AC-498

B.C.A. III Semester (New Course) Examination, Dec. 2015

Course : 301

Paper : Object Oriented Programming - C++

Time: Three Hours]

[Maximum Marks : 75

[Minimum Marks : 30

Note : Attempt any **five** questions. **All** questions carry equal marks.

1. (a) Describe the features of OOPS; Is C++ a pure object oriented programming language, Justify your answer.   15

    (b) Explain about iostream. h header file.

    (c) What do you mean by Encapsulation.

2. (a) What is Default Constructor? Illustrate the parameter initialization with the help of Copy Constructor.   15

    (b) Differentiate between multilevel inheritance and multiple inheritance with example.

3. (a) Sketch the Utility of scope operator.   15

    (b) What is early binding? How it is different from late binding?

    (c) Explain Dynamic Memory Allocation?

4. (a) What is virtual function? Write a program to show the concept of virtual function.   15

    (b) Design a Class string and overload '+' Operator to add two string class objects.

5. (a) Describe the utility of inline function. Explain the calling procedures of inline procedure. 15

   (b) What are qualifiers? How are they different from literals and constants? 15

6. (a) Write a program to demonstrate the use of friend function. 15

   (b) What do you mean by Exception Handling.

7. (a) Explain with example the following : 15

       (i) Public

       (ii) Private

       (iii) Protected

   (b) WAP in C++ to create a class for bank account by taking appropriate data member and member function.

8. Write short notes on any **three** of the following : 15

   (i) Abstract Class

   (ii) This painter (→)

   (iii) All type of Inheritance

   (iv) Object & Class.

   (v) Garbage Collection

AC-499

B.C.A. III Semester (New Course) Examination, Dec. 2015
C : 302
Data Structure Using C & C++

Time: Three Hours]   *[Maximum Marks : 75*

[Minimum Marks : 30

Note : Attempt any **five** questions. **All** questions carry equal marks.

1. (a) Differentiate between single and multidimensional array.

   (b) What is Sparse arrays? Explain with lower and upper triangular matrices.

2. (a) What is queue? Explain D-queue and priority queues.

   (b) Explain conversion between infix, prefix and postfix with suitable example.

3. (a) List an algorithm to insert an item in the stack.

   (b) What is stack? Explain operation and application of stack.

4. (a) Define complete binary tree. How it is different from a binary tree.

   (b) List the selection sort algorithm to sort the following:

      55, 17, 100, 02, 12, 101, 78.

5. (a) Explain in-order, pre-order and post-order traversal of binary tree with suitable example.

   (b) Differentiate between linear and non-linear data structure.

6. (a) What do you mean by sorting? Explain merge sort technique with example.

   (b) What is linked list? Explain various operation of linked list.

7. (a) What do you mean by searching? Explain hashing with example.

   (b) Differentiate between linear search and binary search.

8. Write short notes (any **three**) :

   (i) Binary search tree

   (ii) Insertion Sort

   (iii) Heap Sort

   (iv) Double Linked List

   (v) Tridiagonal Matrices

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AC-500

B.C.A. - III Sem. Examination, Dec. 2015
C-303

Sub. : Computer Architecture & Assembly Language

Time: Three Hours

Max. Marks : 75
Min. Marks : 30

Note: Attempt any **five** questions. **All** questions carry equal marks.

1. What are Microoperation? Explain the following with Examples.   15

    (i) Logic Microoperation

    (ii) Shift Microoperation

2. What is Interrupt? Explain the different Types of Interrupts.   15

3. What is the purpose of Addressing mode? Explain the following with example. 15

    (i) Relative Addressing mode

    (ii) Indirect Registor Mode

4. What is pipelining? Compare RISC Pipelinig with CISC pipelining.   15

5. Explain Booth's Algorithm with Example.   15

6. What is DMA Transfer? Explain. What are IOP'S? Discuss.   15

7. What is microprocessor? Give the brief Introduction of Intel 8085μP.   15

8. What is assembler? Write down an assembly language Program to Add Two fixed Nos.   15

9. Write short notes on any **two** of the following :   15

    (a) Super Computer

    (b) Cache Memory

    (c) Divisor Algorithms

AC-501

BCA III Sem. Examination, December 2015
C-304
Sub. : Business Economics

Time: Three Hours]   *[Maximum Marks : 75*

[Minimum Marks : 30

Note : Attempt any **five** questions . **All** questions carry equal marks.

1. How can we measure the elasticity of demand by comparing total expenditure on a commodity before and after the price change?

2. Explain the various economies and diseconomies of scales of operation?

3. What is cost of production? Discuss the determinants of the cost of production.

4. How can we determine price under monopolistic competition.

5. What are different classification of markets?

6. What are the different methods of measuring national income?

7. What is meant by dumping? Explain the current issues prevalent in the international scenario.

8. Write a short note on intellectual property rights.

9. "Fiscal Policy of the countries determines the fate of the industries". Comment.

10. Describe is the Organizational Structure of WTO. Also explain its role in the development of international trade.

AC-502

B.C.A. III Semester (New Course) Examination, Dec. 2015
Course : 305
Paper : Elements of Statistics

Time: Three Hours]   *[Maximum Marks : 75*

[Minimum Marks : 30

Note : Attempt any **five** questions. **All** questions carry equal marks.

1.   Explain in brief about the difference between classification and Tabulation.

2.   Calculate median for the following :

Class Int.	0-10	10-20	20-30	30-40	40-50	50-60
Freq.	7	12	18	15	9	5

3.   Calculate Geometric mean and Harmonic mean for the following data :

5, 5, 5, 5, 5, 5, 5

4.   Explain in brief about central tendency and its various measures.

5.   Calculate how many four alphabets words can be made from the word " COMBINATION"

6.   Two dice are thrown together, fund the probability that sum of the numbers occurred on both dices will be either 9 or 10.

7.   Explain in brief about Statistical Quality Control with example.

8.   Calculate variance for the following :

Class Int.	0-10	10-20	20-30	30-40	40-50	50-60
Freq.	6	11	15	10	5	3