Code No: **R42031** **R10** **Set No. 1**

IV B.Tech II Semester Supplementary Examinations, July/August - 2017

INTERACTIVE COMPUTER GRAPHICS

(Mechanical Engineering)

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

Answer any FIVE Questions

All Questions carry equal marks

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1	a)	Explain the input device handling algorithms.	[8]
	b)	Give a brief note on video-display devices.	[7]
2	a)	Describe the boundary-fill and flood-fill algorithms.	[8]
	b)	Define Graphic primitives. Mention some typical graphic primitives that a package may provide.	[7]
3		Explain the Cohen- Sutherland and Cyrus-beck line clipping algorithms.	[15]
4		Write a short notes on the following: a) Hermite curve b) CSG c) quadric surfaces	[15]
5	a)	Make a comparison between the Phong's shading algorithm and Gourand shading algorithm.	[8]
	b)	Explain the diffuse reflection lambert's cosine law and point source illumination.	[7]
6	a)	How wireframe displays might be generated with the various visible-surface detection methods? Explain.	[8]
	b)	Write a program to implement the scan-line algorithm for a scene containing several polyhedrons. Use polygon and edge tables to store the definition of the object, and use coherence techniques to evaluate points along and between scan lines.	[7]
7	a)	List and explain the general computer animation functions.	[8]
	b)	Explain the raster animations and computer animation languages.	[7]
8	a)	Define multimedia. With the help of neat diagram, explain the multimedia architecture.	[8]
	b)	Give a brief note on icon-based authoring tools.	[7]