

TEACHING AND EXAMINATION SCHEME FOR

BACHELOR IN COMPUTER APPLICATIONS III YEAR (2011)

Paper Name (Theory)	Lec	Exam Hours	Min Marks	Max Marks
BCA – 19 E-Commerce	3	3	18	50
BCA – 20 Computer Networks & Mobile Computing	3	3	18	50
BCA – 21 Visual Basic Programming	3	3	18	50
BCA – 22 Internet Tools & Website Development	3	3	18	50
BCA – 23 Management Information Systems	3	3	18	50
BCA – 24 Relational Database Management Systems	3	3	18	50
Total of Theory				300

Paper Name (Practical)	Prac	Prac Hours	Min Marks	Max Marks
BCA – 25 Visual Basic Programming	3	3	18	50
BCA – 26 Web Development (DHTML, Java Script, Exploring Internet, E-Commerce)	3	3	18	50
BCA – 27 Oracle & SQL Programming	3	3	18	50
BCA – 28 Project	3	3	18	100
Total of Theory				250
Grand Total of Theory + Practical				550

Note:

1. Attempt 5 questions out of 10 questions set by the examiner.
2. A Laboratory Exercise File should be prepared by each student for each practical paper and should be submitted during practical examinations.
3. Duration of practical exam is 3 hours.
4. Project Work: 6 hours per student.
5. One internal and one external examiner only, in a day, shall assess 20 Project Reports. The Project work should be allotted to a group of maximum 3 students.
6. One internal and one external examiner shall conduct two practical exams, in a day, of a batch of 40 students.
7. Practical of 50 marks distribution is as under:
 - a. 30 marks for practical examination exercise for 3 questions.
 - b. 10 marks for Viva-voce
 - c. 10 marks for Laboratory Exercise File.

**BACHELOR IN COMPUTER APPLICATIONS
SCHEME OF EXAMINATION**

The number of paper and the maximum marks for each paper together with the minimum marks required for a pass are shown against each subject separately. It will be necessary for a candidate to pass in the theory part as well as the practical part of a subject/paper, wherever prescribed, separately.

Classification of successful candidates shall be as follows:

First Division	60%	} of the aggregate marks prescribed at Part I Examination, Part II Examination, Part III Examination, taken together
Second Division	48%	

All the rest shall be declared to have passed the examination, if they obtain the minimum pass marks in each subject viz. 36% no division shall be awarded at the Part I and Part II examination.

BCA – 19 E-COMMERCE

Electronic Commerce Framework, electronic and media convergence, traditional vs electronic business applications, the anatomy of E-commerce applications, overview of mobile computing technology, mobile data internet and mobile computing applications

Networks – Security and firewalls, client – server network security threads, firewalls and network security, data message security, encrypted documents and electronic mail.

Architectural Framework for electronic commerce, World Wide Web as architecture, consumer oriented e-commerce, electronic data interchange (EDI), EDI Applications in business, EDI security document management and digital libraries.

Consumer oriented applications, mercantile process models, mercantile models from the consumer's perspective, mercantile models from the merchant's perspective.

Note: Attempt any 5 questions
Duration: 3 hours

Max Marks: 50

BCA – 20 COMPUTER NETWORK & MOBILE COMPUTING

OSI Model, significance of layer model, network, topology, network classification, switching and components.

Introduction to Ethernet, token ring, basic working and cable, bridges, routers, gateways, private and public networks

FDMA, TDMA, CDMA, personal communications system architecture, cordless telephony, digital enhanced cordless telecommunication.

Wireless technology: Land mobile vs satellite vs inbuilding communication system, cellular telephony, personal communication system/networks.

Wireless architecture for mobile computing, wireless LANs, end user devices, MAC protocols, IEEE 802.11, mobile IP, wireless TCP, hand of adhoc networks, unicast and multicast communication, blue tooth.

BCA – 21 VISUAL BASIC PROGRAMMING

Introduction: Need of Visual languages, integrated development environment (IDE), advantage of Visual Basic, characteristics and features of Visual Basic, characteristics and features of Visual Basic – IDE, Projects, user interface, objects oriented, visual development and event-driven programming, forms/graphic controls, data processing, sharing with windows and internet applications.

Visual Basic Programming and tools: An introduction of Visual Basic programming, simple program construction, statements, input/outputs, comments, editor, subroutines, controls flow statements, objects and variants.

Designing user interface – elements of user interface, understanding forms, menus and toolbars, designing menus and toolbars, building dynamic forms, drag and drop operations, working with menus, customizing the toolbars.

Controls – textbox, combo box, scroll bar and slider control operations, generating timed events, drawing with Visual Basic using graphics controls, coordinate systems and graphic methods, manipulating colors and pixels with Visual Basic.

Database Programming with Visual Basic – data access methods, creating, reading and writing text files, data controls, creating queries.

Note: Attempt any 5 questions

Duration: 3 hours

Max Marks: 50

BCA – 22 INTERNET TOOLS AND WEBSITE DEVELOPMENT

Internet – current state, hardware and software requirement, ISP, an internet account, web home page, URL, browser, security on web, searching tools, search engines, FTP, Gopher, Telnet, emails, TFTP

Web browser architecture, web page and multimedia, static dynamic and active web page, simple mail transfer protocol, simple network management protocol, hyper text transfer protocol

Active Server Pages, features, exception handling, components, application object methods, properties, events, collection, request object methods, properties, collections, response object members.

JavaScript, comment types, JavaScript reserved words, identifiers, events, primitive data types, escape sequence, data type conversion functions and methods, operators, control structures and statements objects applet fundamentals, applet life cycle, local and remote applet applications, tags, creating and passing parameters to applets, exception handling.

Note: Attempt any 5 questions
Duration: 3 hours

Max Marks: 50

BCA – 23 MANAGEMENT INFORMATION SYSTEMS

Introduction to Management Information Systems (MIS): concepts, meaning elements and characteristics of MIS, MIS organization, MIS planning and building a business model.

Database and communications, definition requirement and user view of database, database software, file structure elements of a communication system and distributed data processing.

MIS technology definition of computer technology system and application software elements and support services elements.

Building and installing MIS application, development cycle analysis synthesis and implementation of MIS feasibility of installing MIS

Management and MIS, MIS aided decision making decision support systems education and training for MIS management's role in system development.

Note: Attempt any 5 questions
Duration: 3 hours

Max Marks: 50

BCA – 24 RELATIONAL DATABASE MANAGEMENT SYSTEMS

Distributed database design, architecture of distributed processing system, data communication concept, data placement, placement of DDBMS and other components, concurrency, control and recovery, transaction management, need of recovery, recovery techniques, serializability, blocking, dead locks, introduction to query optimization.

Query optimization and processing, algorithm for external sorting, select and join, object and set operations, heuristics in query optimization, temporal database concept, multimedia database, data-mining, association rule, classification, application, data warehousing, need, architecture, characteristics, data layer

Introduction to SQL, security and integrity of databases, security specifications in SQL.
Oracle RDBMS: Overview of three tier client server – technology, modules of Oracle and SQL * Plus Data types, constraints, operators, DDL, DML, (create, modify, insert, delete and update) searching, matching and Oracle functions, data types, PL/SQL functions, Error handling in PL/SQL, package functions, package procedures, Oracle transactions, SQL Stored Procedures.

Database Triggers: Introduction, Use and type of database triggers, triggers vs declarative integrity constraints, BEFORE Vs AFTER trigger combinations, creating a trigger, dropping a trigger.