Reg. No. : .....

D 82 Q.P. Code : [07 DSC 07]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Part III — Computer Science

JAVA PROGRAMMING

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. (a) Explain the features of abstraction and encapsulation.

(b) Explain the role of java language in internet.

2. (a) Explain the concept of tokens of Java.

(b) Explain the various decision making and looping structures in Java.

3. (a) Discuss the concepts of visibility mechanism in java class, methods and attributes.

(b) Describe the implementation issues for arrays in java environment.

4. (a) How an object array is created in java? Explain.

(b) Explain the implementational process of multiple inheritance in Java.

5. (a) Write a java program to read 10 elements (integers) and to store them in an array and try to access the 12th element in the same array, if there is any error handle it using exception handling techniques of java.

(b) Explain the operations with regard to applets.

6. (a) Describe the concept of abstract classes in java.

(b) Explain about AWT facilities of Java.

7. (a) Write a java program to draw the various ellipse shapes in an applet window.

(b) Explain the various byte stream classes in java.

8. (a) Explain the various character stream I/O classes in java.

(b) Write a java program to enter 20 characters into a file and read the characters from the file and display the same.

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Reg. No. : .....

D 80 Q.P. Code : [07·DSC 04]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Part III — Computer Science

C++ PROGRAMMING

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

1. Describe the concepts of basic, derived and user defined data types with suitable examples.

2. Give a note on function overloading concept. Also write a C++ program to find the volume of a cylinder using the function overloading concept.

3. Write the procedure of defining member functions. Also develop a C++ program with class implementation and member function.

4. (a) Explain the concept of constructors.

   (b) Develop a C++ program with class constructors to demonstrate the passing of arguments to the constructor functions.

5. Discuss the procedure of converting one class type into another class type. Illustrate a program that uses two classes and shows how to convert data of one type to another.

6. (a) With neat diagram, explain the concept of hierarchical inheritance.

   (b) Develop a C++ program to illustrate the use of pointers to objects.

7. (a) Develop a C++ program with array of pointers to objects concept, to input and print five strings.

   (b) Give a note on file pointers and their manipulations.

8. (a) Write a C++ program with I/O operations on binary files.

   (b) Narrate the procedure of error handling during file operations.

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Reg. No. : .....

D 81 Q.P. Code : [07 DSC 05]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

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.

(5 × 20 = 100)

1. Explain one pass and multi pass assemblers with its functions.

2. What is loader? Explain the basic loader functions.

3. Explain the general purpose macro processors.

4. Discuss machine dependent code optimization with example.

5. What is process? Explain the process states with diagram.

6. Discuss page replacement strategies.

7. Explain the operation of moving head storage with example and diagram.

8. Explain

   (a) File descriptor

   (b) Access control matrix.

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Reg. No. : .....

D 83 **Q.P. Code : [07 DSC 09]**

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Third Year

Part III — Computer Science

RDBMS AND ORACLE

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. (a) Explain the components of a database system. (10)

   (b) What is the use of foreign key? Explain it with example. (10)

2. Discuss the various DDL commands with examples.

3. Discuss the following with examples.
   (a) where clause
   (b) sort by
   (c) having clause
   (d) intersect.

4. (a) What is embedded SQL? How is it implemented and executed? Explain. (10)

   (b) Explain the control structures in PL/SQL with examples and flow chart. (10)

5. (a) How many events are there for executing database triggers? Explain. (10)

   (b) What is a package? What is package body? Explain with examples. (10)

6. Normalize the following to get a suitable database structure by explaining the process at each and every step.

   student_rollno, student_name, subjected, subject_name, student_address, semester, mark, result, grade, student_regno.

7. (a) Explain the formatting with respect SQL plus commands. (10)

   (b) Explain the set operations with examples. (10)

8. Discuss the following :
   (a) Procedure creation and invocation
   (b) Rowtype
   (c) Compute on
   (d) Candidate buys.

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Reg. No. : .....

D 84 Q.P. Code : [07 DSC 10]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Third Year

Part III — Computer Science

VISUAL PROGRAMMING — VISUAL BASIC

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

$(5 \times 20 = 100)$

1. (a) Explain the Elements of Visual Basic IDE. (14)

   (b) Explain the Mouse Events (6)

2. (a) What are the data types used in Visual Basic? Explain (12)

   (b) Write a Visual basic program to find the greatest number from given four numbers are A, B,C and D. (8)

3. (a) Explain the determinate an indeterminate loop in VB with suitable examples. (12)

   (b) Explain the Select case with an example. (8)

4. (a) Explain the various control tools in the toolbox. (14)

(b) How to entering input data and displayed the output? Explain. (6)

5. (a) How to building drop-down menus? Explain. (6)

(b) Write short notes

(i) Syntax errors

(ii) Logical errors

(iii) Defining watch values

(iv) User-induced errors

(v) Pop-up menus

(vi) Menu Enhancement (14)

6. (a) Explain the Event Procedures and Function Procedures. (8)

(b) Write Visual Basic Program to read in integers and display the sorted integers in descending order. (12)

7. (a) Explain the Dynamic arrays with an example. (6)

(b) Write a Visual basic program to create a calculator using control array. (14)

8. (a) How to opening, reading, writing and deleting a sequential file? Explain. (14)

(b) Explain the binary access file. (6)

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Reg. No. : .....

D 85 Q.P. Code : [07 DSC 11]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Third Year

Part III — Computer Science

SOFTWARE TESTING

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

1. (a) Give a note on phases of software project. (8)

   (b) Compare and contrast V model with modified V model. (12)

2. Describe the procedure of static testing. (20)

3. Write notes on the following black-box testing methods :

   (a) Positive and negative testing (6)

   (b) Boundary value analysis (6)

   (c) Decision tables. (8)

4. (a) Explain the prccedure of scenario testing.(10)

   (b) Discuss the acceptance testing procedure.(10)

5. (a) Compare and contrast deployment testing with beta testing technique. (10)

   (b) Discuss the concepts of performance tuning and performance benchmarking. (10)

6. List and explain various steps of doing regression testing. (20)

7. (a) Elucidate the types of tools and process for doing performance testing. (10)

   (b) Narrate the best practices followed at the time of testing and the test reporting style. (10)

8. Give a detailed description on test defect metrics factors. (20)