S.V. UNIVERSITY; TIRUPATI

B.Com., / B.Sc., / B.A. (CA) II YEAR - IV SEMESTER

OBJECT ORIENTED PROGRAMMING WITH C++

Unit-1

Introduction:- Programming Language generations, Object Oriented Paradigm, Basics of OOPs, Benefits, Applications of OOPs, Object Oriented Languages, Difference between OOPs and Procedure Oriented Programming

Unit - 2

Introduction to C++, General Structure of a C++ program, cin and cout objects, Keywords, identifiers, Constants, variables, Data types in C++, Operators-scope resolution operator, Control structures: Conditional statements and Looping statements, Functions –function with default arguments, inline functions, function overloading, reference variables Arrays - Single and multidimensional arrays.

Unit-3

Object and Classes-Structure and Class, Defining a class, defining member functions, member function with object as arguments and argument as return type, array of objects, static member data and member function, friend function and friend class.

Constructor and destructors-characteristics of constructor, constructor types-default, parameterized, copy and dynamic, constructor overloading.

Unit-4

Operator overloading, defining operator function, overloading unary, binary and relational operators

Inheritance-benefits of inheritance, types of inheritance, methods overriding, virtual functions.

Unit- 5

C++ Streams and File handling-Stream class, unformatted i/o operations, formatting of output-ios class functions and flags, manipulators, Files-File classes, file types, file functions.

Error handling, command-line arguments

Reference Books

1. Object Oriented Programming with C++ - M.T. Somashekara, D.S.Guru, H.S. Nagendraswamy, K.S. Manjunatha, PHI 2nd Edition

2. Object Oriented Programming with C++ - E. Balagurusamy, 4th Edition, Tata Mc Graw Hill Publication

3. Object Oriented Programming in C++ - Robert Lafore, 4th Edition, Pearson Education

4. Object-Oriented Programming with ANSI and Turbo C++.

B.Com., B.Sc., B.A. (CA) II YEAR - IV SEMESTER (MODEL PAPER)

OBJECT ORIENTED PROGRAMMING WITH C++

Time: 3 Hrs **Max. Marks: 75**

SECTION – A

Answer any 5 Questions : **5 x 3 =15 M**

1. a) Define class and its scope.

   b) What is object oriented paradigm

   c) What is polymorphism and advantages?

   d) Difference between if and switch.

   e) Explain ios class function statements.

   f) What is destructor? How to Define?

   g) What are the benefits of inheritance?

   h) Difference between overriding and overloading

   i) What is file handling?

   j) Describe about file types

SECTION – B

Answer one question from each unit. Each carries equal marks: **5 x 12 = 60 M**

UNIT- I

2. What is OOPs? Explain the advantages and applications of OOPs.

(or)

3. Write the difference between OOPs and Procedure Oriented Programming.

UNIT- II

4. a. Define cin and cout statements with suitable example.
   b. Explain different data types in C++.

(or)

5. Discuss the types of functions with suitable example.

UNIT- III

6. Explain about objects and classes along with structure and member functions?

(or)

7. What is constructor? How the constructors are created with suitable example.

UNIT- IV

8. What is operator overloading? Define binary and relational operators.

(or)

9. What is inheritance? Explain the types of inheritance with an illustration.

UNIT - V

10. Explain C++ streams with a C++ program.

(or)

11. Explain the following
    (a) File types
    (b) File function