D 1035
Q.P. Code : [07 DSC 04]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Part III — Computer Science

C++ PROGRAMMING

Time : Three hours
Maximum : 100 marks

Answer any FIVE questions.

$(5 \times 20 = 100)$

All questions carry equal marks.

1. (a) Explain the different object oriented programming concepts.

 (b) Distinguish between object based on object-oriented programming. (12+8)

2. (a) Explain the different looping statements in C++.

 (b) Write a note on 'Inline' functions. (12+8)

3. (a) Demonstrate the concept of array of object with an example program.

 (b) Explain the rules for 'constructor' (10+10)

4. (a) Elaborate on the various types of inheritance.

 (b) Write a note on user defined conversion types. (12+8)

5. (a) Explain the concept of virtual functions.

 (b) What is the importance of 'this' pointer. (14+6)

6. (a) What are function templates?

 (b) Explain the components of Exception handling mechanism. (8+12)

7. Write a menu-driven program in C++ to read a file and to

 (a) display the contents of the file

 (b) copy the content of the file in to another file and

 (c) remove a file. (20)

8. Write a program on matrix operations using function over loading. (show all matrix operations). (20)

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5. Summarize the features of machine-dependent compiler. (20)

6. (a) Discuss on various process states and process state transitions in detail. (14)

   (b) Briefly discuss the concept of interrupt processing. (6)

7. (a) Compare and contrast fixed partitioned multiprogramming with variable partitioned multiprogramming. (10)

   (b) Write about SJF and SRT scheduling strategies. (10)

8. Narrate the procedure of allocating and freeing space of a disk. (20)

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D 1036   Q.P. Code : [07 DSC 05]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, MAY 2013.

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. Discuss the concept of a simple SIC assembler with object codes. (20)

2. Narrate the procedure of program linking with machine dependent loader features. (20)

3. Explain how do macro definition and expansion functions are implemented in a basic macro processor. (20)

4. Give a neat description on macro processor design options. (20)

3. (a) Write a Java program to create a class for representing a 'student'. (10)

   (b) What is a wrapper in Java? Explain. (10)

4. (a) How hierarchical inheritance is implemented a Java? Explain. (14)

   (b) What is a package? (6)

5. (a) Discuss the use of 'Synchronized' keyword in multithreaded program. (14)

   (b) Compare the methods:
   (i) sleep ( )
   (ii) suspend ( ). (6)

6. (a) Discuss any Six graphics primitives with examples. (12)

   (b) Explain the applet life cycle. (8)

7. (a) Write a Java program to read the contents of a file and to write it in to another. (10)

   (b) Explain the methods in Output stream class. (10)

8. Discuss the following: (20)
   (a) join( ) method.
   (b) web browser.
   (c) final class.
   (d) 'throws' keyword.

D 1037   Q.P. Code : [07 DSC 07]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Part III — Computer Science

JAVA PROGRAMMING

Time : Three hours   Maximum : 100 marks

Answer any FIVE Questions

$(5 \times 20 = 100)$

1. (a) What are the benefit of object oriented programming. (10)

   (b) What is meant by machine Independence. Explain. (10)

2. Explain: (20)
   (a) Data types of Java.

   (b) Arithmetic operators of java

   (c) For loop

6. Explain the various techniques used in software design.

7. Explain the various aspects in unit testing and debugging.

8. (a) Explain enhancing maintainability during development.

   (b) Explain the managerial aspects of software maintenance.

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D 1027   **Q.P. Code : [07 DSCA 06/ 07 DSC 06]**

(For the candidates admitted from 2007–08 onwards)

B.C.A./B.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Part III — Computer Applications/Computer Science

SOFTWARE ENGINEERING

Time : Three hours   Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. Explain any ten quality and productivity factors in software development and maintenance.

2. Explain the various aspects in planning the development process.

3. Explain the different cost estimation strategies.

4. Explain the normal specification techniques.

5. Explain the concepts in fundamental design.