SEC-3	BCS-S502A	COMPUTER GRAPHICS	L	C	CIA	ESE	Time for ESE
			1	1	30	70	3Hrs.
PREREQUISITES		:	Knowledge of data structures, C/ C++ programming language, linear algebra and co-ordinate geometry				
COURSE OBJECTIVES/ LEARNING OUTCOMES		:	By the end of the semester students are expected to have a general understanding of the following: • The basic elements of computer graphics and graphics hardware • Basic modeling techniques • State of the art in 2D computer graphics				
NOTE: The question paper shall consist of three sections (Sec.-A, Sec.-B and Sec.-C). **Sec.-A** shall contain 10 objective type questions of one mark each and student shall be required to attempt all questions. **Sec.-B** shall contain 10 short answer type questions of four marks each and student shall be required to attempt any five questions. **Sec.-C** shall contain 8 descriptive type questions of ten marks each and student shall be required to attempt any four questions. Questions shall be uniformly distributed from the entire syllabus. The previous year paper/model paper can be used as a guideline and the following syllabus should be strictly followed while setting the question paper.								

Development of computer Graphics: Raster Scan and Random Scan graphics storages, displays processors and character generators, colour display techniques, interactive input/output devices. **3L**

Points, lines and curves: Scan conversion, line-drawing algorithms, circle and ellipse generation, conic-section generation, polygon filling anti aliasing. **6L**

Two-dimensional viewing: Coordinate systems, linear transformations, line and polygon clipping algorithms. **6L**

BOOKS RECOMMENDED :

1 D. Hearn and M.P. Baker, Computer Graphics, 2nd Ed., Prentice–Hall of India, 2004.

2 J.D. Foley, A van Dam, S.K. Feiner and J.F. Hughes, Computer Graphics: Principals and Practices, 2nd Ed., Addison-Wesley, MA, 1990.

3 D.F. Rogers, Procedural Elements in Computer Graphics, 2nd Ed., McGraw Hill Book Company, 2001.