

No. of Printed Pages : 02

Roll No.

D-211

B.C.A. EXAMINATION, May 2016

(Fourth Semester)

(B. Scheme) (Main & Re-appear)

OPERATING SYSTEM

BCA-202-B

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. Explain operating system services. 15

(2-39) M-D-211

I.T.O.

2. What is Real time operating system ? Also differentiate between networked and distributed operating systems. **15**

Unit II

3. What is CPU scheduling ? Explain different algos using suitable example. **15**
4. What are Deadlocks ? Explain methods of handling deadlocks. **15**

Unit III

5. What is critical section problems ? Explain inter process communication. **15**
6. What is memory management in O/S ? Explain swapping and paging. **15**

Unit IV

7. What is Fragmentation ? Explain its different types and how it is produced. **15**
8. What is Disk Scheduling ? Explain FCFS, LOOK and C-LOCK algorithm. **15**

2018
2019
2020
2021
2022

No. of Printed Pages : 05

Roll No.

D-212

B.C.A. EXAMINATION, May 2016

(Fourth Semester)

(B. Scheme) (Main & Re-appear)

RELATIONAL DATABASE MANAGEMENT
SYSTEMS

BCA-204-B

Time : 3 Hours]

[Maximum Marks : 75

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

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P.T.O.

Unit I

- 1. (a) Describe set compatibility conditions for set operations. Give example queries of set operations. 7
- (b) Describe domain relational calculus in brief. 8

- 2. Describe the following terms in context of relational model :
 - (i) Degree of a relation 2
 - (ii) Cardinality of a relation 2
 - (iii) Referential data integrity 5
 - (iv) Candidate key and super key 2
 - (v) Tuple and Tuple variable 2
 - (vi) Relational schema and relation instance. 2

W	X	Y	Z
1	2	2	3
1	3	2	2
3	3	4	1
4	4	5	4

- (i) Does relation satisfies $W \rightarrow X$?
- (ii) Does relation satisfies $W \rightarrow Y$?
- (iii) Does relation satisfies $X \rightarrow Z$?
- (iv) Does relation satisfies $WY \rightarrow Z$? 8
- (b) With the help of a suitable example describe concept of lossless decomposition. 7

- 4. What is data redundancy ? How is it controlled ? What type of problem may occur in database due to redundancy ? Give examples in support of your answer. 15

Unit II

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

Unit III

- 5. (a) What is a Primary key ? Give SQL syntax for its implementation. 4

(b) Why view is called dynamic table ?
Explain. 4

(c) Give four commands in SQL to illustrate the usage of the following SQL constructs :

(i) IN

(ii) ANY

(iii) Between AND

(iv) Group by

(v) Having

(vi) AVG

(vii) Unique. 7

6. Consider a table Employee (Empid, name, Age, Department_id, Salary) and write the following queries in SQL :

(i) Find names of Employees that start with 'A'.

(ii) Find the name of Employee who is getting maximum salary.

(iii) Find the Average Salary of Each Department.

(iv) Find the name of youngest employee

(v) Find average salary of departments where number of employees are more than 10.

15

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 to demonstrate use of stored procedures. 10

8. What are various types of Triggers ? Explain with syntax. 15

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Roll No.

D-213

B.C.A. EXAMINATION, May 2016

(Fourth Semester)

(B. Scheme) (Main & Re-appear)

INTRODUCTION TO INTERNET
& WEB DESIGNING

BCA-206-B

Time : 3 Hours]

[Maximum Marks : 75

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

(2-38) M-D-213

P.T.O.

16 78

Unit I

- 1. (a) What is Computer Network ? Explain various topologies of computer network. **10**
- (b) Write a note on WWW. **5**
- 2. (a) Explain various modes of connecting to Internet. **8**
- (b) Explain the working of Internet. **7**

Unit II

- 3. (a) What do you understand by the Web Browser ? Explain any *one* popular web browser. **6**
- (b) What do you understand by meta search engine ? **5**
- (c) Write a brief note on Web Crowler. **4**
- 4. Explain the following :
 - (a) URL
 - (b) Web Server
 - (c) Proxy Servers
 - (d) Video Conferencing. **3+4+4+4**

Unit III

- 5. (a) What do you understand by search engine ? Explain the components of search engine. **10**
- (b) What is the difference between CGI scripts and CGI applications ? **5**
- 6. (a) What do you understand by Website ? Explain **all the** phases of website development. **10**
- (b) How can we create a website using HTML ? **5**

Unit IV

- 7. (a) What is HTML ? What do we need to create HTML ? Write and explain the structure of HTML documents. **10**
- (b) What is difference between HTML and XML ? **5**
- 8. Write notes on the following :
 - (a) Style Sheets
 - (b) Forms
 - (c) Colors and Text fonts. **3×5=15**

Unit IV

7. Explain the meaning, significance and sources of working capital.
8. Write a detailed note on applications of computers in accounting.

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Roll No.

D-214

B.C.A. EXAMINATION, May 2016

(Fourth Semester)

(B. Scheme) (Main/Re-appear)

BASIC ACCOUNTING

BCA-208-B

Time : 3 Hours

[Maximum Marks : 75

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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, principles and importance of accounting.

2. Using suitable examples, explain the following :

- (i) income
- (ii) expenditure
- (iii) assets

Why are they determined ?

Unit II

3. Discuss the principles of entry of transactions in a journal. Taking a hypothetical example, involving seven transactions, prepare the journal.

4. Prepare a cash book from the following information :

April 1996

1st Opening balance-Cash Rs. 15,200 and Bank Rs. 45,750

3rd Received a cheque from Mars Ltd., a customer, of Rs. 22,850 in full settlement of their dues of Rs. 23,000

4th Cash withdrawn from bank Rs. 10,000

10th Paid salaries by cash Rs. 20,500

12th Issued cheque to Neptune Ltd., a supplier, of Rs. 46,500 in full settlement of his claim of Rs. 47,000

15th Cheque received from Mars Ltd., dishonoured by bank.

20th Cash received from Pluto Ltd. Rs. 15,500

25th Collected a cheque, from Sun Star Ltd., of Rs. 16,700 in settlement of their dues of Rs. 17,000

30th Deposited Rs. 5,000 in bank.

Unit III

5. Explain the elements of profit and loss account. Why is it prepared ?

6. What is a bank reconciliation statement ? What purpose does it serve ? What are the causes of differences of bank balances between cash book and bank reconciliation statement.

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Roll No.

D-215

B.C.A. EXAMINATION, May 2016

(Fourth Semester)

(B. Scheme) (Main & Re-appear)

OBJECT ORIENTED PROGRAMMING

BCA-210-B

Time : 3 Hours]

[*Maximum Marks : 75*

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

Unit I

1. Explain the features of C++ in detail with suitable example. 15

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P.T.O.

2. (a) Explain the various data types used in C++. Distinguish the difference between user defined data types and derive data types. **10**
- (b) What is the difference between inline function and simple function ? **5**

Unit II

3. (a) Explain the different types of constructors with example. **10**
- (b) Explain the static member function with example. **5**
4. (a) What is a class ? Define its access specifier with suitable example. **10**
- (b) What is the role of Destructor in C++ ? **5**

Unit III

5. (a) What is Polymorphism ? Explain function overloading and function overriding with example. **10**
- (b) Explain inline function with example. **5**

6. (a) What is Inheritance ? Also define various types of inheritance with example. **10**
- (b) What is virtual function ? **5**

Unit IV

7. (a) Explain the exception handling mechanism available in C++ with suitable examples. **10**
- (b) Explain try, catch and throw. **5**
8. Write a C++ program to demonstrate file handling as follows : get strings as input from the user, store them in a file, retrieve them and display them. **15**