

No. of Printed Pages : 03

Roll No.

D211

B.C.A. EXAMINATION, May 2019

(Fourth Semester)

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

(BCA)

BCA202B

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. (a) Describe the working of time sharing operating system. 7
- (b) Describe the differences in workings of Simple operating and Real time operating system. 8
2. What do you mean by operating system service? Describe various operating system services in detail. 15

Unit II

3. Draw a neat diagram of PCB and explain its contents in details. 15
4. With the help of examples explain working of SJF and Round robin scheduling algorithms. 15

Unit III

5. What do you mean by indexed memory allocation in file management? Explain in details. 15

6. What are various directory structures used by operating systems? Explain directory structure used by UNIX operating system. 15

Unit IV

7. What is Critical Section Problem? Discuss, how semaphores can be used to solve dining philosophers problem. 15
8. What is Page Fault? When would it occur? What are various algorithms for page replacement? 15

6. (a) Briefly describe the concept of 'Views' in SQL. Also write how 'Views' can be specified in SQL ? 9
- (b) List and explain different schema change statements. 6

Unit IV

7. (a) Discuss the concept of PL/SQL execution environment. Also write the advantages of PL/SQL. 8
- (b) What are different PL/SQL control structures ? Explain. 7
8. Write short notes on the following :
- (a) Cursors
- (b) Triggers. 15

D212

B.C.A. EXAMINATION, May 2019

(Fourth Semester)

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

(BCA)

BCA204B

RELATIONAL DATABASE MANAGEMENT
SYSTEMS

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. (a) What are different Codd's Rules for Relational Model ? Illustrate. 7
(b) Discuss the various types of inner join operations. Why is theta join required ? 8
2. (a) Compare and contrast Tuple relational Calculus and domain relational calculus. 7
(b) Discuss the DIVISION operation. How is it represented, and what are the requirements of the numerator and denominator relation ? Explain with an example. 8

Unit II

3. What do you mean by Normalization ? Also explain 2NF, 3NF and BCNF with suitable examples. 15

4. (a) What is Data Redundancy ? What are the consequences of redundancy within a database ? 7
(b) List and explain different type of functional dependencies ? Also write characteristics of functional dependencies. 8

Unit III

5. (a) Describe the different types of constraints which you can specify in SQL. 9
(b) Write SQL update statements to perform the following queries in the student' table mentioned below.

Table : Student

Name	Student_number	Class	Major
Amit	15	1	CS
Sumit	8	2	CS

- (i) Insert a new student, <'Vijay', 25, 1, 'Math'>, in the student table.
- (ii) Delete the record for the student whose name is 'Sumit' and whose student number is 8. 6

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Roll No.

D213

B.C.A. EXAMINATION, May 2019

(Fourth Semester)

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

(BCA)

BCA206B

INTRODUCTION TO INTERNET AND WEB
DESIGNING

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.

(3-06/5) M-D213

P.T.O.

Unit I

1. (a) What is DNS ? Explain. 7
(b) Explain the Client-Server Architecture. 8
2. Define Computer Network. Explain the type of network Topologies. 15

Unit II

3. (a) What is a Search Engine ? Write categories of Search Engines. 8
(b) Explain the working of HTTP. 7
4. Explain the following :
 - (a) e-Mail 8
 - (b) Video Conferencing. 7

Unit III

5. Write notes on the following :
 - (a) Dynamic Web Page
 - (b) URL. 15

6. What is a Website ? Write and explain the steps involved in designing of a website. 15

Unit IV

6. (a) What is Meta Information ? Explain meta tag and its attributes in HTML. 8
(b) What is a Frame ? Explain the frameset tag in HTML. 7
8. Write notes on the following :
 - (a) Table 8
 - (b) Style Sheets. 7

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Roll No.

D215

B.C.A. EXAMINATION, May 2019

(Fourth Semester)

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

(BCA)

BCA210B

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.

(3-06/9) M-D215

P.T.O.

Unit I

1. (a) Explain the of object oriented approach. Explain, how object oriented approach is different from procedural approach.
(b) How does composition help facilitate encapsulation ? 5
2. Write a program in C++ using structure and array to display the Name, Class and Average marks of three subjects of each students. Assume there is 10 students in a class. 15

Unit II

3. What is class and objects ? Explain the access specifier in C++ with suitable example. 15
4. What is Constructor ? Explain, how constructor is overloaded, Also explains Copy Constructor with suitable example. 15

Unit III

5. Define Virtual Function ? Explain the rules to define the virtual functions. What is the benefit of using virtual function with example ? 15

6. What do you mean by inheritance ? Explain the types of inheritance with example. 15

Unit IV

7. What is Template Classes ? Explain, how template function is declared ? Write a program to create function template that returns the maximum of two values. 15
8. Explain difference between Binary File and Text File. Write a C++ program to open and close a particular file. 15