BCA 321 - C++

INTRODUCTION
C++ programming Basic
Object Oriented programming, Characteristics, Advantages of object Oriented programming over procedural language.

INTRODUCTION TO C++, EXTENSION OF C
Data types, constants, references, Variable, Loops and decisions
Arrays, strings and Structures Revision
Classes and objects

INTRODUCTION TO C++ CLASSES:
Data Members, Functions, Scope resolution operator,
Access specifier
New, delete operator, Static members.

CONSTRUCTOR and DESTRUCTOR
Encapsulation, Inline functions, and default parameters
Pointers and ‘This’ pointer

OVERLOADING:
Function Overloading, Operator Overloading
Default Arguments

INHERITANCE:
Base class, derived class, Virtual Class, Abstract class.

POLYMORPHISM
Virtual functions, Pure Virtual functions and abstraction
Function Overloading and ambiguities
All remaining types of functions

STREAM CLASS, FILE INPUT/OUTPUT.
FStream classes, working with files with functions for reading and writing

EXCEPTION HANDLING.
Fundamental, Multiple catch statements, catching all exception
BCA - 322 DBMS

1.0 Objectives
1.1 Storage devices characters
1.2 File Organization
   - Sequential Files
   - Indexing and methods of indexing
   - Hash files

2: Introduction To Database Systems
2.0 Objective
2.1 Introduction To DBMS
   2.1.1 What is Data, Database system, DBMS?
   2.1.2 Single and Multi-user systems
   2.1.2 Advantages and drawbacks of DBMS
   2.1.3 Architecture of DBMS
   2.1.4 Users of DBMS
   2.1.5 Roll of Database Administrator
2.2 Components of DBMS
2.3 Types of DBMS
   Hierarchical
   Network
   Relational
2.4 Why RDBMS?
2.5 Features of RDBMS
2.6 Attributes, tuples & tables, codd’s rules

3: Entity Relationship Model
3.0 Objectives
3.1 Entity Relationship Model
   3.1.1 Entity set
   3.1.2 Relationship set
   3.1.3 Attributes and values.
3.2 Weak and Strong Entity
3.3 Keys in DBMS
3.4 Conventions for drawing ERD
3.5 Abstraction
3.6 Generalization

4: DBMS Concepts
4.0 Objectives
4.1 ACID Properties
4.2 Concurrency Control
4.3 Recovery Mechanisms
4.4 Views And Security
4.5 Integrity Constraints
4.6 Data Security

5: Relational Database Design
5.0 Objectives
5.1 Need For Proper Database
5.2 Undesirable Properties Of Bad Database Design
5.3 Functional Dependencies
5.4 Normalization Using FDS
   1 NF
   2 NF
   3 NF
   BCNF
5.5 Properties Of Decomposition
   Loss less Join
   Dependency Preserving

6: SQL Relational Database Design
6.0 Objectives
6.1 Introduction
6.2 DDL
6.3 DML
6.4 DCL
6.5 Simple Queries

7: Security
7.0 Objectives
7.1 Granting access to users
7.2 Extending and restricting privileges
7.3 Using views of security

8: Transaction Processing
8.0 Objectives
8.1 Transaction, transaction processing
8.2 Properties of Transaction
8.3 Schedules
8.4 Serializing and its need

9: Backup and Recovery
9.0 Objectives
9.1 Types of failure and storage systems
9.2 Need for backup and recovery

10: Concurrency Control & Recovery Techniques
10.0 Objectives
10.1 Concurrency problems
10.2 Concurrency control mechanisms
10.3 Deadlocks
10.4 Deadlocks handling detection and prevention

11: Introduction To Data Warehousing And Data Mining
11.0 Objectives
11.1 Data Warehousing
11.2 Data Mining
1. The Types of Business Communication
   Introduction
   Business Communication
   The Classification, Functions & Scope of Business Communication
   Internal Communication
   External Communication
   Conclusion

2. The Communication Process
   Elements of Communication
   The Communication Cycle
   The Barriers To Communication

3. The Principles of Communication
   Introduction
   The Medium of Communication
   Accuracy
   Brevity
   Clarity
   Courtesy
   Conclusion

4. The Modes of Communication
   Introduction
   The Types of Communication
   Oral Communication
   Written Communication
   Non-Verbal Communication
   Visual Signs in Non-Verbal Communication
   Audio Signals in Non-Verbal Communication
   Silence
   Time
   Touch
   The Functions of Non-Verbal Communication
   The Merits & Demerits of Non-Verbal Communication
   Conclusion

5. Verbal Skills
   Introduction
   The Language used in Oral Communication
   Verbal & Linguistic Modifiers & Regulators & Voice Culture
   The Techniques of Delivery
   Conclusion
6. The Art of Listening
Listening & Hearing
The Value of Listening
The Functions of Listening
The Pitfalls involved in Listening
The Process of Listening / The Principles of Listening
How to Listen Efficiently
The Barriers to Efficient Listening
The Types of Listening
Conclusion

7. Body Language
Introduction
The Types of Body Language
Facial Expressions
Kinesics Related To The Body
Touch
Conclusion

8. How to conduct Oral Communication
The Classification of Oral Communication
Dyadic Communication
Group Communication
Requests
Complaints
Inquiries
Introduction
Dictation
The Telephone
Interviews An Overview
At the Interview Venue

9. The Essentials of Written Communication
Introduction
Alignment
Font Style
Bold, Italics & Normal
Font Size
Indentation & Block Style
Items
Emphasis
Letter Heads
Continuation Sheets
Stationery
Presentation
Conclusion
Reference Books:
1. Communication Skills : Dr. Rao & Dr. Das- Himalaya Publishing House
2. Communication Skills : Dr. Urmila Rai, S.M. Rai – Himalaya Publishing house
4. Developing Communication Skills : Mohan Banerjee, Macmillan, India
6. Communication Skills for : Dr. Anjali Ghanekar, Everest Publishing
BCA-328 Advanced Web Designing (HTML, JavaScript, ASP)

1. **HTML Basics**
   Definition of HTML, Markup language, hypertext etc, html tags-tag syntax. Structure of html document- head section and body section. Block level elements Text level elements, Font tag, base font tag, big and small tags, bold italic and underline tags, the strike, teletype and BR tag, subscript and superscript tags, the quote tag. Heading tag and attributes, paragraph tag, center and block quote tags, hr tag the preformatted tag lists-ordered and unordered lists, definition lists.

2. **Images and colors**
   background images and colors and their attributes.

3. **Hyperlinks & Table**
   Anchor tag, h ref, title attribute, Table element, TR, TD, TH tags, caption elements, attributes of the table tag.

4. **Frames & Forms**
   Creating frames-vertical, horizontal and grid of frames, attributes of the frameset element, frame tag and its attributes, linking frames.
   The form tag-attributes- action, method the input elements and its types-text password checkboxes, radio buttons, submit and reset buttons, select tag, text area tag.

1. **Introduction to Java Script**

Origins of Java script, Java script characteristics, Common programming concepts Java & Java script, Server Side vs Client Side Application, Annotating Code with Comments

2. **Working with Variables & Data**

Communicating with the user, Variables Keyword and Reserved Words, Expression Operators, the on Load Event Handlers, Functions, Methods and Events, Defining Function, Calling a Function,

3. **Controlling Programme Flow & The do.......while Statement**
The if else statement, the while statement, the for statement, the break statement, the continue statement, the switch statement

4. The Java Script Object model

The Java Script Object Hierarchy Model Commonly Used Objects, The window Object

The with statement, The document Object The Image Object The history Object The location Object The navigator Object

5. Java Script Objects


1. Active Server Pages


Using VB Script

Differences Bet. VB Script and Java Script, Declaring Variables with VB Script Program Flow

2. ASP Intrinsic Objects

Scripting Context, Server, Application, Sessions, Request, and Response Objects, error, Cookies

3. Active X Data Objects

Open Database Connectivity (ODBC) and Ole DB, Active X Data Objects, Registering Data Source names
BCA-326 Practical – C++

BCA-329 Practical - AWD