BCA Third Semester Examination, Dec. – 2018

SECOND PAPER

Advance Java Programming

Paper Code:- 3621

Time Allowed: Three Hours **Maximum Marks.70**

(1) No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.

(2)All the parts of one question should be answered at one place in the answer book.

(Attempt all six questions.)

Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4 , 5 & 6) has internal choice.

Part-I

1. Answer any 10 questions. Each question carries 1 mark. 10x1= 10

(Words limit up to 20 words each)

a) What do you mean by Probability in Java?

b) What are Command Line Arguments?

c) What is Interface?

d) What method is used to compare values of two string objects?

e) What is the base class of all exception classes?

f) What is the purpose of Multi - threading?

g) What is Applet?

h) List any four methods of the Mouse Listener Interface.

i) What is Resultset?

j) What are the steps to connect to the database in Java?

k) When do we declare a method or class final?

l) State the use of Wrapper Classes.

2. Answer all the questions. Each question carries 5 marks. 4x5 = 20

(Words limit up to 50 words each)

a) Differentiate between JDK, JRE and JVM.

b) What is the difference between Error and Exceptions?

c) What is the difference between Processes and Threads?

d) What is the difference between Execute, Execute Query and Execute Update?

Part-II

Unit-I

3. What is Method Overloading? How is it different from Method Overriding? Explain with an example. **10**

OR

What is Object Oriented Programming ? Discuss the benefits of OOP. Explain various types of data types available in Java. **10**

Unit-II

4. What is Package ? How to create package? Give examples. **10**

OR

Write a program to implement Multiple Inheritance using Interfaces. Also explain the process. **10**

Unit-III

5. What do you by a Java Applet? How is an applet different from an application? Discuss the life cycle of a Java Applet. **10**

OR

Explain Event Delegation. How action listener class is implemented? Explain. **10**

Unit-IV

6. Explain the different types of drivers used in JDBC with example. **10**

OR

Write a JDBC program to search for an attribute in a table and display the entire tuple to the user. For example, display all the details of the student give his / her roll number. **10**

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BCA Third Semester Examination - Dec.2018

FIRST PAPER

Data Base Management System

Paper Code: 3611

Time Allowed: Three Hours **Maximum Marks: 70**

No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.

(Attempt all six questions.)

Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4, 5 & 6) has internal choice.

PART I

1. Attempt any 10 questions out of the following. Each question carries 1 mark. **10x1=10**
(Words limit up to 20 words each)

a. Write full for of DBA.

b. Define Normalization.

c. What do you mean by Naive User?

d. Write one main difference between Network Model and Hierarchical Data Model.

e. Define QBE.

f. Define Index.

g. What do you mean by "procedural" ?

h. Define Attribute.

i. Give the Notation of Weak Entity.

j. Why we need Normalization?

k. Give three names of Clauses.

l. Write full form of SQL.

2. Attempt all questions. Each question carries 5 marks. **4X5=20**
(Words limit up to 50 words each)

a. Explain Instance and Schema with suitable example.

b. Define E-R model.

c. Write the difference between 3NF and BCNF.

d. Explain advantages of SQL.

Part-II
Unit- I

3. Explain the following: **10**

a) DDL (b) DML
c) DCL (d) Meta data

OR

What is DBMS? Explain system structure (Architecture) of DBMS. **10**

P.T.O.

Unit- II

4. Explain the following: **10**

a) Primary Key
b) Foreign Key
c) Candidate Key
d) Super Key
e) Generalization

OR

Describe the fundamental operations in the relational algebra with suitable examples of each operation. **10**

Unit- III

5. Define Transaction. Define ACID and write desirable properties of transactions. **10**

OR

Explain the following : **10**

a) Full and Partial Functional Dependency
b) Functional Dependency
c) Transitive Dependency
d) Multivalued Dependency
e) Join Dependency

Unit- IV

6. What do you understand by Structured Query Language? Explain basic structure of execution way of SQL Command with an example. **10**

OR

Consider the relational database: **5x2**

Employee (emp-name, street, city)
Works (emp-name, company – name, salary)
Company (emp-name, city)
Manager (emp-name, manager-name)

Give expression in SQL for the following :

a. Find the name of all employees who work for XYZ Ltd.
b. Find all employees in the database who live in the same cities as the companies for which they work.
c. Find all names, street address and cities of residence of all employees who work for the XYZ Ltd.
d. Find all employees in the database who live in the same cities and on the same street as do their managers.

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BCA Third Semester Examination, Dec. – 2018

THIRD PAPER

Operating System Fundamentals

Paper Code:- 3631

Time Allowed: Three Hours **Maximum Marks.70**

(1) No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.

(2)All the parts of one question should be answered at one place in the answer book.

(Attempt all six questions.)

Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4 , 5 & 6) has internal choice.

Part-I

1. Answer any 10 questions. Each question carries 1 mark. 10x1= 10

(Words limit up to 20 words each)

a) What is Time Sharing Operating System ?

b) What is Process ?

c) What is a File System ?

d) What do you mean by Paging ?

e) What is PCB?

f) Define Dead lock.

g) What is Critical Section ?

h) How many types of file access methods are there ?

i) What are schedulers ?

j) What is Access Matrix ?

k) How free space is managed ?

l) What is Swap Space ?

2. Answer all the questions. Each question carries 5 marks. 4x5 = 20

(Words limit up to 50 words each)

a) Define Operating System and discuss its role from different perspectives.

b) Explain the difference between logical and physical address.

c) Give necessary conditions for a deadlock to hold in a system.

d) Write short notes on ‘file protection’.

Part-II

Unit-I

3. Explain different types of Operating Systems. **10**

OR

Describe various pre-emptive and non –pre-emptive scheduling techniques. **10**

Unit-II

4. What do you mean by 'Virtual Memory'? Describe its advantages. **10**

OR

Explain the page replacement algorithms. **10**

Unit-III

5. Explain various techniques to handle the deadlock. **10**

OR

Write short notes on the three major methods of allocating disk space. **10**

Unit-IV

6. Explain Disk Scheduling. **10**

OR

Explain Security and goals of protection. **10**

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BCA Third Semester Examination, Dec.-2018

FOURTH PAPER

System Analysis & Design

Paper Code:- 3641

Time Allowed: Three Hours **Maximum Marks.70**

(1) No supplementary answer book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer book only.

(2)All the parts of one question should be answered at one place in the answer book.

(Attempt all six questions.)

Part I (Question No. 1& 2) is compulsory & Part II (Question No. 3, 4 , 5 & 6) has internal choice.

Part-I

1. Answer any 10 questions. Each question carries 1 mark. 10x1= 10

(Words limit up to 20 words each)

a) What are the constraints of a System?

b) Define Decision Tree.

c) What do you understand by Computer Based Information System?

d) What are the main advantages of creating a data dictionary?

e) What is Management Information System?

f) What do you mean by Questionnaire?

g) What is Performance Analysis?

h) What do you understand by System Design?

i) What is Testing?

j) Explain Structure Chart.

k) What is Black Box Testing?

l) What do you understand by input design?

2. Answer all the questions. Each question carries 5 marks. 4x5 = 20

(Words limit up to 50 words each)

a) Difference between Formal and Informal system.

b) Explain the difference between Structured and an Unstructured Interview.

c) Explain Data Dictionary. What are the advantages of Data Dictionary?

d) Difference between System Testing and Unit Testing.

Part-II

Unit-I

3. Define System. Explain the characteristics and elements of a system. **10**

OR

What do you understand by SDLC? What are the phases of SDLC? **10**

Unit-II

4. Who is a System Analyst? What are the tasks performed by a System Analyst? **10**

OR

What is Feasibility Study? What are the different types of feasibility? **10**

Unit-III

5. Explain data-flow diagram. Explain its different levels. **10**

OR

What are the different types of Information gathering techniques? **10**

Unit-IV

6. What is the purpose of documentation? Discuss the use of different types of documents prepared during documentation. **10**

OR

Explain different types of Testing. **10**

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