D 1523   **Q.P. Code : [07 DSC 04]**

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, MAY 2014.

Second Year

Part III — Computer Science

C ++ PROGRAMMING

Time : Three hours   Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

$(5 \times 20 = 100)$

1. Give a detailed description on basic concepts of object oriented programming with suitable illustrations.

2. Write about basic and uses defined data types with illustrations and sample codings.

3. With flow charts, discuss the various control structures used in C++ language.

4. Discuss the concept of function overloading. Also develop a C ++ program to overload the function volume for three different shapes.

5. Illustrate with a C ++ program and explain the concept of overloading binary operators.

6. (a) Explain the concept of multiple inheritance with an example. (10)

   (b) How do pointers are declared and initialized? Discuss with a illustration. (10)

7. Develop a C ++ program to illustrate how pointers are used to derive objects.

8. (a) Elaborate the various unformatted I/O operations with syntax and examples. (14)

   (b) Discuss the importance of class templates with parameters and function templates with multiple parameters along with general formats. (6)

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D 1524 Q.P. Code : [07 DSC 05]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, MAY 2014.

Second Year

Part III — Computer Science

SYSTEM SOFTWARE AND OPERATING SYSTEM

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. (a) Explain symbol defining statements.

    (b) Define bootstrap loader. (15+5)

2. Define Loader. Explain machine in dependent loader features. (5+15)

3. Explain the General purpose macro processor. (20)

4. Discuss on text Editors. (20)

5. Explain the Intermediate form of a program with example. (20)

6. Define process. Explain process states and Transitions. (4+8+8)

7. What is meant by page replacement? Explain page replacement strategies. (4+16)

8. (a) Explain the Disk performance optimization.

   (b) Describe file system functions and organization. (10+10)

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D 1517

(For the candidates admitted from 2007-2008 onwards)

B.C.A. DEGREE EXAMINATION, MAY 2014.

Second Year

Part III – Computer Science/Computer Application

SOFTWARE ENGINEERING

Time : Three hours   Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks

$(5 \times 20 = 100)$

1.   Explain the various size factors in software development and maintenance.

2.   Elaborate on planning an organizational structures.

3.   Describe the various software cost factors.

4.   Explain staffing-level estimation and estimation of software maintenance costs.

5. Explain the various aspects in formal specification techniques.

6. Elaborate on the various design notations.

7. Explain the various structured coding techniques.

8. Explain the various aspects of unit testing and debugging.

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D 1525 Q.P. Code : [07 DSC 07]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, MAY 2014.

Second Year

Part III — Computer Science

JAVA PROGRAMMING

Time : Three hours   Maximum : 100 marks

Answer any FIVE questions.

1. (a) Give any four benefits of OOP. (4)

    (b) Discuss about the Java two Features. (16)

2. (a) Explain any two web browsers. (4)

    (b) Explain the Structure of the Java programme. (10)

    (c) Write a java program to calculate the square root of a number. (6)

3. (a) Write a Java program to create a class for representing a 'Rectangle' and calculate the area. (10)

    (b) Explain the Jumping in Loops with an example. (10)

4. (a) What is single inheritance? Give an example program of the single inheritance. (12)

   (b) Compare and contrast overloading and overriding methods. (8)

5. (a) Write a Java program for sorting n strings in the alphabetical order. (12)

   (b) How to create and access a package? Explain. (8)

6. (a) Give an example of using the thread class. (12)

   (b) Write an applet program to enter any two numbers in the relevant input box and display its sum. (8)

7. (a) Explain the Applet Life Cycle. (12)

   (b) Discuss about the classification of Java Steam Classes. (8)

8. (a) Write a Java program to read the contents of any one file and the output displayed in the screen. (10)

   (b) How to append to a text file using random access? Explain. (10)