Seat No.:	Enrolment No
GUJARAT TECHNOLOGICAL UNIVERSITY	
M. E SEMESTER – II • EXAMINATION – WINTER • 2013	
Subject code: 1722805	Date: 08/12/2014
Subject Name: Computer Aided Design	for Machine Component
TIME: 2:30 to 5:00 PM	TOTAL MARKS: 70
Instructions:	
1. Attempt all questions.	
2. Make suitable assumptions wherever necessary	V-
5. Figures to the right indicate full marks.	
Q.1 (a) Distinguish between Conventional Design ar	nd Computer Aided Design
system with CAD architecture. Explain appli	ication of Computers to the design
process.	07
(b) Draw the flow chart and write Bresenhamøs alg	contribution for generation of
circle.	07
Q.2 (a) Explain the following two dimensional geor	netric transformations in detail:
(1) Translation (2) Scaling.	07
(b) Explain the types of geometric modeling & re	present a surface model of cube
with its basic entity and edge type.	07
(b) What is the significance of homogeneous coor	dinates in geometric
transformations?	07
Q.3 (a) Define geometry and topology. Compare C-	rep and B-rep approaches. 07
(b) Explain the types of wire frame modeling.	07
OR	
Q.3 (a) Describe in detail the structure of an IGES fi	le. 07
(b) What do you mean by 2D and 3D wireframe mo	odeling? Differentiate between
Wire-frame modeling and solid modeling technic	que for CAD. 07
Q.4 (a) What is graphic standard? Explain different (CAD standards in detail with
(b) Explain DDA algorithm for generation of line w	vith flow chart 07
(b) Explain DDA algorithm for generation of mile w OR	thi now chart.
Q.4 (a) Write a program in C: Design of closed heli	cal spring. 07
(b) Write various approaches used for creating so	olid models of an object,
explain any one.	
Q.5 (a) Discuss the followings with respect to optim	1Zation: 07
(h) Using C Language write a program for a connect	ting rod of an IC Engine 07
OR	and rot of an ro Engine. Of
Q.5 (a) What do you mean by compatible and incom	patible problem in optimum
design? Explain.	07
(b) State various optimization techniques and explain	n Johnson method of optimum
uesigii.	07