COMSATS University Islamabad Lahore Campus

Sessional 2 Examination – Semester Spring 2021

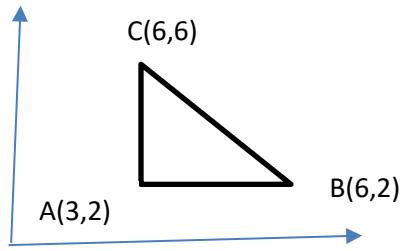
Course Title:	Computer Graphics			Course Code:	CSD304	Credit Hours:	3(2,1)
Course Instructor/s:	Aamer Mehmood			Programme Name:	BS Computer Sciences		
Semester:	5th,7th	Batch:	SP18-SP19	Section:	A,B,C	Date:	
Time Allowed:	**1.5 Hours**			**Maximum Marks:**		**20**	
Student's Name:				Reg. No.	CIIT/SDP-SP( )-BCS- /LHR		

Important Instructions / Guidelines:

- Use proper indentation, comments, naming conventions and self-explanatory names if you want to secure better marks.

Question 1: Provide a 3x3 matrix that will compute the new vertices of a planner box after a rotation of 60 degrees and a scaling of factor $S_x=S_y=0.5$ about its center [4, 2]. (5 marks)

Question 2: (A) Rotate the triangle given in figure (a) by 90 degrees about the origin. (3 marks)



Figure(a).

(B) Write all the points which describe the rotation about arbitrary point (Pivot Point) other than the origin. (2 marks)

Question 3: Find a transformed point Q caused by rotating P (3, 5) about the origin through an angle of 60°. (5 marks)

Question 4: What are the basic steps, performed to fill a polygon? Explain the algorithm with the given scenario. (5 marks)