ORDINANCES
AND OUTLINES OF TESTS,
SYLLABI AND COURSES OF READING

FOR

BACHELOR OF COMPUTER APPLICATIONS (B.C.A)

(SEMESTER SYSTEM)

PART-III

(Semester 5th and 6th)

For 2023-24 and 2024-25 Session
(For students admitted in session 2021-22 and 2022-23 only)

Programme Code: BCAB3PUP

PUNJABI UNIVERSITY PATIALA

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OUTLINE OF PAPERS AND TESTS
for
B.C.A. Third Year (5th Semester)

For 2023-24 and 2024-25 Session

Code	Title of Paper	Hours per Week	University Examination	Internal Assessment	Max. Marks	Exam. Duration Hours
BCAB3101T	English Literary Skills – I	4	75	25*	100	3
BCAB3102T	System Analysis and Design	4	75	25	100	3
BCAB3103T	System Software	4	75	25	100	3
BCAB3104T	Java Programming	4	75	25	100	3
BCAB3105T	Web Designing using HTML and DHTML	4	75	25	100	3
BCAB3106L	Software Lab – IX (based on paper BCAB3104T Java Programming)	4	35	15	50	3
BCAB3107LT	Software Lab – X (based on paper BCAB3105T Web Designing using HTML and DHTML)	4	35	15	50	3
		Total	445	155	600	3

Note:

The break-up of marks for the practical will be as under:

i.	Lab Record (Internal Assessment)	15 Marks
ii.	Viva Voce (External Evaluation)	15 Marks
iii.	Program Development and Execution(External Evaluation)	20 Marks

The break-up of marks for the internal assessment for theory papers except BCA-211 will be as under:

i.	One or two tests out of which minimum one best will be considered for assessment.	15 Marks
ii.	Attendance	5 Marks
iii.	Class participation/behaviour/assignment	5 Marks

*The break-up of marks for the internal assessment for BCAB3101T: English Literary Skills – I will be as under:

i.	Formal assessment through Interview/Self Introduction/Recitation etc.	10 Marks
ii.	Conversation Skills (particularly listening and speaking to be evaluated through oral examination)	5 Marks
iii.	Attendance	5 Marks
iv.	Class participation/behavior/assignment	5 Marks

OUTLINE OF PAPERS AND TESTS
B.C.A. Third Year (6th Semester)
For 2023-24 and 2024-25 Session

Code	Title of Paper	Hours per Week	University Examination	Internal Assessment	Max. Marks	Exam. Duration Hours
BCAB3201T	English Literary Skills – II	4	75	25*	100	3
BCAB3202T	E-Commerce	4	75	25	100	3
BCAB3203T	Operating Systems	4	75	25	100	3
BCAB3204T	Software Engineering	4	75	25	100	3
BCAB3205T	Web Designing using ASP.NET	4	75	25	100	3
BCAB3206L	Software Lab – XI (Minor Project)	4	35	15	50	3
BCAB3207L	Software Lab – XII (based on BCAB3205T Web Designing using ASP.NET)	4	35	15	50	3
		Total	**445**	**155**	**600**	**3**

Note:

The break-up of marks for the practical will be as under:

i.	Lab Record (Internal Assessment)	15 Marks
ii.	Viva Voce (External Evaluation)	15 Marks
iii.	Program Development and Execution(External Evaluation)	20 Marks

The break-up of marks for the internal assessment for theory papers except BCA-211 will be as under:

i.	One or two tests out of which minimum one best will be considered for assessment.	15 Marks
ii.	Attendance	5 Marks
iii.	Class participation/behaviour/assignment	5 Marks

*The break-up of marks for the internal assessment for BCAB3201T: English Literary Skills – II will be as under:

i.	Formal assessment through Interview/Self Introduction/Recitation etc.	10 Marks
ii.	Conversation Skills (particularly listening and speaking to be evaluated through oral examination)	5 Marks
iii.	Attendance	5 Marks
iv.	Class participation/behavior/assignment	5 Marks

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BCAB3101T: English Literary Skills-1

COMMON SYLLABUS OF ENGLISH WILL BE AS PER UG
(BOARD OF STUDIES) IN FACULTY OF LANGUAGE, PUNJABI
UNIVERSITY, PATIALA

BCAB3102T: System Analysis and Design

Max Marks: 75   Maximum Time: 3 Hrs.

MinPass Marks: 35%   Lectures to be delivered: 45-55 Hrs

(A) INSTRUCTION FOR THE PAPER SETTER

The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 15 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 15 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

(B) INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION-A

Systems concepts: Definition and characteristics of a system, Elements of a system, Types of systems. **The system development life cycle:** Introduction to various phases.

The role of the Systems Analyst: Qualifications of a systems analyst, various roles of the systems analyst.

Systems analysis: Initial investigation, needs identification, determining the user's information requirements, Information-gathering tools.

SECTION B

Structured analysis tools: Data flow diagram, Data dictionary, Decision tree, Structured English, Decision tables. **Feasibility study:** Feasibility considerations, Steps in Feasibility analysis. **Systems Design:** The process and stages of systems design, Input/output and forms design, Database design.

Implementation and software maintenance: Conversion, Post-implementation review. Software maintenance: maintenance or enhancement, Primary activities of a maintenance procedure.

Hardware and software selection: Procedure and major phases in selection.

Text Book:

1.   E. M. Awad: Systems Analysis and Design, Galgotia Publications (P) Ltd.

Reference Books:
1. Systems Analysis and Design: Techniques, Methodologies, Approaches, And Architectures1st Edition **Author:** Hardgrave Bill C. , Siau Keng , Chiang Roger H. L. **Publisher:** M.E. Sharpe

BCAB3103T: Systems Software

Max Marks: 75   Maximum Time: 3 Hrs.
MinPass Marks: 35%   Lectures to be delivered: 45-55 Hrs

(A) INSTRUCTION FOR THE PAPER SETTER

The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 15 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 15 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

(B) INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION – A

Introduction: Definition of system software, types of system software, features of system programming, system programming vs. application programming.

Language Processors: Introduction, Language processing activates, Fundamentals of Language Processing.

Assembler: Elements of Assembly Language Processing, A simple Assembly scheme, Pass structure of Assemblers, Design of a two pass assembler. A brief overview of single pass assembly and problem of forward references.

Linkers and Loaders: Definition of linker and loader Design of Absolute Loader, Re-locatable Loader.

SECTION –B

Compilers: Overview of Compilation Process, Scanning, Parsing (Top down and Bottom Up parsing), Intermediate code forms (variant I and II) intermediate code form for arithmetic expressions (postfix, prefix, triples, quadruples – concepts only), Code optimisation transformations (Compile time evaluation, Elimination of common sub-expression, Dead code elimination, Frequency reduction, strength reduction – concepts only), compiler vs. interpreter.

Software Tools: Software tools for program development, Editors, Debug monitors, Programming environments, User Interfaces.

Text Book:
1.   Dhamdhere D. M. "Systems Programming and Operating system", Tata McGraw-Hill Publishing Company Limited, New Delhi, Second Edition.

References:
1.   Donovan, "System programming". (McGraw-Hill), 1991
2.   Aho andUlman, "Principles of Compilers", Narosa Publishing House, 1986.
3.   Aho, A.V., Ullman Sethi R., I.D.: Compilers : Principles, Techniques and Tools, Addison-Wesley Publishing Co., 1988.

BCAB3104T: Java Programming

Max Marks: 75
Min Pass Marks: 35%

Maximum Time: 3 Hrs.
Lectures to be delivered: 45-55 Hrs

(A) INSTRUCTION FOR THE PAPER SETTER

The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 15 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 15 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

(B) INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION-A

Introduction to java: evolution, features, comparison with C and C++; Java program structure; tokens, keywords, constants, variables, data types, type casting, statements.

Operators and expressions: arithmetic, relational, logical, assignment, increment, decrement, conditional, bitwise and special operators. Operator precedence & associativity rules.

Control statements: if else, switch case, for, while, do while, break, continue, labeled loops.

Class: syntax, instance variable, class variables, methods, constructors, overloading of constructors and methods.

SECTION B

Inheritance: types of inheritance, use of super, method overriding, final class, abstract class, wrapper classes.

Arrays, Strings and Vectors, Packages and Interfaces, visibility controls

Errors and Exceptions: Types of errors, Exception classes, Exception handling in java, use of try, catch, finally, throw and throws. Taking user input, Command line arguments.

Multithreaded Programming: Creating Threads, Life cycle of thread, Thread priority, Thread synchronization, Inter-thread communication.

Text Book:
1.   Patrick Naughton and Herbert Schildt, *"The Complete Reference Java 2"*, TMH
References:
2.   Horstmann, Cay S. and Gary Cornell, *"Core Java 2: Fundamentals Vol. 1"*, Pearson Education.
3.   E. Balagurusamy *"Programming with Java"*, TMH

BCAB3105T: Web Designing using HTML and DHTML

Max Marks: 75   **Maximum Time: 3 Hrs.**
Min Pass Marks: 35%   **Lectures to be delivered: 45-55 Hrs**

(A) INSTRUCTION FOR THE PAPER SETTER

The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 15 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 15 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

(B) INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION-A

Introduction to HTML: Basic HTML concepts, an overview of HTML markup.
What is good Web design; the process of Web publishing; implementation; the phases of Web site development; HTML's role in the Web; and issues facing HTML and the Web.
HTML overview: the structure of HTML documents; document types; the <HTML> element; the <HEAD> element; the <BODY> element;
Links and Addressing: Linking basics; what are URLs; linking in HTML; anchor attributes; images and anchors; image maps; semantic linking with the <LINK> element; meta-information;
HTML and Images: The role of images on the Web; image preliminaries; image downloading issues; obtaining images; HTML image basics; images as buttons; and image maps.
Introduction to Layout: Backgrounds, Colors, and Text; design requirements; HTML approach to Web design; fonts; colors in HTML; document-wide color attributes for <BODY>; and background images. Introduction to tables, LISTS; frames

SECTION-B

Style Sheets: style sheets basics; style sheet example; style sheet properties; positioning with style sheets;
Basic Interactivity and HTML: Forms form preliminaries; the <FORM> element; form controls;
Introduction to Server-Side Programming: This chapter covers: overview of client/server programming on the Web; server-side programming; common gateway interface (CGI);
Dynamic HTML (DHTML): dynamic HTML and document object model; HTML and scripting access; rollover buttons; moving objects with DHTML; and ramifications of DHTML.

Text Book:

1.   Thomas A. Powell , "HTML: The Complete Reference", Osborne/McGraw-Hill

References:

1. Deitel, Deitel and Nieto : Internet & WWW. How to program, 2nd Edition, Pearson Education Asia.
2. E Stephen Mack, JananPlatt : HTML 4.0 , No Experience Required, 1998, BPB Publications.
3. "HTML Complete" by Sybex, BPB Publications, 2001.
4. Bayross, "Web Enabled Commercial Applications Development Using HTML, DHTML, Java Script, Perl CGI," Third Edition, BPB Publications.
5. Scott Mitchell, "Designing Active Server Pages, "O Relly, 2000.
6. Keith Morneau, Jill Batistick, "Active Server Pages", First Edition, Vikas Thomson Learning, 2000.
7. Smith, A. Eric, "Active Server Pages 3 Programming Bible", Wiley India, 2000.

BCAB3106L: Software Lab – IX
(Based on paper BCAB3104T: Java Programming)

Max Marks: 50   **Maximum Time: 3 Hrs.**
Min Pass Marks: 35%   **Practical Sessions to be conducted: 40-50 Hrs**

This laboratory course will comprise as exercises to supplement what is learnt under paper BCA-314: Java Programming. Students are required to develop the following type of programs in Java language with internal documentation:

1. Write a **Class Date** that takes day, month, and year while creating an object of this class. Find a new date when the number of days is given.
2. Write a program to implement Boolean AND, OR, XOR, and NOT operations.
3. Write a program to Add, Subtract, Multiply two matrices using switch statement. The program must also validate the sizes of two matrices before performing any operation and should raise exception in case the operation cannot be performed.
4. Write a program to store and then prints sorted names of students according to their length of name using arrays with variable sized rows.
5. Write a program to find the **area of all types of triangles** using the principle of **constructor overloading and Inheritance** depending on the number of dimensions given in the input parameter list using **super** to call the super class constructor.
6. Write a program to find the **area of rectangle** using an **abstract super** class figure and also **override** method use to compute the area of the rectangle.
7. Write a program to implement grow able and shrinkable **Stack** that can support operations like- push, pop, and view the top item with concept of dynamic allocation using **finalize()** method. The program should also incorporate the concepts of **private and public** access methods to avoid accidental manipulations of stack.
8. Write a program to demonstrate **static variables, methods and blocks**.
9. Write a program to swap two items belonging to an object using **returning of object** by a function.
10. Write a program to count the frequency of each vowel in a given string.
11. Demonstrate the use of **static and non static nested** classes.
12. Create a package containing a class to print your (name, roll no, marks) and use this package in another program using **import** statement.

The break-up of marks for the practical will be as under
i.	Lab Record (Internal Assessment)	15 Marks
ii.	Viva Voce (External Evaluation)	15 Marks
iii.	Program Development and Execution(External Evaluation)	20 Marks

BCAB3107L: Software Lab – X
(Based on paper BCAB3105T: Web Designing using HTML and DHTML)

Max Marks: 50   **Maximum Time: 3 Hrs.**
Min Pass Marks: 35%   **Practical Sessions to be conducted: 40-50 Hrs**

This laboratory course will comprise as exercises to supplement what is learnt under paper BCA-315: Web Designing using HTML and DHTML. Students are required to do at least 10 assignments based on the paper.

1. Create a web page to show the structure of HTML.
2. Show the use of formatting tags in HTML
3. Write HTML code to show the use of absolute and relative URL with anchor tag.
4. Show the use of image tag and show images as buttons.
5. Create a web page to show the use of image maps.
6. Create a table in which colspan and rowspan elements are used.
7. Create a webpage to show the use of different lists available in HTML.
8. Create a webpage to show the use of frame tag in HTML.
9. Create admission form for a college.
10. Create a webpage to show the use of different types of CSS.
11. Create a webpage to show the DHTML properties.

The break-up of marks for the practical will be as under

i.	Lab Record (Internal Assessment)	15 Marks
ii.	Viva Voce (External Evaluation)	15 Marks
iii.	Program Development and Execution(External Evaluation)	20 Marks

COMMON SYLLABUS OF ENGLISH WILL BE AS PER UG (BOARD OF STUDIES) IN FACULTY OF LANGUAGE, PUNJABI UNIVERSITY, PATIALA

BCAB3202T: E-Commerce

Max Marks: 75   **Maximum Time: 3 Hrs.**
MinPass Marks: 35%   **Lectures to be delivered: 45-55 Hrs**

(A) INSTRUCTION FOR THE PAPER SETTER

The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 15 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 15 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

(B) INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION – A

Introduction to E-commerce: Definition of E-commerce, Advantages and disadvantages of E-commerce, E-commerce versus traditional commerce.
Internet and WWW, Electronic commerce framework, Electronic commerce and media convergence, The anatomy of E-commerce applications.
Architectural framework for E-commerce, World Wide Web as the architecture, Web background: Hypertext publishing, Security and the Web.
Consumer-oriented E-commerce: Consumer-oriented applications, Mercantile Process Models – consumer's perspective, Merchant's perspective.

SECTION-B

Advertising and Marketing on the Internet: The new age information based marketing, Advertising on the Internet – Active or push-based advertising models, Passive or pull-based advertising models. Guidelines for Internet advertising.Online marketing process.
Types of Electronic Payment Systems, Digital token-based electronic payment systems, Smart cards and electronic payment systems, Credit card-based electronic payment systems, Risk and electronic payment systems.
Electronic Data Interchange and its applications in business.
Legal, Ethical and other public policy issues related to e-commerce.

Text Book:
1.   Ravi Kalakota, Andrew B. Whinston: Frontiers of Electronic Commerce, Addison Wesley.

References:
1.   EfraimTurbon, Jae Le, David King, Chung: Electronic Commerce- A managerial perspective, Prentice-Hall International.

2.   Gary P. Schneider, James T. Perry: Electronic Commerce

BCAB3203T: Operating System

Max Marks: 75   **Maximum Time: 3 Hrs**
Min Pass Marks: 35%   **Lectures to be delivered: 45-55 Hrs**

(A) INSTRUCTION FOR THE PAPER SETTER

The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 15 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 15 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

(B) INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.

SECTION-A

Operating System – Definition, Need, Services, Types of operating systems: simple batch system, multi programmed batch system, time sharing system, parallel system, distributed system, real time system, personal computer system. Operating system components, operating system services, system calls.

Process Management – process definition, process state, process scheduling, operations on processes, Basic concepts of thread, Difference between process and thread.

CPU Scheduling – Basic concepts, scheduling criteria, scheduling algorithms – FCFS, SJF, Round Robin and Multilevel queue scheduling.

SECTION-B

Deadlocks – Characteristics of deadlocks, methods for handling deadlocks, deadlock prevention, deadlock avoidance

Memory Management – Logical versus Physical address space, swapping, contiguous allocation, Paging, Concept of Virtual memory, Implementation by Demand Paging, Page replacement algorithms – FIFO, Optimal, LRU, Concept of thrashing .

File Management – Allocation methods: contiguous allocation, linked allocation and indexed allocation;

Device Management – Disk Scheduling: FCFS, SSTF, SCAN, C-SCAN, LOOK.

Text Book:

1.   Abraham Silberschatz, Peter B. Galvin, Operating Sytem Concepts, Addison –Wesley Publishing Co. Engineering, Third Edition 2005 ,PankajJalote, Narosa Publications. 5th Edition

BCAB3204T: Software Engineering

Max Marks: 75   **Maximum Time: 3 Hrs**
Min Pass Marks: 35%   **Lectures to be delivered: 45-55 Hrs**

(A) INSTRUCTION FOR THE PAPER SETTER

The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 15 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 15 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

SECTION – A

Introduction – The Problem Domain, Software Engg.Challenges, Software Engg.Approach. Software development life cycle, its phases, **Software development process models** :Waterfall, Prototyping, Iterative;
Software Process- Characteristics of software process, Project management process, Software configuration management process.
Project Planning – activities, COCOMO model.**Software Metrics** – Definition, Importance, Categories of metrics. **Software Quality** – Attributes,Cyclomatic complexity metric.
Software Requirements Analysis – Need for SRS, Data flow diagrams, Data Dictionary, entity relationship diagram, Characteristics and components of SRS, validation, metrics

SECTION-B

Software Design – Design principles, Module-level concepts, Structure Chart and Structured Design methodology,, verification, metrics : network metrics, information flow metrics.
Coding – Programming Principles and Guidelines, Verification- code inspections, static analysis.**Software Testing** – testing fundamentals, Black Box Testing : Equivalence class partitioning, Boundary value analysis, cause-effect graphing; White Box Testing : Control flow and Data flow based testing, mutation testing; levels of testing, test plan, test case specification, test case execution and analysis,
Software maintenance – Categories of maintenance.**Software Reliability** – Definition, uses of reliability studies

Text Book:
1. An Integrated approach to Software Engineering, Third Edition 2005, Pankaj Jalote, Narosa Publications.

References:
1. Software Engineering , Revised Second Edition , K.K. Aggarwal, Yogesh Singh, New Age International Publishers.
2. Software Engineering – A Practitioner's Approach, Fifth Edition, Roger. S. Pressman, McGraw Hill

BCAB3205T: Web designing using ASP.NET

Max Marks: 75
Min Pass Marks: 35%

Maximum Time: 3 Hrs
Lectures to be delivered: 45-55 Hrs

(A) INSTRUCTION FOR THE PAPER SETTER

The question paper will consist of *three sections A, B and C.* Section A and B will have four questions from the respective section of the syllabus carrying 15 marks for each question. Section C will consist of 5-10 short answer type questions carrying a total of 15 marks, which will cover the entire syllabus uniformly. . Candidates are required to *attempt five questions in all by selecting at least two questions each from the section A and B. Section C is compulsory.*

SECTION-A

Introduction to .net framework: - Genesis of.NET, Features, Advantages and disadvantages of .net framework. Common Language Runtime:-Common Type System, Common Language Specification, .Net binaries, Microsoft Intermediate Language, Meta Data, .Net types and .net namespaces.

Basics of ASP. NET: - Introducing ASP .NET– Creating ASP .NET applications using command line compiler and visual studio .net IDE.

Introduction to c#:- variables, Constants, Data Types, Operators, Control Structures and loops, Arrays, events.

Introduction to Classes and objects

Web forms, Standard Controls: - Display information, Accepting user input, Submitting form data, displaying images, using the panel control, using the hyperlink control.

Validation Controls: required field validation control, range validator Control, compare validator control, regular expression validator control, custom validator control, validation summary controls.

SECTION-B

Rich Web Controls: -Accepting file uploads, displaying a calendar, Displaying advertisement, displaying different page views, displaying a wizard. List Controls: Dropdown list control, Radio button, list controls. Grid View Controls: Grid view control fundamentals, using field with the grid view control, working with grid view control events extending the grid view control. Debugging, caching and deploying ASP .NET pages.

Master pages: - Designing Website with Master Pages: Creating master pages, Modifying master page content, Loading master page dynamically. ASP.NET security, localizing ASP .NET applications.
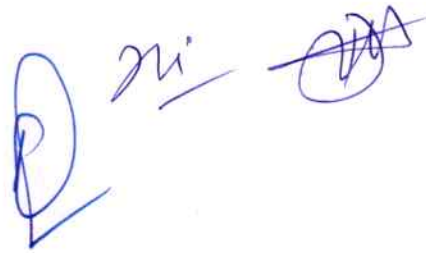
ADO.NET:- Changes from ADO to ADO.NET, ADO .NET Managed Providers – OleDb and SQL Managed Providers – OleDb Data Adapter Type. SQL Data Source Control: Creating database connections, executing database commands, Using

ASP.NET parameters with the SQL data source controls, programmatically executing SQL data source commands, Caching database data with the SQL data Source controls.

References:

1. ASP.NET 3.5: Stephen Walther, Pearson Education, 2005
2. Andrew Troelsen – "C# and the .Net Platform" – Apress – 2001.(Unit I and II)
3. David S. Platt – "Introducing .Net" – Microsoft Press – 2002
4. ASP.NET Bible" – MridulaParihar – Wiley-Dreamtech India Pvt. Ltd
5. Visual Basic .net Comprehensive Concepts and Techniques' Shelly, cashman, QuasneyCengage learning, 2012
6. Murach's Beginning Visual Basic .NET Anne Prince Murach

BCAB3206L: Software Lab – XI (Minor Project)

Max Marks: 50   **Maximum Time: 3 Hrs.**
Min Pass Marks: 35%   **Practical Sessions to be conducted: 40-50 Hrs**

This laboratory course will comprise as advance exercises to what is learnt in the previous semesters. Students are required to perform following activities

Activity 1: Select any one basic project idea for implementation that involves GUI forms, data to be stored at back end, Retrieval of data from database, generating reports i.e. involving the requirement of database connectivity. (1-2 page overview about this in your assignment)

Activity 2: Plan and Design GUI forms for interaction with user and templates for displaying the reports generated from data stored requested by end users. (Snapshots of all Forms to be attached along with their code)

Activity 3: Write code for event handling, database connectivity and report generation. (Full working to be explained as algorithm and then implementation in suitable programming language based on events)

The breakup of marks for the practical will be as under
i.	**Lab Record (Internal Assessment)**	**15 Marks**
ii.	**Viva Voce (External Evaluation)**	**15 Marks**
iii.	**Program Development and Execution(External Evaluation)**	**20 Marks**

BCAB3207L: Software Lab – XII
(Based on paper BCAB3205T: Web designing using ASP.NET)

Max Marks: 50
Min Pass Marks: 35%

Maximum Time: 3 Hrs.
Practical Sessions to be conducted: 40-50 Hrs

This laboratory course will comprise as exercises to supplement what is learnt under paper BCAB3205T:Web designing using ASP.NET. Students are required to do at least 10 assignments based on the paper.

PRACTICAL ASSIGNMENTS:-

1. Write a program to show the use of standard controls in a web form.
2. Write a program containing the list controls and its functions:
3. Write a program to show the use of file upload and calendar control.
4. Write a program to display advertisement on a web page.
5. Write a program to create an admission form for a college.
6. Write a program to demonstrate the master page.
7. Write a program to create login page which accepts user name and password, Then check for authentication of the user.
8. Write a program that demonstrates a textbox for a user input name and validate it with RequiredField Validation.
9. Write a program that demonstrates different validation controls.
10. Create a user control that displays the current date and time. Include it in a Web Form and refresh it each time a button is clicked.
11. Write a program to demonstrate ADO.NET controls and connectivity with database.
12. Write a program to demonstrate submits data in database by using the ado.net controls.

The breakup of marks for the practical will be as under
  i.   Lab Record (Internal Assessment)
  ii.   Viva Voce (External Evaluation)   15 Marks
  iii. Program Development and Execution(External   15 Marks
        Evaluation)   20 Marks

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