MODULE – I

COMPUTER ARCHITECTURE   (20 Marks)

The Von Neumann and Harward architecture – computer components – computer functions – Instruction Fetch and Execute – Interrupts – I/O Function – Interconnection structures – Bus Interconnection – Multiple Bus Hierarchies

Memory Hierarchy – Cache Memory Principles – Semiconductor Main Memory – Organisation – DRAM amd SRAM – types of ROM

External Memory – Magnetic Disk - Magnetic Read and Write Mechanism – Data Organization and formatting – Physical Characteristics – RAID – Level 0,1,2,3,4,5,6 – Optical Memory – Compact Disk – Digital Versatile Disk – High Definition Optical Disks

Input/Output Devices – Keyboard/Monitor – Disk Drive – I/O Modules – Module function – I/O Module Structure – Programmed IO, Interrupt Driven IO, DMA

Processor organization – CISC & RISC – Register organization – User visible Registers – Control and Status Registers – Instruction Cycle – The Indirect Cycle – Data Flow – Instruction Pipelining

Control Unit Organization – Micro operations – Fetch, Indirect, Interrupt, Execute, Instruction Cycles – Control of the Processor – Hardwired & Micro programmed control – Parallel processing – Multiple processor organization

MODULE - II

INFORMATION TECHNOLOGY – ETHICAL AND SOCIAL ISSUES   (15 Marks)

IT in communication, Business, Governance, Medicine, Office Automation and Health Care, Education, Science, Entertainment, Engineering Manufacturing, IT Policy in the State

E-Commerce – Types of e-commerce, B2B, B2C, C2C, P2P, M – commerce. On-line trading and Net-Banking

Ethical and social issues related to systems – Key Technology Trends that Raise Ethical Issues – Ethics in an information Society-Basic Concepts : Responsibility, Accountability and Liability, Ethical Analysis – Candidate Ethical Principles – Professional Codes of Conduct

Information Rights : Privacy and Freedom in the Internet Age

Property Rights : Intellectual Property, Accountability, Liability and Control, System Quality

MODULE - III

INFORMATION SECURITY   (10 Marks)

Computer Security : Security concepts – Security aspects in communication – Security requirements

Cryptography : Symmetric encryption Algorithms – Authentication Methods – Access control – Principles, Policies, Requirements – UNIX File Access Control

Intrusion and Detection – Malicious Software – Denial of Service – Firewall Operating System Vulnerabilities : Windows OS vulnerabilities – Linux OS vulnerabilities - Countermeasures

MODULE – IV

MS OFFICE AND INTERNET   (15 Marks)

Windows – Desktop, Taskbar, Start Menu, My Computer, Windows Explorer, Recycle Bin – Accessories – Calculator, Notepad, Paint, Wordpad.

MS Word – Text Formatting Features – Paragraph Change Case, Font, Tabs, Drop Cap, Bullets and Numbering, Advanced Formatting Features – Boarders and Shading, Autoshape, Caption, Columns, Text Box, Footnote, Tables and Drawing Features – Insert Table, Draw Table, Formula, Sort, Forms Graphics – Word Art and Clip Art, Tools – Mail Merge, Spelling and Grammar, Thesaurus, Autocorrect

MS Excel – Worksheets, Cell, Cell Range Operations, Fill Series, protecting Worksheets Functions – sum, average, if. Financial and Statistical Functions, Mathematical Functions. Database Operations Sort, Filter – Auto filter and Advanced filter. Subtotals, Table, Validation Charts – Column, Pie, XY, Line, Scatter.

MS Powerpoint – Graphics and image file formats, and its restrictions to particular hardware/operating system platforms. Platform independent formats. Image formats and incorporation of compression technique for large storage size of Image files. Vector Graphics and Raster Graphics, Screen Graphics and Pixel Graphics :-formats like ai. pdf, eps, svg, svgz, psd, bmp, gif, jpg, pcx, pct, png, raw, sct, tga, tiff, vst.

MODULE -V

PHOTOSHOP   (10 Marks)

Image editing, Photo re-touching, colourful image, collages, artistic backgrounds.
Creation of the optimized images with roll over effects and image mapping. Special effects on images.

MODULE – VI

WEB PROGRAMMING   (15 Marks)

Internet – Internet Protocol Address – Domain Names – World Wide Web – Web Browsers – Web Servers – URL – MIME – HTTP HTML – tags – attributes – table – form – frame – format tags – image tags – embedding multimedia

CSS – Java script – programming – event handling – data validation – dynamic documents – positioning elements, moving elements, element visibility, font and colour changing, dynamic content

MODULE – VII

MULTIMEDIA AND ANIMATION   (15 Marks)

Multimedia Harware – sound cards, video acceleraters, various memory storage devices, Display devices Media Types – Text – Hyper text, Audio and Video file formats – standards, Image – Image types – Image Compression, RLE, JPEG, MPEG – Fractal and wavelet Compressions -

Image file types
Animation tools – Maya, Director, flash
Drawing tool – colors – filters