Reg. No. : .....

D 145 Q.P. Code : [07 DIT 04]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Part III — Information Technology

OBJECT ORIENTED PROGRAMMING WITH C++

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. (a) Explain the various operators available in C++.

   (b) Explain the concept of function overloading. (12 + 8)

2. (a) Describe the format and its functionality with an example about looping statements in C++.

   (b) Write a C++ program to find the sum of individual digits of five digit number. (12 + 8)

3. (a) Explain the characteristics of constructor and destructor.

   (b) Write a program to demonstrate the use of dynamic constructor. (12 + 8)

4. (a) Discuss the different types of inheritance.

   (b) Write a note on 'type conversions'. (14 + 6)

5. (a) Explain the concept of polymorphism.

   (b) Write a note on 'this' pointer. (14 + 6)

6. (a) Write a program to copy the content of one file the another file.

   (b) Write a note on the various file mode parameters. (12 + 8)

7. Write a program on matrix operations using function overloading showing all matrix operations. (20)

8. Write a note on the following : (5 + 5 + 10)

   (a) Inline functions

   (b) Friend functions

   (c) Virtual functions.

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Reg. No. : .....

D 146 **Q.P. Code : [07 DIT 05]**

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Part III — Information Technology

SYSTEM SOFTWARE AND OPERATING SYSTEM

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. What is an assembler? Explain the basic assembler statements with an example.

2. What is a loader? Explain the basic loader function?

3. What is a macroprocessor? Explain the general purpose macro processor.

4. Discuss :
   (a) Code optimization of a program statement
   (b) Compiler compilers.

5. Define DOS. Explain the history of DOS also explain any five commands.

6. What is scheduling? Explain any two scheduling techniques.

7. What is paging? Explain the paging hardware mechanism in virtual memory.

8. Write short notes on :
   (a) free space management
   (b) access control matrix.

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Reg. No. : .....

D 147 Q.P. Code : [07 DIT 06]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Part III — Information Technology

SOFTWARE ENGINEERING

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

(5 × 20 = 100)

1. Explain software project size factors. (20)

2. (a) Discuss on phased life cycle model. (8)

   (b) Write about software product complexity. (12)

3. Describe the formal specification technique, "Relational Notations" in detail. (20)

4. (a) Explain the concept of Petrinets. (10)

   (b) With suitable illustration, explain the strategy, "Efficiency considerations". (10)

5. Write the guidelines that are to be followed to have a good coding style. (20)

6. (a) Explain the documentation guidelines in detail. (12)

   (b) Write note on walkthroughs and inspections. (8)

7. Compare and contrast functional testing with system testing. (20)

8. Explain the following concepts :

   (a) Component-based software engineering. (10)

   (b) Software verification for quality assurance. (10)

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Reg. No. : .....

D 148 Q.P. Code : [07 DIT 07]

(For the candidates admitted from 2007 onwards)

B.Sc. DEGREE EXAMINATION, DECEMBER 2010.

Second Year

Part III — Information Technology

INTERNET AND JAVA PROGRAMMING

Time : Three hours Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. (a) What is URL? Explain the components. (6)

(b) Discuss the structure of a HTML document. (6)

(c) Explain : (i) TELNET (ii) Browser. (8)

2. (a) Explain the data types in Java. (5)

(b) Discuss the looping structures in Java with examples. (10)

(c) Explain the use of break. (5)

3. (a) What is an interface? Explain its use. (10)

(b) Explain the use of 'Static' keyword in Java. (10)

4. (a) Bring out the differences between 'throw' and 'throws'. (8)

(b) Explain the purpose of the following methods.

(i) Join ( )

(ii) Sleep ( )

(iii) Suspend ( ). (12)

5. (a) Discuss the applet life cycle. (8)

(b) Discuss the graphics primitives with examples. (12)

6. (a) Discuss the exception handling mechanism. (12)

(b) What are wrapper classes? Explain. (8)

7. (a) Write a Java program to create a class for representing a 'fan' and also write the main function to create an object and to store information about the fan in the Hall in which you are writing the examination. (14)

(b) What is the effect of 'Final' class? (6)

8. Discuss :

(a) Advantages of Java

(b) User-defined exceptions.

(c) Thread priority. (8 + 6 + 6)
