

No. of Printed Pages : 02

Roll No.....

D-211

B.C.A. EXAMINATION, May 2015

(Fourth Semester)

(B. Scheme) (Main Only)

BCA-202-B

OPERATING SYSTEM

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. Define Operating System. Also explain its needs.

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P.T.O.

2. What are personal computers ? Also explain multi-programming Operating System.

Unit II

3. What are Processes ? Explain PCB.
4. What are Deadlocks ? Explain deadlock characterization.

Unit III

5. What is Critical Section problem ? Explain how it is resolved ?
6. What is Virtual Memory ? Explain different page replacement algorithms.

Unit IV

7. What is a File ? Explain different directory structures.
8. What is Disk Scheduling ? Explain SSTF, SCAN and C-SCAN algorithm.

Unit IV

7. (a) What are %TYPE and %ROWTYPE ?
What are their advantages over other data types ?

5

(b) Write a program in PL/SQL that generate Fibonacci numbers between 1 and 100.

10

8. What are various types of Cursors ? Explain with syntax.

15

Imp ———
Exp ———
Parameters ———

D-212

B.C.A. EXAMINATION, May 2015

(Fourth Semester)

(B. Scheme) (Main Only)

BCA-204-B

RELATIONAL DATABASE MANAGEMENT
SYSTEMS

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. Describe Codd's Rules for Relational Model.

15

2. (a) Describe natural join and division operation with example of each. 8
- (b) Describe operations and notations of Domain Relational Calculus. 7

Unit II

3. (a) Consider the relation given and answer the question below with reasons : 8

A	B	C	D
1	2	2	3
1	3	2	2
3	3	4	1
4	4	5	4

- (i) Does relation satisfies $A \rightarrow B$
- (ii) Does relation satisfies $A \rightarrow C$
- (iii) Does relation satisfies $B \rightarrow D$
- (iv) Does relation satisfies $AC \rightarrow D$
- (b) What are Armstrong's axioms ? Explain in detail. 7

4. (a) Explain natural join operation in relational algebra and write its equivalent commands in SQL. 8
- (b) Write a short note on operations in domain Relational Calculus. 7

Unit III

5. (a) What is a Foreign Key ? Give SQL syntax for its implementation. 4
- (b) Why view is called a virtual table ? Explain. 4
- (c) Give four command of DML and Four command of DDL category, and explain their usage. 4
- (d) Give a command in SQL to add a new column in an existing table. 3
6. (a) What is difference between Char and Varchar ? 3
- (b) What is difference between Drop and Delete ? 3
- (c) Explain ON Delete Cascade command in SQL. 4
- (d) Explain various Integrity constraints in SQL. 5

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Roll No.

D-163

B.C.A. EXAMINATION, May 2015

(Fourth Semester)

(Old Scheme) (Re-appear Only)

BCA-206

SYSTEM ANALYSIS & DESIGN

Time : 3 Hours]

[Maximum Marks : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Q. No. 1 is compulsory. Attempt any *Four* questions from Sections A, B and C by selecting at least *one* question from each Section.

1. (a) Explain the role of system analyst. 20

- (b) What is the basis of planning ?
- (c) Explain analysis tool.
- (d) What is decision table ?
- (e) What is decision tree ?
- (f) Why do we need data flow diagram ?
- (g) What is the process of design ?
- (h) What is sytem testing ?
- (i) What is IPO Chart ?
- (j) What is data dictionary ?

Section A

- 2. What is System ? Explain characteristics, elements and types of system. 20
- 3. (a) Write down system development life-cycle with block diagram. 20
- (b) What is recognition of need and its feasibility study.

Section B

- 4. What is system analysis ? Explain the observation, record searching and document analysis with example. 20

- 5. What is decision tree ? How do we make decision tree ? Also explain decision table with example. 20

Section C

- 6. What is the process of design ? Also explain logical and physical design with example. 20
- 7. Explain input/output and form design with example. 20
- 8. Write down the methods for system implementation and system testing with example. 20

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Roll No.....

D-214

B.C.A. EXAMINATION, May 2015

(Fourth Semester)

(B. Scheme) (Main Only)

BCA-208-B

BASIC ACCOUNTING

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. All questions carry equal marks.

Unit I

1. What is the meaning of Accounting ? Explain in brief the importance and scope of Accounting. 15

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P.T.O.

2. Write short notes on the following :

- (a) What is Double Entry System of book-keeping ? 8
- (b) Accounting Equation with relevant examples. 7

Unit II

3. What is a Trial Balance ? Describe two methods of preparation of Trial Balance with relevant examples. 15
4. Pass Journal entries in the books of Mr. Pankaj from the following transactions : 15

2014

July

- | | | |
|----|--------------------------------------|--------|
| 1 | Commenced business by investing cash | 80,000 |
| 2 | Purchased Land | 25,000 |
| 3 | Purchased goods from Amar on credit | 10,000 |
| 4 | Sold goods for cash | 20,000 |
| 5 | Sold goods to Ajay on credit | 5,000 |
| 8 | Paid towards charities | 1,200 |
| 10 | Paid salaries to Ramesh | 1,500 |

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2

- | | | |
|----|-------------------------------------|--------|
| 12 | Deposited cash into Bank | 15,000 |
| 17 | Withdrawn from bank for private use | 6,000 |
| 25 | Rent received | 3,000 |
| 27 | Loan from bank | 30,000 |

Unit III

5. What is a Balance Sheet ? Discuss the rationale of preparing Balance Sheet. 15
6. What is a Bank Reconciliation Statement ? Prepare a Bank Reconciliation Statement, taking imaginary figures. 15

Unit IV

7. What do you understand by Working Capital ? Distinguish between working capital and long term capital. 15
8. Define a Computerized Accounting System. Write in brief the different applications of computers in accounting. 15

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D-215

B.C.A. EXAMINATION, May 2015

(Fourth Semester)

(B. Scheme) (Main Only)

BCA-210-B

OBJECT ORIENTED PROGRAMMING

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. Explain the concept of object oriented language. Also explain the characteristics of OOP's with examples. 15

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P.T.O.

2. Write a program in C++ to perform addition and subtraction of two matrices (3*3). 15

Unit II

3. (a) What is a class ? Define its access specifier with suitable example. 10
(b) What is the role of Destructor in C++ ? 5
4. Define constructor. Also define its type with example. 15

Unit III

5. With the help of friend function implement the program to overload the binary operator. 15
6. (a) How ambiguity arise in multiple inheritance ? 5
(b) What is Inheritance ? Define various types of inheritance used in C++. 10

Unit IV

7. How exception handling is performed in C++ ? Explain try, catch, and throwing in detail. 15
8. Explain about the file opening and closing modes with example. 15