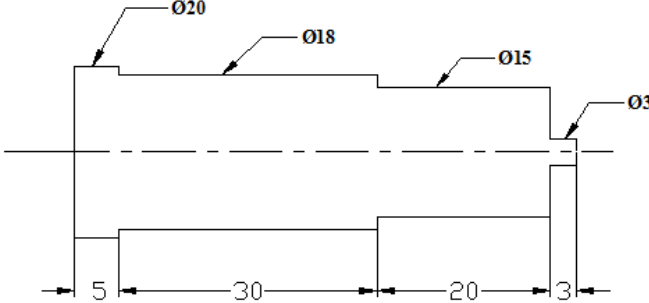
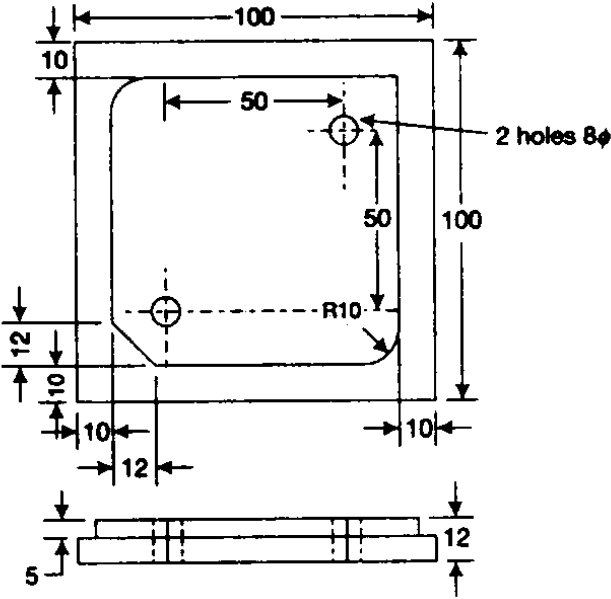
S. No.		Marks	CO
Q 1	Differentiate between incremental and absolute coordinate system.	5	CO1
Q 2	How the future factory does depend upon CAD/CAM?	5	CO1
Q 3	What are the main parts of a DNC system?	5	CO1
Q 4	Discuss advantages and limitations of NC systems.	5	CO1
Q 5	What do you understand by the Implicit and Parametric representation of curves?	5	CO2
Q 6	Explain the concept of floating datum and set point with reference to CNC part programming. What is their relationship?	5	CO2

SECTION B

Q 7	Write a program in C/C++/MAT Lab to generate a line on screen using DDA line generating algorithm. OR Write a program in C/C++/MAT Lab to generate a circle on screen using Bresenham's circle generating algorithm.	10	CO3
Q 8	Briefly explain the various graphic transformations required for manipulating the geometric information.	10	CO3
Q 9	What is adoptive control in CNC machine? State advantages of using adoptive control.	10	CO4
Q 10	Why Bezier splines are highly useful and convenient for curve design? Write limitations of wireframe modelling.	10	CO4

Q 11	Discuss the following programming formats in detail. (a) Word address format (b) Tab sequential format (c) Fixed block format	10	CO4
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SECTION-C

Q 10	<p>Write a CNC program for turning and facing of the component given below.</p>  <p style="text-align: center;">OR</p> <p>The following component is to be machined. Prepare the part programs to completely machine the parts from metal stock as shown. The slot drill to be used is of 16 mm dia.</p> 	20	CO5
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