Reg. No. : .....

D 1532 Q.P. Code : [07 DSCA 04]

(For the candidates admitted from 2007 onwards)

B.C.A. DEGREE EXAMINATION, DECEMBER 2009.

Second Year

Computer Applications

PROGRAMMING WITH C AND C++

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Write short notes on constants and variables. (10)

(b) Write a program in C to display number names for the numbers from 1-10. (10)

2. (a) Explain the concept of array with example.(10)

(b) Write a program in C to sort the given n numbers. (10)

3. (a) Give the syntax of structures and explain array of structure with example. (10)

(b) Write a program in C to check, the given string is palindrome or not. (10)

4. (a) Explain the concept of classes and objects with example. (10)

(b) Discuss on function overloading. (10)

5. (a) What is the use of virtual function and explain with example. (10)

(b) Discuss on binary operator overloading. (10)

6. (a) Explain the concept of virtual base class with example. (10)

(b) Write a program for multiple inheritance. (10)

7. (a) Discuss on friend function. (10)

(b) Write down various file modes in C++ with examples. (10)

8. (a) Write short notes on constructor and destructor with example. (10)

(b) Discuss on

(i) This pointer

(ii) New and delete operator with example. (10)

Reg. No. : .....

D 1533 **Q.P. Code : [07 DSCA 05]**

(For the candidates admitted from 2007 onwards)

B.C.A. DEGREE EXAMINATION, DECEMBER 2009.

Second Year

Part III — Computer Applications

DATA STRUCTURES AND ALGORITHMS

Time : Three hours Maximum : 100 marks

SECTION A — (5 × 20 = 100 marks)

Five out of Eight questions to be answered :

1. (a) Explain what criteria should be considered for analysing a program. (10)

   (b) Write a note on sparse matrix. (10)

2. (a) Discuss the working of stack. (10)

   (b) Describe on mazing problem. (10)

3. Elaborate the various methods for evaluating an expression. (20)

4. (a) Comment on the working of linked stacks and Queues. (8)

   (b) Illustrate the concept of polynomial addition. (12)

5. Describe the working of

   (a) Garbage collection and. (10)

   (b) Compaction. (10)

6. Explain the following :

   (a) Insertion sort. (6)

   (b) Heap sort. (7)

   (c) Quick sort. (7)

7. Describe the working principal of hash table. (20)

8. Narrate the procedure of organizing 'Files' which suitable illustration. (20)

Reg. No. : .....

D 1575 **Q.P. Code : [07 DSC 06/ 07 DSCA 06]**

(For the candidates admitted from 2007 onwards)

B.Sc./B.C.A. DEGREE EXAMINATION, DECEMBER 2009.

Second Year

Part III — Computer Applications/Computer Science

SOFTWARE ENGINEERING

Time : Three hours Maximum : 100 marks

Answer any FIVE questions. (5 × 20 = 100)

1. Explain the factors that influence quality and productivity.

2. Describe in detail the phased model of the software life cycle.

3. Explain the COCOMO cost estimation model.

4. Explain the various formal specification techniques.

5. Discuss in detail the fundamental concepts of software design.

6. Describe the various design notations.

7. What are the guideliness for documentation? Explain.

8. Write short notes on the following:

   (a) Unit testing

   (b) Software Quality Assurance

   (c) Debugging

   (d) Software maintenance.

———————

Reg. No. : .....

D 1534 **Q.P. Code : [07 DSCA 07]**

(For the candidates admitted from 2007 onwards)

B.C.A. DEGREE EXAMINATION, DECEMBER 2009.

Second Year

Part III — Computer Applications

OPERATING SYSTEMS

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. Explain in detail, the evolution of operating system.

2. Explain the features of LINUX Operating System.

3. (a) Explain the services of the operating system. (12)

   (b) Explain the features of GUI. (8)

4. (a) Define a process. (4)

   (b) Explain the evolution of multiprogramming. (8)

   (c) Explain the concept of context switching. (8)

5. (a) Explain process states and process state transactions. (12)

   (b) Explain the operations that can be performed on a process. (8)

6. Explain in detail fixed partitioned memory management.

7. Explain the features of client/server computing.

8. Explain in detail, the use and features of clusters.