

**COURSE STRUCTURE, SYLLABUS AND
SCHEME OF EXAMINATION**

FOR

**BACHELOR OF COMPUTER
APPLICATION**

(BCA)

2014-15 Onwards



Department of Computer Applications

VBS PURVANCHAL UNIVERSITY, JAUNPUR

DEPARTMENT OF COMPUTER APPLICATIONS
VBS PURVANCHAL UNIVERSITY, JAUNPUR

STUDY & EVALUATION SCHEME

BCA (Bachelor of Computer Applications)
Effective from session: 2016-2017

SEMESTER VI

SUB CODE	SUBJECT	L	T	P	TA/CT/ESE	TOTAL
BCA-601	DATA COMMUNICATION & COMPUTER NETWORKS	3	1	0	10/20/70	100
BCA-602	E-COMMERCE	3	1	0	10/20/70	100
BCA-603	MULTIMEDIA SYSTEM	3	1	0	10/20/70	100
BCA-P61	BCA PROJECT - II				200	200
BCA-P62	COMPREHENSIVE VIVA				100	100
					TOTAL	600

SEMESTER VI

DATA COMMUNICATION & COMPUTER NETWORKS BCA 601

Unit – I

Digital Communication:

Fundamentals of Digital Communication, Communication Channel, Transmitter, Channel Noise, Amplitude modulation, Frequency modulation, Sampling pulse modulation, PCM.

Base Band Data Transmission:

Synchronization and Scrambler and unscramble, Band pass data transmission system ASK, PSK, DPSK, MSK, Modulation.

Registrars

Unit – II

Introduction:

Uses of Computer Networks, Network Architecture, Reference Model (ISO-OSI, TCP/IP Overview, IP Address Classes, Subnetting), Domain Name Registration &

Physical Layer:

Theoretical basis for data communication, transmission media-Magnetic Media, Twisted Pair, Baseband Coaxial Cable, Broadband Coaxial Cable, Fibre Cable, Structured Cabling, Cable Mounting, Cable Testing, Wireless transmission, the telephone system, narrowband ISDN, broadband ISDN and ATM.

Unit – III

Data Link Layer:

Data link layer design issues, error detection and correction, data link protocols, sliding window protocols, Examples of Data Link Protocols.

Unit – IV

The Medium Access Sub layer:

The channel allocation problem, multiple access protocols, IEEE standard 802 for LANS and MANS, high-speed LANs, satellite networks, Network devices-repeaters, hubs, switches and bridges.

Unit - V

Network Layer:

Network layer design issues, routing algorithms, congestion control algorithm, internetworking, the network layer in the internet, the network layer in ATM networks.

Books:

1. Tananbaum A.S., "Computer Networks", 3rd Ed, PHI, 1999.
2. Black U., "Computer Networks-Protocols, Standards and Interfaces", PHI, 1996.

3. Stallings W., "Computer Communication Networks", PHI.
4. Laura Chappell (ed), "Introduction to Cisco Router Configuration", Techmedia, 1999.
5. Michael A. Miller, "Data & Network Communication", Vikas Publication

SEMESTER VI

E-COMMERCE BCA 602

Unit – I

Introduction:

Electronic Commerce – Technology & Prospects, Definition of E-Commerce, Electronic potential of E-Commerce, Forces behind E-Commerce, Advantages and disadvantages of E-Commerce.

Unit – II

Mobile Commerce:

Introduction, Wireless application protocol, WAP technology, Mobile information device, Mobile computing Applications.

Unit – III

Web Security:

Security issue on web, Firewall, Components of Firewall, Security threats, Network security, Limitation of firewall.

Unit – IV

Encryption:

Encryption techniques, Symmetric Encryption keys and data Encryption standards, Triple Encryption, Asymmetric Encryption – Secret key Encryption, Public and Private key Encryption.

Unit – V

Electronic Payment:

Overview, Payment gateway, Certificate, Digital tokens, Smart card, Credit card, Magnetic strip card, E-checks, On line banking.

Books:

1. Ravi Kalakota: Frontiers of Electronic Commerce
2. Bajaj & Negi: E-Commerce the cutting edge of Business

SEMESTER VI

MULTIMEDIA SYSTEMS BCA 603

Unit - I

Evolution of Multimedia and its objects, Scope of multimedia in business & work, Production and Planning of Multimedia applications, Multimedia hardware, Memory and storage Devices, Communication Devices, Multimedia Software,

Unit – II

Production and Planning of Multimedia building blocks, Text Sound (MIDI), Digital Audio, Audio file formats, MIDI under Windows environment, Audio and Video Capture.

Unit – III

Macromedia products, Basic drawing techniques, Advance animation techniques, Creating multi layer combining interactivity and multiple scenes.

Unit – IV

Digital Audio concept, Sampling Variables, Loss Less compression of sound, Lossy compression & Silence compression.

Unit – V

Multimedia monitor bitmaps, Vector drawing, Lossy graphic compression, Image file formatic animations Image Standards, JPEG compression, Zig Zag coding, Video representation, colors, video compression, MPEG standards, recent development in Multimedia.

Book:

- Tay Vaughan, “Multimedia Making it Work”, Addison Wesley
- Andreas Halzinger, “Multimedia Basics”, Firewell Media
- Agrawal & Tiwari, “Multimedia Systems”, Excel
- Sleinreitz, “Multimedia Systems”, Addison Wesley