

## Syllabus Unitization & Prescribed Books (Session 2023-2024)

Department of CS & IT

### Class – BCA-VI Semester

**Pattern of Question Paper** - Eight questions of equal marks (Specified in the syllabus), two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

#### COMPUTER GRAPHICS

**M.Marks : 75**

<b>Month wise Division</b>	<b>Syllabus Unitization</b>
<b>Jan-Feb</b>	<b><u>SECTION-A</u></b> Overview of Graphics system: Computer Graphics and their applications. Display Devices: CRT Monitors (Random – Scan and Raster Scan), DVST, Plasma – Panel Display, LED and LCD Monitors <b><u>SECTION-B</u></b> Two Dimensional Transformations: Basic Transformations, Scaling, Translation, Rotation, Reflection, Shear, Matrix representation of Basic transformations and homogenous coordinates. 3D transformations. translation, scaling, rotation,
<b>March</b>	<b><u>Section B</u></b> Elementary Drawing: Points and various line drawing Algorithms and their comparisons. Circle generating algorithms, Algorithms for ellipse, arc and spiral <b><u>SECTION-C</u></b> Composite Transformations: Windowing and clipping. Windowing concepts, clipping and its algorithms. Window-to-view port transformations.
<b>April</b>	<b><u>SECTION-D</u></b> Three Dimensional concepts. 3 D Coordinate Systems. Projections, parallel projections. Perspective projection.

#### **Prescribed Book**

**Book Name** – Computer Graphics

**Author** – Charanjit Singh

**Publisher** – Kalyani Publishers

**COMPUTER NETWORKS**

**M.Marks : 75**

<b>Month wise Division</b>	<b>Syllabus Unitization</b>
<b>Jan-Feb</b>	<b><u>SECTION-A</u></b> Introduction: Network Definition, Basic Components of a Network, Network types and topologies, Uses of Computer Networks. Transmission Media: Coaxial cable, twisted pair cable, fiber optics & satellites. OSI reference model, TCP/IP reference model, comparison of OSI and TCP reference model.
<b>March</b>	<b><u>SECTION-B</u></b> Introduction to Analog and Digital Transmission: Telephone system, Modems, Types of modems, pulse code modulation. Transmission & Switching: Multiplexing, circuit switching, packet switching, hybrid switching. <b><u>SECTION-C</u></b> Local Area Network Protocols: CSMA Protocols, IEEE standards 802, Token Bus, Token Ring. Data Link Layer Design Issues: Services provided to Network layer, Framing, error control, flow control, link management. Error detection & correction, Elementary Datalink Protocols. Design Issues of Network Layer: Services provided to transport layer, routing, connection, internet & World Wide Web.
<b>April</b>	<b><u>SECTION-D</u></b> Network Security and Privacy: Brief Introduction to Cryptography. Network Services: File transfer, Access & Management, Electronic Mail, Remote login

**Prescribed Book**

**Book Name** – Computer Networks

**Author** – Tannanbum

**Publisher** – Prentice Hall