

B. Sc. IT (HONS.): 6th Semester

Course Title	Course Code	Credits- 06			Total Marks- 90	
		Theory	Tutorial	Practical	Theory	Practical
Computer Graphics	BIT620D1A	04	Nil	02	60	30

Unit- I

Introduction: what is computer graphics? Video Display Devices- Cathode ray tube, Raster scan displays, Random scan displays. Raster scan systems, Random scan systems, Input devices, Graphics Software Coordinate Representations, Fundamental problems in Geometry.

Unit-II

Algorithms: Line drawing-DDA, Bresenham's, Circle and Ellipse generating algorithms- Midpoint Circle Algorithm, Midpoint Ellipse Algorithm.

UNIT-III

Filling: Filled Area Primitives, Scan-Line Polygon Fill Algorithm, Inside-Outside Tests, Scan-Line Fill of Curved Boundary Areas, Boundary- Fill Algorithm, Flood-Fill Algorithm, Character Generation, Attributes of lines, curves, filling, characters etc

Unit-IV

2-D Geometric Transformations: Basic Transformations, Matrix representation & Homogeneous Coordinates, Composite Transformations, Other Transformations, Transformations between Coordinate Systems, Raster methods for Transformations.

Note: *The Practical Component shall be based on the Unit-I to Unit-IV*

SUGGESTED BOOKS

1. Computer Graphics, Donald Hearn & M. Pauline Baker, PHI
2. Computer Graphics by Hill Jr
3. Computer Graphics, Steven Harrington, McGraw-Hill

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Course Title	Course Code	Credits- 06			Total Marks- 90	
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Cloud Computing	BIT620D1B	04	Nil	02	60	30

Unit- I

Cloud Introduction:

Cloud Computing Fundamentals: Cloud Computing definition, Types of Cloud, Cloud services: Benefits and challenges of cloud computing, Evolution of Cloud Computing , usage scenarios and Applications , Business models around Cloud– Major Players in Cloud Computing – Issues in Cloud – Eucalyptus – Nimbus – Open Nebula, CloudSim.

Unit- II

Cloud Services and File System:

Types of Cloud services: Software as a Service – Platform as A Service – Infrastructure as a Service – Database as a Service – Monitoring as a Service –Communication as services. Service providers- Google App Engine, Amazon EC2, Microsoft Azure, Sales force. Introduction to Map Reduce, GFS, HDFS, Hadoop Framework. Collaborating With Cloud: Collaborating on Calendars, Schedules and Task Management –Collaborating on Event Management, Contact Management.

Unit- III

Virtualization for Cloud:

Need for Virtualization – Pros and cons of Virtualization – Types of Virtualization – System Vm, Process VM, Virtual Machine monitor – Virtual machine properties-Interpretation and binary translation, HLL VM – Hypervisors – Xen, KVM , VM Ware, Virtual Box, Hyper-V.

Unit- IV

Security, Standards, and Applications

Security in Clouds: Cloud security challenges – Software as a Service Security, Common Standards: The Open Cloud Consortium – The Distributed management Task Force – Standards for application Developers – Standards for Messaging – Standards for Security, End user access to cloud computing, Mobile Internet devices and the cloud.

Note: *The Practical Component shall be based on the Unit-I to Unit-IV*

Books Recommended:

1. Bloor R., Kanfman M., Halper F. Judith Hurwitz “Cloud Computing ” Wiley India edition,2010
2. John Rittinghouse& James Ransome, “Cloud Computing Implementation Management and Strategy”, CRC Press, 2010
3. Antohy T Velte ,Cloud Computing : “A Practical Approach”, McGraw Hill,2009
4. Michael Miller, Cloud Computing: “Web-Based Applications That Change the Way You Work and Collaborate Online”, Que Publishing, August 2008.
5. James E Smith, Ravi Nair, “Virtual Machines”, Morgan Kaufmann Publishers, 2006.