

Syllabus(Computer Science)

Lesson 1

Anatomy of a Digital Computer

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Functions and Components of a Computer
 - 1.3.1 How the CPU and Memory work
- 1.4 Input devices
 - 1.4.1 Keyboard
 - 1.4.2 Magnetic Ink character Recognition (MICR)
 - 1.4.3 Optical mark recognition (OMR)
 - 1.4.4 Bar Code Reader
 - 1.4.5 Digitizing Tablet
 - 1.4.6 Scanners
 - 1.4.7 Mouse
 - 1.4.8 Light Pen
 - 1.4.9 Speech input devices
- 1.5 Memory Unit
 - 1.5.1 Capacity of Primary Memory
- 1.6 Secondary Storage
 - 1.6.1 Magnetic Tape
 - 1.6.2 Magnetic Disk
 - 1.6.3 Floppy Disk
 - 1.6.4 Optical Disk
- 1.7 Output Device
 - 1.7.1 Display Screen
 - 1.7.2 Printer
 - 1.7.3 Plotter
 - 1.7.4 Sound Cards & Speaker
 - 1.7.5 3 D - Audio
- 1.8 What do you have learnt
- 1.9 Terminal Questions
- 1.10 Feedback to In –Text Question

Lesson - 2

Data Processing Concept

- 2.1 Introduction.
- 2.2 Objectives
- 2.3 Data
- 2.4 Processing
- 2.5 Information
- 2.6 Data Processing Activities
- 2.7 The Data Processing Cycle
- 2.8 Computer Processing Operation
- 2.9 Data Processing Systems
- 2.10 Data Organisation



- 2.11 Variable and Fixed Length Records
- 2.12 Logical Versus Physical Records
- 2.13 What you have learnt
- 2.14 Terminal Questions
- 2.15 Feedback to In- Text Question

Lesson – 3 Computer

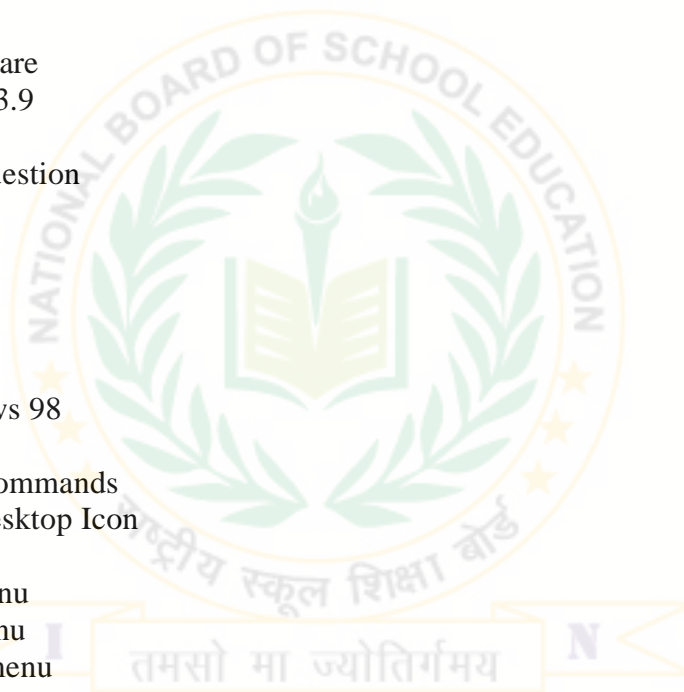
Software

- 3.1 Introduction.
- 3.2 Objectives
- 3.3 Computer Language
- 3.4 Type of High –Level Language
- 3.5 Compilers and Interpreters 3.6
- What is Software
- 3.7 Type of software
 - 3.7.1 System software
 - 3.7.2 Application Software
- 3.8 What do you have learn 3.9
- Terminal Questions
- 3.10 Feedback to In-Text Question

Lesson – 4

Operating System

- 4.1 Introduction. 4.2
- Objectives
- 4.3 Main features of Windows 98
 - 4.3.1 Using the Mouse
- 4.4 The Symbol for Menu Commands
 - 4.4.1 Desktop 4.4.2 Desktop Icon
- 4.5 Start Button and Taskbar
 - 4.5.1 Programs Submenu
 - 4.5.2 Favorites Submenu
 - 4.5.3 Documents Submenu
 - 4.5.4 Setting
 - 4.5.5 Find 4.5.6
 - Help 4.5.7 Run
 - 4.5.8 Shut Down
- 4.6 Window Explorer
- 4.7 Managing Files, Folders and Windows
 - 4.7.1 Shortcuts
 - 4.7.2 Windows Most Common
- 4.8 Sharing Folders and Printers
- 4.9 MS-DOS – Based Program
- 4.10 What You Have Learn
- 4.11 Terminal Question
- 4.12 Feedback to In-Text Question



Lesson – 5

Data Communication and Networking

- 1.1 Introduction
- 1.2 Objectives
- 1.3 Data Communication
- 1.4 Communication Protocol
- 1.5 Data Transmission Modes
- 1.6 Types of Communication Services
- 1.7 Communication Media Computer Network
- 1.8 Types of Networks Network Protocols
- 1.9 Network Architecture
- 1.10 Important terms used in Networking
- 1.11 What you have learn
- 1.12 Terminal Question
- 1.13 Feedback to In-Text Question

1.14 Lesson – 6

1.15 Fundamentals of Internet and Java Programming

Introduction

Objects

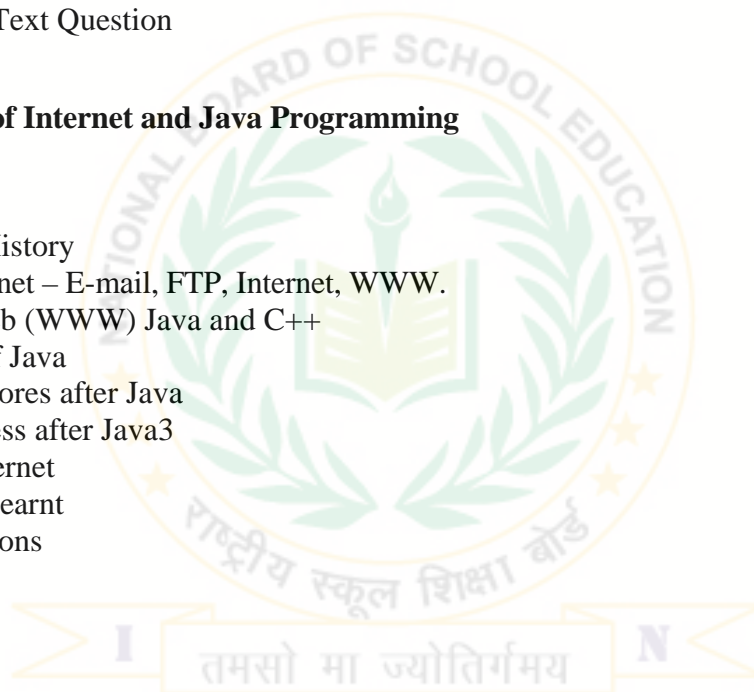
- 6.1 Internet – The History
- 6.2 Services of Internet – E-mail, FTP, Internet, WWW.
- 6.3 World Wide Web (WWW) Java and C++
- 6.4 Characteristic of Java
- 6.5 How to Java ignores after Java
- 6.6 Software Business after Java3
- 6.7 Java and the Internet
- 6.8 What you have learnt
- 6.9 Terminal Questions
- 6.10 Feedback

6.11 Lesson – 7

6.12 Introduction to

C++

- 1.1 Introduction
- 1.2 Objectives
- 1.3 C++ Character Set
- 1.4 Basic Data Types
 - 1.4.1 Integer Type (int)
 - 1.4.2 Floating Point type (float)
 - 1.4.3 Character Type (char)
- 1.5 Tokens
 - Keyword
- 1.5 Identifiers
 - 1.5.1 Literals
 - 1.5.2 Punctuators
 - 1.5.3
 - 1.5.4



- 1.5.5 Operators
- 1.6 The Size of operator
- 1.7 The order of Precedence
- 1.8 Type conversion
- 1.9 Constants
- 1.10 Variables
- 1.11 Input/output (I/O)
- 1.12 Structure of C++ Program
- 1.13 What you have learnt
- 1.14 Terminal Question
- 1.15 Feedback to In-Text Question

Lesson - 8

General Concept of OOP

- 8.1 Introduction
- 8.2 Objectives
- 8.3 Object – Oriented Programming
- 8.4 Basic Concepts
 - 8.4.1 Objects
 - 8.4.2 Classes
 - 8.4.3 Data Abstraction
 - 8.4.4 Data Encapsulation
 - 8.4.5 Modularity
 - 8.4.6 Inheritance
 - 8.4.7 Polymorphism
- Benefits of OOP
- 8.5 Programming Applications of OOP
- 8.6 What you have learnt
- 8.7 Terminal Questions
- 8.8 Feedback to In-Text Question

Lesson – 9

Control Statements

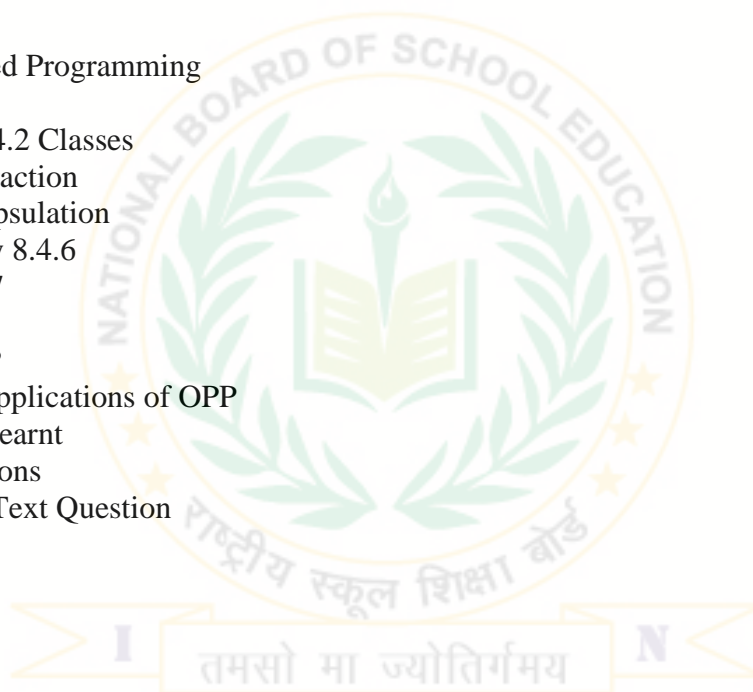
- Introduction
- 9.1 Objectives
- 9.2 Statements
- 9.3 Compound Statement
- 9.4 Null Statement
- 9.5 Conditional Statement
- 9.6 Loop Construct
- 9.7 Jump Statements
- 9.8 Exit () function
- 9.9 What you have learnt
- 9.10 Terminal Question Feedback
- 9.11 to In-text Question

Lesson

- 10

Functions

- 1.1 Introduction



- 1.2 Objectives
- 1.3 # Include Directive
- 1.4 Library Function
- 1.5 User defined C++ function
 - 1.5.1
 - Function Prototype 1.5.2
 - Arguments to a function 1.5.3
 - Return type of a function 1.5.4
 - Global and local variables
 - 1.5.5 Calling of function
- 1.6 Inline function
- 1.7 Function with default arguments
- 1.8 What you have learnt
- 1.9 Terminal questions
- 1.10 Feedback to In-text Question

Lesson – 11

Array

- 11.1 Introduction
- 11.2 Objectives
- 11.3 Initializations of one dimensional Array
- 11.4 Initialization of String
- 11.5 Processing an Array
- 11.6 Two dimensional Array
- 11.7 Terminal question
- 11.8 Feedback to In-Text question

Lesson 12

Structure, Type def & Enumerated Data Type

- 12.1 Introduction
- 12.2 Objective
- 12.3 Structure
- 12.4 Variable of the Structure
- 12.5 Accessing of data members
- 12.6 Structure variable in assignment statements
- 12.7 Structure within structure
- 12.8 Accessing nested structure members
- 12.9 Initializing nested structure
- 12.10 Typedef
- 12.11 Enumerated Data Type
- 12.12 What you have learnt
- 12.13 Terminal questions
- 12.14 Feedback to In-Text Question

Lesson – 13

Classes & Objects with Constructors / Destructors

- 13.1 Introduction
- 13.2 Objective
- 13.3 Structure
- 13.4 Class

- 13.4.1 Creating objects
- 13.4.2 Accessing class member
- 13.4.3 Member function
- 13.4.4 Nesting of member function
- 13.4.5 Memory allocation for objects
- 13.4.6 Array of object

13.5 Constructor

- 13.5.1 Default constructor
- 13.5.2 Parameterized constructors
- 13.5.3 Copy constructor

13.6 Constructor with default arguments

13.7 Destructor

13.8 What you have learnt

13.9 Terminal Question

13.10 Feedback to In-Text Question

Lesson – 14

Inheritance Extending Classes

- 15.1 Introduction
- 14.2 Objectives
- 14.3 Need for Inheritance Different
- 14.4 forms of inheritance Defining
- 14.5 derived class Multiple
- 14.6 inheritance Visibility modes
- 14.7 Absent class
- 14.8 Virtual base class
- 14.9 What you have learnt
- 14.10 Terminal Questions Feedback
- 14.11 to In-Text Question
- 14.12

Lesson – 15

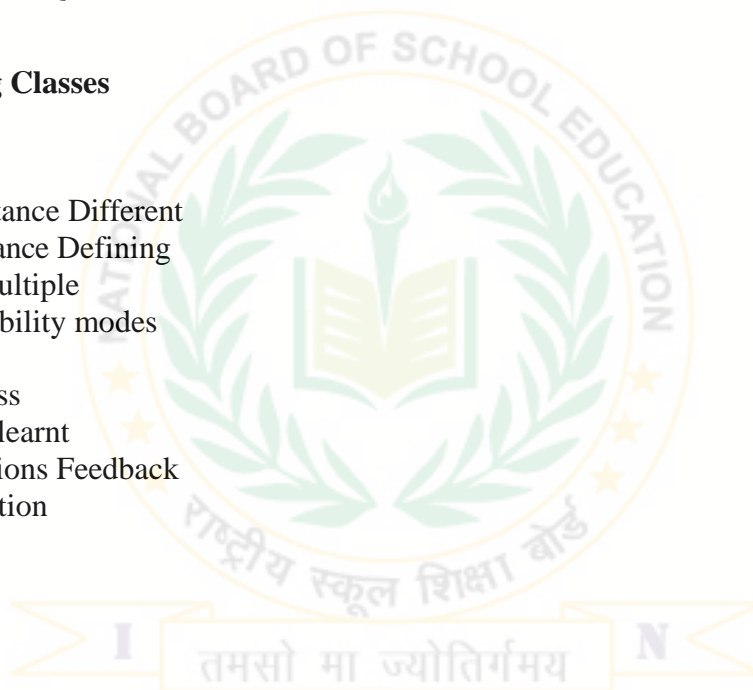
Pointer

- 15.1 Introduction
- 15.2 Objectives
- 15.3 Pointer
 - 15.3.1 Pointer to Array
 - 15.3.2 Pointer to string constant
 - 15.3.3 Pointer to structure
 - 15.3.4 Pointer to objects
- 15.4 This pointer
- 15.5 What you have learnt
- 15.6 Terminal Question
- 15.7 Feedback to In-Text Question

Lesson 16

Files

- 1.1 Introduction
- 1.2 Objectives



- 1.3 File
 - 1.3.1 Opening a file
 - 1.3.2 Open () function
 - 1.3.3 File pointers
 - 1.3.4 The tellg () and tellp () function
 - 1.3.5 Write () and read () functions
 - 1.3.6 Close () function
- 1.4 What you have learnt
- 1.5 Terminal Questions
- 1.6 Feedback to In-Text Question

