Code No: **R31054** **R10** **Set No. 1**

III B.Tech I Semester Supplementary Examinations, October/November -2017

COMPUTER GRAPHICS

(Common to Computer Science and Engineering & Information Technology)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks

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1	a)	Derive Bresenham's line drawing algorithm.	[8M]
	b)	Differentiate between Bresenham's and DDA line drawing algorithm.	[7M]
2		Explain scanline fill algorithm with an example showing necessary vertex list, edge list, active edge list etc.	[15M]
3	a)	Derive shear transformation matrices i.e X and Y shear.	[10M]
	b)	What are world coordinates of Homogeneous coordinates? Explain transformation between co-ordinate systems.	[5M]
4	a)	Explain Sutherland-Hodgeman polygon clipping algorithm with an example.	[10M]
	b)	Discuss cyrus-beck line clipping alogarithm.	[5M]
5	a)	Derive the equation of Hermite curve. Give its properties.	[10M]
	b)	Write short note on polygon surfaces.	[5M]
6	a)	Derive the necessary transformation matrices for parallel and perspective projections.	[10M]
	b)	Develop the necessary bit codes for the 3D version cohen-sutherland line clipping algorithm.	[5M]
7	a)	Explain depth shorting algorithm with an example.	[8M]
	b)	Discuss BSP tree methods .How is it differ from area subdivision method?	[7M]
8	a)	Explain Animation specification involving accelerations.	[8M]
	b)	Discuss in detail Computer animation languages.	[7M]

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