November 2021 2021/UGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I B.Sc. Computer Science - Programming in C(Integrated) – QIC1(7)

I B.C.A - Programming in C – RIC1(7)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. A _____ is a name given to some numeric constant, or a character constant or string constant, or any other constants.
2. The _____ method in C is used to write a character, of unsigned char type, to stdout.
3. A _____ is a group of statements that together perform a task.
4. _____ are defined as an array of characters.
5. _____ can be defined as a user-defined data type which is a collection of different variables of different datatypes in the same memory location.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. An _____ can be composed of letters such as uppercase, lowercase letters, underscore, digits, but the starting letter should be either an alphabet or an underscore.

   a) Constant b) final c) identifier d) None

7. The _____ is a binary operator that evaluates its first operand and discards the result, it then evaluates the second operand and returns this value.

   a) Unary operator b) Comma operator

   c) Ternary operator d) None of the above

8. A _____ is an early sample, model, or release of a product built to test a concept or process.

   a) C b) C++ c) Prototype d) None

9. _____ is a built-in constant that has a value of zero.

   a) NULL b) Empty c) NILL d) None

10. The _____ is a keyword used in C programming to provide some meaningful names to the already existing variable in the C program.

    a) Typedef b) Typecast c) Integer d) Character

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I B.C.A - Programming in C – RIC1(7)

III. Answer the following in One or Two Sentences (5 x 2 = 10 Marks)

11. Define Unary operator.
12. Mention the use of Puts() function.
13. Define Recursion.
14. Define array.
15. Mention about Self Referential structure.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. ***All questions carry equal marks.(Each answer should not exceed 300 words)***

16. Explain about the data types in C.
17. Write notes on Break and Continue, Goto statements.
18. Explain about passing arguments to functions
19. Illustrate on passing Arrays to Functions.
20. Differentiate between Union and Structures.
21. Explain in brief about Multidimensional arrays.
22. Enumerate on Arrays of Pointers.
23. Discuss about Multifile programs.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain in detail about Operators and Expression in C.
25. Discuss in detail about the Control statements in C with suitable examples.
26. Illustrate about the storage classes in C.
27. Enumerate about the operations on Pointers.
28. Elaborate on File handling in C with suitable examples.

---------- ***All the Best*** ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I B.Sc. Computer Science

Digital Electronics and Microprocessor(Integrated) – QIC2(7)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. The Octal equivalent of binary number 10111101 is _____.
2. There are _____ minterms for 3 variables.
3. A decoder converts n inputs to _____ outputs.
4. _____ counter is also called as parallel counter.
5. _____ determines the number of operations to be performed per second in microprocessor.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. What is the Output state of NOR gate if the inputs are 0 and 0?
   a) 3 b) 2 c) 1 d) 0
7. Which is the commutative property?
   a) A.1 = A b) A+0 = A c) A+B = B+A d) A+1 = 1+A
8. A 3-8 decoder is also called
   a) Octal-to-decimal decoder b) Binary-to-Octal decoder
   c) Decimal-to-octal decoder d) Octal-to-decimal decoder
9. A set of flip-flops integrated together is called
   a) Counter b) Adder c) Accumulator d) Register
10. The addressing mode, where you directly specify the operand value is called
    a) Immediate b) Direct c) Definite d) Relative

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. What is Gray code?
12. Define Minterm and Maxterm.
13. State the purpose of Multiplexer.
14. What do you mean by Serial transfer?
15. What is Microprocessor?

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I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I B.Sc. Computer Science

Digital Electronics and Microprocessor(Integrated) – QIC2(7)

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. "NAND and NOR gates are universal building blocks" – Justify.
17. State and prove the Commutative Law and Associative law.
18. What is demultiplexer? Explain the difference between DMUX and MUX.
19. Draw the logic diagram for JK flip-flop and explain its working with truth table.
20. List and explain different types of addressing modes with example.
21. Convert the following:
    a) $(19.625)_{10}$ to binary.
    b) $(45.6)_8$ to decimal
22. Simplify by Tabulation method.

    $F(A, B, C, D) = \sum_m (0,1,4,5,10.11.14.15)$

23. Draw the circuit of the 4-bit binary ripple counter and write its output sequence.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Define the term Complements. Explain different types of complements with suitable example.
25. Simplify the Boolean function $F(A, B,C,D)=\sum_m(1,3,7,11,15)$ and the don't care condition $\sum_d (A,B,C,D)=\sum(0,2,5,8)$ using K-Map.
26. With logic diagram and truth table, explain the working of the following:
    a) Full adder b) Encoder
27. Illustrate the working of left shift and right shift operations in an register with example.
28. What are basic set of microprocessor instructions? Explain any two group with example.

---------- ***All the Best*** ----------

November 2021 2020/UGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

III SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.Sc.Computer Science/ II B.C.A.

Data Structures – QIIICE1A(6)/ RIIIC4(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. _____ is called organization of data.
2. Minimum number of fields in each node of a doubly linked list is _____.
3. A dequeue operation removes an element from the _____ of the queue.
4. Every full binary tree is also called a _____ binary tree.
5. The complexity of merge sort is _____.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. In general, the index of the first element in an array is
   a) 0 b) -1 c) 2 d) 1
7. A data structure in which linear sequence is maintained by pointers is known as
   a) Array b) Stack c) Linked list d) Pointer based data structure
8. Data structure required to convert arithmetic expression in infix to its equivalent postfix notation
   a) Queue b) Stack c) Tree d) List
9. The following data structure is used to represent a relationship between pairs, where relationship is not hierarchical
   a) Priority queue b) Heap c) Tree d) Graph
10. The best way to find an item in a sorted list implemented using an array is with
    a) Direct search b) Binary search c) Linear search d) Random search

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III SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.Sc.Computer Science/ II B.C.A.

Data Structures – QIIICE1A(6)/ RIIIC4(6)

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. What do you mean by complexity of algorithm?
12. Defined linked list.
13. List the advantages of recursion.
14. Write a note on binary tree.
15. How is hashing useful?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Explain the representations of linear arrays in memory with example.
17. Discuss about memory allocation and garbage collection in data structure.
18. Determine priority queues.
19. Elaborate binary search tree with an example.
20. Differentiate between linear and binary search in detail.
21. Elucidate in detail about the various data structure operations.
22. Give the following data 10, 80, 30, 90, 40, 50, 70 perform quick sort and explain.
23. Classify the various operations performed on graphs in data structures.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate on asymptotic notations in data structure.
25. Enumerate how to create, insert and delete a node in a linked list.
26. Briefly explain evaluation of infix, postfix and prefix expression using stack.
27. Discuss in detail about Warshall's algorithm.
28. Explain bubble sort and insertion sort in detail.

---------- ***All the Best*** ----------

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III SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

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Data Structures – QIIICE1A(6)/ RIIIC4(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

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Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. _____ is called organization of data.
2. Minimum number of fields in each node of a doubly linked list is _____.
3. A dequeue operation removes an element from the _____ of the queue.
4. Every full binary tree is also called a _____ binary tree.
5. The complexity of merge sort is _____.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. In general, the index of the first element in an array is
   a) 0 b) -1 c) 2 d) 1
7. A data structure in which linear sequence is maintained by pointers is known as
   a) Array b) Stack c) Linked list d) Pointer based data structure
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II B.Sc.Computer Science/ II B.C.A.

Data Structures – QIIICE1A(6)/ RIIIC4(6)

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. What do you mean by complexity of algorithm?
12. Defined linked list.
13. List the advantages of recursion.
14. Write a note on binary tree.
15. How is hashing useful?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Explain the representations of linear arrays in memory with example.
17. Discuss about memory allocation and garbage collection in data structure.
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19. Elaborate binary search tree with an example.
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21. Elucidate in detail about the various data structure operations.
22. Give the following data 10, 80, 30, 90, 40, 50, 70 perform quick sort and explain.
23. Classify the various operations performed on graphs in data structures.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate on asymptotic notations in data structure.
25. Enumerate how to create, insert and delete a node in a linked list.
26. Briefly explain evaluation of infix, postfix and prefix expression using stack.
27. Discuss in detail about Warshall's algorithm.
28. Explain bubble sort and insertion sort in detail.

---------- ***All the Best*** ----------

November 2021 2019/UGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science

Database Management Systems - QVC6(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. _____ is the powerful language for working with DBMS
2. _____ performing tasks like creating the structure of the relations, deleting relation.
3. A huge collection of the information or data accumulated form several different source is _____.
4. The copies of the same data (or information) occupying the memory space at multiple places is _____.
5. A _____ DBMS distributes data processing task between the work station and Network server.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. A Database Management System is a type of _____ software.

   a) It is a type of system software b) It is a kind of application software
   c) It is a kind of general software d) Both A and C

7. In the following Query, which of the following can be placed in the Query's blank portion to display the salary from highest to lowest amount, and sorting the employs name alphabetically?

   SELECT * FROM instructor ORDER BY salary ____, name ___;

   a) Ascending, Descending b) Asc, Desc c) Desc, Asc d) All of the above

8. Which of the following refers to the level of data abstraction that describes exactly How the data actually stored?

   a) Conceptual Level b) Physical Level c) File Level d) Logical Level

9. Rows of a relation are known as the

   a) Degree b) Tuples c) Entity d) All the above

10. The term "ODBC" stands for

    a) Oral database connectivity b) Oracle database connectivity
    c) Open database connectivity d) Object database connectivity

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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science

Database Management Systems - QVC6(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. List the basic components of a DBMS.
12. State Event.
13. Identify the sub query names in DBMS.
14. Define Procedural Language.
15. What tasks are performed by a DBA?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. ***A*ll questions carry equal marks.(Each answer should not exceed 300 words)**

16. Discuss about the Components of DBMS.
17. Show how an outer join working with an example.
18. Elucidate 4NF.
19. Brief out on creating forms with examples.
20. Discuss the three tier client/server model.
21. Analyze briefly the data dictionary and the system catalog.
22. Write short notes on Table Operation.
23. State about Procedure.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Classify the Different Data Types with an Example.
25. Compare SQL DDL and SQL DML Commands.
26. Elucidate in detail about 2NF and 3NF.
27. Analyze the common controls to build a form.
28. Elaborate the following (a) Client/Server Databases (b) Object Oriented Database.

---------- ***All the Best*** ----------

March 2022

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*, **CHENNAI – 600 018**

V SEMESTER (Regular) – Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science/ III B.C.A.

Big Data Analytics - QVC5(6)/ RVC10(6)

TIME: THREE HOURS MAXIMUM MARKS : 100

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. 20 Marks I. Fill in the blanks (5 x 1= 5 Marks)

1. E-mail is an example of _____ data format.
2. Decision tree is a _____ method.
3. Hadoop is an open source framework for writing and running _____ applications that process large amounts of data.
4. Pig is a _____ language.
5. YARN is responsible for _____.

II. Choose the correct answer (5 x 1= 5 Marks)

6. Identify the Data Processing framework

   a) PIG b) HIVE c) Hadoop d) Spark

7. _____ is the book keeper of HDFS.

   a) Name node b) Data node c) Master node d) None

8. _____ has no support for ACID property of transactions.

   a) New SQL b) NoSQL c) MySQL d) SQL Server

9. Mongo DB uses _____ schemes.

   a) RDBMS b) Static c) Dynamic d) None

10. Metastore consists of_____ and a database.

    a) JSON b) BSON c) Meta services d) Web Service

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*, **CHENNAI – 600 018**

V SEMESTER (Regular) – Applicable to candidates admitted in the year 2019

III. Answer the following in One or Two Sentences (5 x 2= 10 Marks)

11.Define Data Analytics.
12. What do you mean by Collaborative Filtering?
13. List any two features of MongoDB.
14. Specify the HDFS Daemons.
15. Mention the data units of HIVE.

Section – B (5 x 7 = 35 Marks)

Answer any five questions.All questions carry equal marks.(Each answer should not exceed 300 words)

16.Describe the Characteristics and Challenges in Big data.
17.Analyze the components of Hadoop Ecosystem.
18. Explain briefly about Association Rule Mining.
19. Describe the Anatomy of File Write in HDFS with a neat diagram.
20. Discuss on the Relational Operators in Pig.
21. Compare and Contrast NoSQL, NewSQL and RDBMS.
22. State CAP theorem. Justify CAP theorem with a neat example.
23. Discuss about the types of analytics and the classification of big data.

Section – C (3x 15 = 45 Marks)

Answer any three questions.All questions carry equal marks.(Each answer should not exceed 600 words).

24. What is Big data Analytics? Describe the terminologies in the big data environment.
25. Elucidate the concept of Map Reduce Programming with a neat example. 26. Analyze the Machine Learning Algorithms.
27. Elaborate the key concepts of HDFS in Big data.
28. Illustrate the use of HIVE in detail.

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018
V SEMESTER **(Regular)**–Applicable to candidates admitted in the year 2019
III B.Com. Information Systems Management
.Net Technologies – QPSVC11(3)

Time: Three Hours **Maximum Marks: 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section – A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 X 1=5 Marks)**

1. A _____ is an identifier that denotes a storage location used to store a data value.
2. In a switch-case statement, the _____ is an optional case.
3. Objects in C# are creating using the _____ operator.
4. The CLR stands for _____.
5. We can use _____ to compare between range of data.

II. Choose the correct answer **(5 X 1= 5 Marks)**

6. The character pair?: is a _____ operator.
   a) relational b) logical c) conditional d) bit-wise

7. The _____ keyword automatically enumerates a list of words by assigning them values 0, 1, 2 and so on.
   a) enum b) enumerate c) auto d) autoword

8. _____ means method acting for another method.
   a) recursion b) final c) enum d) delegate

9. Hyperlink control is one of the _____ controls in asp.net.
   a) Verification b) basic server c) data list web server d) validation

10. The _____ control is used to display a repeated list of items that are bound to the control.
    a) relist b) rebound c) repeater d) refresh

III. Answer the following in one or two sentences **(5 X 2= 10 Marks)**

11. Define literals.
12. What is an array?
13. Define class.
14. Describe HTML.
15. What is meant by required field validator control?

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CHENNAI – 600 018
V SEMESTER **(Regular)**–Applicable to candidates admitted in the year 2019
III B.Com. Information Systems Management
.Net Technologies – QPSVC11(3)

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. ***All questions carry equal Marks. (Each answer should not exceed 300 words)***

16. List and explain the different data types available in C#.
17. Discuss about the structures in C#.
18. What is an inheritance? Explain with C# program.
19. Give a short note on ASP.NET structure.
20. List and explain any three data list web server controls of ASP, NET.
21. Write a short note on .NET frame work.
22. Discuss about the methods in C#.
23. Explain the term polymorphism.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. ***All questions carry equal Marks. (Each answer should not exceed 600 words)***

24. List and explain the operators available in C#.
25. Explain the different types of looping statements available in C#.
26. Briefly explain the operator overloading with example C# program.
27. Explain any five basic server controls of asp.net in detail.
28. Write a brief note on validation controls of asp.net.

----------All the Best.----------

November 2021 2019/UGR

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CHENNAI – 600 018

V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science/ III B.C.A.

Big Data Analytics - QVC5(6)/ RVC10(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. The Process of describing the data that is huge and complex to store and process is known as_____.
2. BigData could be found _____ different format.
3. HDFS is implemented in _____ language.
4. The MapReduce algorithm contains two important tasks, namely _____.
5. _____ is the world largest Hadoop cluster.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. Data in _____ bytes size is called Big Data.
   a) Tera b) Giga c) Peta d) Meta
7. What are the main components of Big Data?
   a) MapReduce b) HDFS c) YARN d) All of the above
8. Who was the developer of Hadoop language?
   a) Apache Software Foundation b) Hadoop Software Foundation
   c) Sun Microsystems d) Bell Labs
9. What is the full form of YARN?
   a) Yet Another Resource Network b) Yet Another Relational Negotiator
   c) Yet Another Resource Negotiator d) Yet Another Relational Network
10. Which of the following company has developed PIG?
    a) Google b) Yahoo c) Microsoft d) Apple

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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science/ III B.C.A.

Big Data Analytics - QVC5(6)/ RVC10(6)

III. Answer the following in One or Two Sentences **(5 x 2= 10 Marks)**

11. What is Big Data?
12. Define Data Analytics.
13. Why is Cassandra used?
14. State the role of YARN.
15. How many file formats are there in Hive?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Discuss about Data characteristics and classification.
17. What are the types of big data analytics?
18. Write short notes on NOSQL.
19. Differentiate RDBMS versus Hadoop.
20. Explain Map Reduce Model.
21. What is the difference between data warehousing and big data?
22. List out the challenges faced by bigdata.
23. Discuss about pig data types and its operators.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Write in detail about big data technology and its applications.
25. Define Machine learning. Explain about machine learning algorithms.
26. Discuss in detail about Hadoop ecosystems.
27. Explain in detail HDFS.
28. Elaborate in detail about Hive Architecture.

---------- ***All the Best*** ----------

November 2021 2019/UGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science/ III B.C.A.

.Net Technologies – QVC7(6)/ RVC11(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. The _____ framework applications are multi-platform applications.
2. _____ is a mechanism of wrapping the data (variables) and code acting on the data (methods) together as a single unit.
3. _____ web forms extend the event-driven model of interaction to the web applications.
4. _____ is the technology used for working with data and databases.
5. _____ are primarily text documents formatted and annotated with Hypertext Markup Language (HTML).

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. The _____ refer to fixed values that the program may not alter during its execution.

a) constants b) Identifier c) Operator d) Keyword

7. _____ event allows loading view state information into the controls.

a) PreInit b) InitComplete c) LoadViewState d) UnLoad

8. _____ can be used to select only one item at a time.

a) Dropdown List b) List c) Check d) Radio

9. The _____ provides the mechanism for you to find information about your visitor and their request

a) Request object b) Response Object c) Compare d) Adaptor

10. _____ is the XML description of service

a) RMI b) HTTP c) WSDL d) URL

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CHENNAI – 600 018

V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science/ III B.C.A.

.Net Technologies – QVC7(6)/ RVC11(6)

III. Answer the following in One or Two Sentences **(5 x 2= 10 Marks)**

11. List out various types of applications in .NET framework.
12. Define Class.
13. Differentiate between Check Box and Radio Button Control.
14. How to send the text with the Response object?
15. What is meant by IIS?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Describe any four type's data types in C# programming.
17. Classify about the boxing and unboxing in C#.
18. Briefly notes on Data Grid Control in ASP.Net.
19. Elaborate in various OLEDB Classes used in ASP.Net Application.
20. State IIS. How it is used along with Page directives? Explain
21. Analyze the control structure in C# programming.
22. Enumerate briefly notes on different types of inheritances available in C#.
23. Write short notes on each of the following with an example.

    a) Label Box b) Radio Button

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain the Components of .Net Framework.
25. Define interface in C# Explain implementation with an example.
26. How XML file is configured in Ad Rotator Control?
27. List out the types of Validation Controls.
28. Describe the ASP.Net basic web server control.

---------- ***All the Best*** ----------

November 2021 2019/UGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science/ III B.C.A.

Software Engineering – QVCE2A(6)/ RVC9(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. The agile software development model is built based on _____.
2. The major drawback of RAD model is _____.
3. _____ is a technique covered in Static Analysis.
4. _____ is done in the development phase by the debuggers.
5. _____ is a quality control function that has one primary goal to find errors.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. What is the first step in the software development lifecycle?

   a) System Design b) Coding

   c) System Testing d) Preliminary Investigation and Analysis

7. SDLC stands for

   a) Software Development Life Cycle b) System Development Life cycle

   c) Software Design Life Cycle d) System Design Life Cycle

8. Which one of the following is not an agile method?

   a) XP b) 4GT c) AUP d) All of the mentioned

9. Which of the following is not a SQA plan for a project?

   a) evaluations to be performed b) amount of technical work

   c) audits and reviews to be performed d) documents to be produced by the SQA group

10. What do you call testing individual components?

    a) system testing b) unit testing

    c) validation testing d) black box testing

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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science/ III B.C.A.

Software Engineering – QVCE2A(6)/ RVC9(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Give the example of Agile.
12. List the Class based modeling.
13. Define Software quality.
14. What is Verification and Validation?
15. Show the list of process.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Explain the Concurrent model with example.
17. Elucidate in detail the Requirement analysis.
18. Describe about the Formal technical reviews.
19. Elaborate the White box testing give example.
20. Discuss about the Software Measurement.
21. Determine about the Virtual Memory.
22. Implement the creation of behavioral model.
23. Analyze the task set for the project scheduling.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain the waterfall model and Incremental process model.
25. Elaborate the Design concepts with diagram.
26. Give an Overview of Software quality Assurance.
27. Illustrate the control structures testing and model based testing.
28. Discuss about the detailed notes the Estimation for software projects.

---------- ***All the Best*** ----------

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V SEMESTER **(Regular)** - Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science/ III B.C.A.

Software Engineering - QVCE2A(6)/ RVC9(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. Software engineering is both a _____ and a model.
2. _____ models that depict how the software behaves as a consequence of external "events".
3. _____ is a technique covered in Static Analysis.
4. _____ is one of the techniques of white-box testing which is used to test the control structure of any software and was first introduced by Tom McCabe.
5. _____are Scheduling Methods applied to software development.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. Software consists of?

a) Set of instructions + operating procedures

b) Programs + documentation + operating procedures

c) Programs + hardware modules d) Set of programs.

7. An object encapsulates

a)Data b) Behaviour

c) state d) d) Both a) and b).

8. If the objects focus on problem domain then we are concerned with

a)Object Oriented Design b) Object Oriented Analysis

c) Object Oriented Analysis &Design d) None of the above.

9. What do you call testing individual components?

a) system testing b) unit testing

c) validation testing d) black box testing

10. What do you call testing individual components?

a)system testing b) unit testing

c) validation testing d) black box testing

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V SEMESTER **(Regular)** - Applicable to candidates admitted in the year 2019

III B.Sc.Computer Science/ III B.C.A.

Software Engineering - QVCE2A(6)/ RVC9(6)

Answer the following in One or Two Sentences (5 x 2 = 10 Marks)

11. List any 2 software process models.
12. Define software reliability
13 What is a Design concept
14 What is Validation
15 Define software testing..

Section - B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Explain the process patterns.
17. Elucidate the objectives of requirements model.
18. Describe about the InFormal technical reviews.
19. Elaborate the Black box testing give example.
20. Discuss about the project metrics.
21. Determine the types of control structure testing.
22. Identify the importance quality concepts.
23. Analyze the task set for the project scheduling.

Section - C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain the Evolutionary process model and Incremental process model.
25. Elaborate the Design models with diagram.
26. Give an overview of various elements of Software quality Assurance.
27. Illustrate any two testing strategies in detail.
28. Discuss Project scheduling in detail.

All the Best

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III SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.C.A.

Computer Graphics – RIIICE1A(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. The _____ is actually the transformation that produces a mirror image of an object.
2. GUI means _____
3. DDA stands for _____
4. _____ transformation is used for altering the object's size.
5. _____ device is used for the 3D positioning of an object.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. The graphics can be _____

   a) Drawing b) Photograph c) Simulation d) All the above

7. Raster graphics are composed of _____

   a) Pixels b) Path c) Palette d) None of the above

8. Shadow mask method is used in _____

   a) Random scan method b) Raster Scan method

   c) Both a and b d) None of these

9. The Process of Coloring the area of a polygon is called _____

   a) Polygon filling b) Polygon flow

   c) Aliasing d) None of these

10. A translation is applied to an object by _____

    a) Repositioning it along with straight path

    b) Repositioning it along with Circular path

    c) Both a and b

    d) None of these

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III SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.C.A.

Computer Graphics – RIIICE1A(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Define Computer Graphics.
12. Define Mid Point Circle algorithm.
13. State rotation.
14. Define B-Spline curve.
15. What is Shearing in computer graphics?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Differentiate Random scan and Raster scan displays.
17. Explain DDA algorithm.
18. Distinguish between window port & view port.
19. Discuss Parallel Projection in detail.
20. Illustrate 3D Viewing with example.
21. Show the various Clipping Operation in detail.
22. Evaluate Line drawing algorithm.
23. Classify the various Transformation.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Discuss Video Display Devices.
25. Analyze Bresenham's algorithm.
26. Determine Cohen Sutherland Line Clipping.
27. Enumerate B- Spline Curves.
28. Elaborate Composite Transformation.

---------- ***All the Best*** ----------

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CHENNAI – 600 018

V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.C.A.

Data Mining and Warehousing – RVCE2A(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. Data Transformation and Consolidation are performed before Data _____ Process.
2. _____ is random error or variance in a measure variable.
3. Regression Analysis is a statistical methodology often used for _____ prediction.
4. Data stored in _____ Database are Semi-Structured data.
5. _____ combines ROLAP and MOLAP technology.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. To remove noise and inconsistent data is called Data _____

   a) integration b) transformation c) selection d) cleaning

7. Data _____ tools use simple domain knowledge to detect errors and make correction in the data.

   a) scrubbing b) auditing c) migration d) extraction

8. _____ Regression models the probability of some events occurring as a linear function of a set of predictor variables.

   a) logistic b) lasso c) elastic d) linear

9. The Basic structure of a Web Page is _____

   a) DOM b) COM c) HTML d) XML

10. Data Cube allows data to be modelled and viewed in _____ dimensions

    a) one b) two c) three d) multiple

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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.C.A.

Data Mining and Warehousing – RVCE2A(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Indicate Pattern Evaluation.
12. List out the Measures for Data Dispersion.
13. What are the two common approaches for tree pruning?
14. Define Web Usage Mining.
15. State Concept Hierarchy.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Describe about Data Warehouses with neat diagram.
17. Explain the need to preprocess the Data.
18. Evaluate about Attribute Selection Measures.
19. Discuss about Automatic Classification of Web Documents.
20. Illustrate the steps for Design and Construction of Data Warehouses.
21. List out the Major issues in Data Mining.
22. Elucidate about Data Transformation in detail.
23. Analyze about Decision Tree Induction.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain Advanced Data and Information System and Advanced Application of Data Mining.
25. Illustrate the Data Summarization Techniques in Data Mining.
26. Elucidate in detail about Bayesian Classification.
27. Elaborate about Text Mining Approaches.
28. Describe about Multi-Dimensional Data Model in detail.

---------- ***All the Best*** ----------

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III SEMESTER (**Regular**) – Applicable to candidates admitted in the year 2020

II B.Sc. Electronics and Communication Science

Introduction to Java Programming – WIIIA3(6)

TIME: Three Hours **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. Java is a _____ oriented programming language.
2. The && and || operators compare two _____values.
3. Derived class from more than one base class is called _____inheritance.
4. Index in array start with _____.
5. The _____keyword must be used to throw an exception explicitly.

II. Choose the correct answer **(5X1=5 Marks)**

6. Which of the following is smallest integer data type?

   a) long b) int c) short d) byte

7. Evaluate the following Java expression, if x=3, y=5, and z=10: **++z + y - y + z + x++**

   a) 23 b) 20 c) 24 d) 25

8. Which is the file extension used for a compiled Java class file?

   a) .java b) .class c) .jav d) .bin

9. Which keyword is used to prevent content of a variable from being modified?

   a) static b) abstract c) final d) last

10. Which of the following is an immediate subclass of the Panel class?

    a) Window class b) Applet class c) frame class d) dialog class

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. Mention the importance of Automatic type conversion.
12. List out the merits of decision making statements.
13. Define: Inheritance.
14. Specify the syntax of two dimensional array.
15. State advantage of exception handing in java.

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III SEMESTER (**Regular**) – Applicable to candidates admitted in the year 2020

II B.Sc. Electronics and Communication Science

Introduction to Java Programming – WIIIA3(6)

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Summarize the features of object oriented language.
17. Illustrate a simple java program using ternary operator.
18. Express the method overloading concept with example.
19. Analyze the usage of vector class in java.
20. Discuss the concept of multiple catch statement.
21. Narrate the role of Java Virtual Machine. (JVM)
22. Describe the logical operators.
23. Develop a java program to construct a method overloading.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain the following with example

    (a) Data types (b) Symbolic constants

25. Distinguish between the while and do statement with examples.
26. Develop a package and access the package with example.
27. Discuss the concept of interfaces and implementation of interface.
28. Construct Applet life cycle with example.

All the Best

November 2021 2019/UGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

V SEMESTER (**Regular**) – Applicable to candidates admitted in the year 2019

III B.Sc. Electronics and Communication Science

Database Management Systems – WVCE2A(6)

TIME: Three Hours **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. Data is represented in a DBMS as _____.
2. The full form of DML is _____.
3. A function that has no partial functional dependencies is in _____ form.
4. A _____is a major database object used to display information in an attractive, easy-to-read screen format.
5. _____ users can access a database according to its privacy constraints.

II. Choose the correct answer **(5X1=5 Marks)**

6. Which name must be unique within a database?
   a) Table b) Field c) Record d) Character
7. Which of the following command is a type of Data Definition language command?
   a) Merge b) Update c) Delete d) Create
8. Which of the following keys is generally used to represents the relationships between the tables?
   a) Primary key b) Foreign key c) Secondary key d) Join query
9. A ____ is an effective way to present data in a printed form.
   a) query b) forms c) reports d) table
10. For a backup/restore system, _____ is a prerequisite for service in an enterprise
    a) Scalability b) filter c) recovery d) security

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. Define: class diagram.
12. Define: DDL.
13. Specify the objective of Normalization.
14. List the primary section of Reports?
15. Mention the role of database administrator?

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V SEMESTER (**Regular**) – Applicable to candidates admitted in the year 2019

III B.Sc. Electronics and Communication Science

Database Management Systems – WVCE2A(6)

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Classify the basic data types of to define an attribute? Explain with examples.
17. Compose the SQL grouping functions with example.
18. Summarize the concept of Data Dictionary?
19. Explain the effective design of forms and reports?
20. Compare the client server databases with traditional databases.
21. Narrate the various Direct Manipulation of Graphical Objects.
22. Discuss in detail the Queries with multiple tables. Analyze with Employee payroll details.
23. Describe the use of sub query and Nested sub query?

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. (a) Justify the different components of DBMS?
    (b) Discuss the advantages of DBMS?
25. Elaborately analyze to do join operation in the tables with different size of record set using Outer Join method? Explain with example.
26. Analyze First Normal Form (1 NF & 2 NF) with examples.
27. Express the various Common Controls to build a form in the Data base environment.
28. Highlight the Development stages of a database tasks? Explain.

All the Best

November 2020 2020/PGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

I M.Sc Computer Science

Python Programming – MGIC2(6)

TIME: 90 Minutes **MAXIMUM MARKS : 50**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **15 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. _____ is immutable/ unchangeable in Python.
2. _____ method is used to get first character in uppercase & remaining in lowercase.
3. The _____ operator is used to check if a value exists within an iterable object container.
4. A _____ is a code block that only executes when it is called.
5. All classes uses _____ function which is always executed when the class is being initiated.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. Which of the following function convert a string into an integer in Python?

a) int(x) b) char(x) c) str(x) d) all

7. What is the output of the following code?

```
for i in range(10,15,1):
    print(i,end=',')
```

a)10, 11, 12, 13, 14 b) 11, 12,13,14 c) 10,11, 12,13,14,15 d) None

8. Dictionaries are used to store data values in _____ pairs.

a) key: value b) index: value c) value: key d) all

9. Can we use the "else" clause for loops?

```
for i in range(1,5):
    print(i)
else:
    print(" This is else block statement")
```

a) else clause will not get executed. b) else clause is not allowed in for loops.

c) else clause will get executed. d) None

10. Which of the method read lines from the files?

a) readline() b) readlines() c) read() d) None

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
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I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

I M.Sc Computer Science

Python Programming – MGIC2(6)

III. Answer the following in One or Two Sentences **(5 x 1= 5 Marks)**

11. Write the advantages of Python.
12. List out the difference between List and Tuples.
13. What is Dictionary comprehension?
14. Explain GUI.
15. Explain file modes.

Section – B

(3 x 5 = 15 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 150 words)**

16. Explain the Interactive and Script modes of Python.
17. Define & explain List.
18. Explain Modules.
19. Explain Loops in python.
20. Explain Classes and Objects in detail.

Section – C

(2 x 10 = 20 Marks)

Answer any two questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

21. Explain Data types in Python.
22. Explain the Function definition and Function calling in detail.
23. Define file & Explain File operation and file Object methods.
24. Write the Python GUI program to implement Tkinter.

---------- ***All the Best*** ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc.Computer Science

Object Oriented Analysis and Design – MGIC2(7)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. An object is _____ data type.
2. A _____ is a set of related classes to perform a certain task.
3. CRC means _____.
4. There are two types of Design model _____ & _____.
5. The language used in UML is _____.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. Encapsulation is the process of binding _____ & _____

   a) Attributes & method b) object & class

   c) member & class d) a & b

7. Which of the following early OOD methods incorporates both a micro & macro development process.

   a) Booch Method b) Rumbaugh method

   c) wirfs-brock method d) Coad & yourdon method

8. During the Design phase, the overall _____ of the system is described.

   a) Architecture b) System flow c) Data flow d) none of the above

9. The Design _____ describes the minima/rule set for designing interfaces.

   a) Axioms b) object c) class d) b & c

10. _____ are weak entities are represented in UML diagrams by using aggregations.

    a) Qualified b) non-qualified c) a & b d) none of the above

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I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc.Computer Science

Object Oriented Analysis and Design – MGIC2(7)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Define : Aggregation.
12. What is Pattern?
13. Why using Business object in OOAD?
14. What is Design process?
15. Mention the three building of UML.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Elaborate types of polymorphism.
17. Explain Rumbaugh methodologies.
18. Identifying object relationships & methods.
19. Illustrate types of Design patterns.
20. Which purpose using Dynamic modeling?
21. Explain access layer classes.
22. Discuss classes, Responsibilities & collaborates.
23. Elaborate Booch methodology.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain about OOS Development life cycle.
25. Elaborate Jacobson methodology.
26. Discuss Use case model object Analysis.
27. Explain in detail the axioms & corollaries in object-oriented design.
28. Illustrate UML Diagram symbols.

---------- ***All the Best*** ----------

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CHENNAI – 600 018

I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc.Computer Science / I M.C.A

Digital Image Processing(Integrated) – MGIC3(7)/MHIC2(8)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. _____ is known as the elements of a digital image.
2. _____ is the basis for numerous spatial domain processing techniques.
3. Filter that replaces the pixel value with the minimum values of intensity levels is called_____.
4. _____ helps in reducing the complexity of the image to make further processing and analysis.
5. _____restores the large file to its original form with loss of some data.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. The first and foremost step in Image Processing is:

   a) Image acquisition b) Segmentation

   c) Image enhancement d) Image restoration

7. Which of the following in an image can be removed by using a smoothing filter?

   a) Sharp transitions of brightness levels b) Sharp transitions of gray levels

   c) Smooth transitions of gray levels d) Smooth transitions of brightness levels

8. The brightest points of an image can be identified by

   a) min filter b) max filter c) average filter d) median filter

9. Image Restoration deals with

   a) Highlight certain features of interest in image

   b) Reducing the storage required to save an image

   c) The representation of shape and boundary of objects

   d) Improving the appearance of an image

10. Compressed image can be recovered back by

    a) Image Enhancement b) Image contrast

    c) Image decompression d) Image equalization

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I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc.Computer Science / I M.C.A

Digital Image Processing(Integrated) – MGIC3(7)/MHIC2(8)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. What is Pixel?
12. Define Spatial filter.
13. State on Image enhancement.
14. What are Noise Models?
15. List any two advantages of Image compression.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. ***A*ll questions carry equal marks.(Each answer should not exceed 300 words)**

16. What are the various fundamental steps in digital image processing?
17. Explain the use of histogram statistics for image enhancement.
18. Describe how periodic noise can be reduced using frequency domain filtering.
19. Distinguish between image enhancement and image restoration.
20. Highlight on Lossy compression and bring its disadvantages.
21. Outline the principles of region-based segmentation.
22. Explain the periodic noise reduction by frequency domain filtering with respect to notch filter.
23. Illustrate the principles of JPEG standard.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate on RGB color model and illustrate on histogram processing of color images.
25. Summarize the significances of Histogram processing.
26. Define Fourier spectrum and Phase angle of 2D-DFT. Also explain the following two properties of 2D-DFT:

    a) Convolution b) Correlation
27. Explain the model of image degradation and restoration process using suitable block diagram.
28. Draw the functional block diagram of image compression system and explain the purpose of each block.

---------- ***All the Best*** ----------

November 2021 2020/UGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

III SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.Sc.Computer Science

Linux and Shell Programming – MGIIIC8(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. The computer programs that allocate the system resources and coordinate all the details of the computer's internals is called _____
2. VFS stands for _____
3. _____is used for copying files and directories to another location.
4. _____ is the one which understands all user directives and carries them out.
5. A _____ is a major component of a Unix system.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. _____ means softwares can work on different types of hardwares in the same way.

a) Portability b) Open Source c) Shell d) Multi-User

7. Which is the he home directory of the current user?

a) User b) Home c) Editor d) Shell

8. In which of the following, ready to execute processes must be present in RAM?

a) Multiprocessing b) Multiprogramming

c) Multitasking d) All of the above

9. The process of getting into the Unix environment is known as _____ into the system.

a) Logout b) Login c) tput d) echo

10. The _____ profile file is a one which is stored in the /etc directory.

a) system-level b) personal c) environment d) None of the above

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III SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.Sc.Computer Science

Linux and Shell Programming – MGIIIC8(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Define Operating System.
12. Write short notes on file system?
13. Identify the vi editor.
14. Indicate the shell script?
15. What is shell programming?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Explain the Linux operating system history.
17. Briefly notes on files which hold the Linux system network configuration.
18. Enumerate briefly notes on Filters command.
19. Discuss the types of classification of variables.
20. Write notes on file management.
21. Describe about the features of Unix Operating System.
22. Elaborate System wide Shell Configuration Scripts in detail.
23. List out the following commands with examples

    a) cat b) pwd c) rm

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain Architecture of Unix/Linux system.
25. Discuss briefly about Memory and Virtual File Systems.
26. Describe about any Six Linux commands.
27. Write notes on each of the following

    a) Login process b) logout
28. Elaborate the control structure in C shell programming.

---------- ***All the Best*** ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

III SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.Sc.Computer Science

Cryptography – MGIIICE4A(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. An Asymmetric-key (or public-key) cipher uses _____ key.
2. DES stands for _____
3. Hashed message is signed by a sender using _____ key
4. The _____ is the original message before transformation.
5. The Diffie-Hellman key exchange vulnerable to _____.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. In cryptography, what is cipher?
   a) algorithm for performing encryption and decryption
   b) encrypted message
   c) both algorithm for performing encryption and decryption and encrypted message
   d) decrypted message
7. In asymmetric key cryptography, the private key is kept by _____
   a) sender b) receiver
   c) sender and receiver d) all the connected devices to the network
8. ElGamal encryption system is _____
   a) symmetric key encryption algorithm b) asymmetric key encryption algorithm
   c) not an encryption algorithm d) block cipher method
9. Which one of the following algorithm is not used in asymmetric-key cryptography?
   a) rsa algorithm b) diffie-hellman algorithm
   c) electronic code book algorithm d) dsa algorithm
10. A transposition cipher reorders (permutes) symbols in a _____
   a) block of packets b) block of slots
   c) block of signals d) block of symbols

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III SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.Sc.Computer Science

Cryptography – MGIIICE4A(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Define Encryption.
12. What do you mean by Number Theory?
13. State Cryptography.
14. What is message authentication?
15. Define Digital Signature.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Analyze various Symmetric Cipher Model in detail.
17. Show in detail the Euclidean algorithm with example.
18. Distinguish the Principles of Public key Cryptosystems.
19. Determine the various Hash Functions in detail.
20. Illustrate Digital Signature with example.
21. Explain Transposition Techniques in detail.
22. Define Euler's theorem and its application?
23. Describe in general terms an efficient procedure for picking a prime number.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain Data Encryption Standard (DES) in detail.
25. Elucidate Chinese Remainder Arithmetic algorithm.
26. Determine RSA algorithm with example.
27. Analyze Message authentication requirements in detail.
28. Elaborate ElGamal Digital Signature with example.

---------- ***All the Best*** ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.C.A

Advanced Data Structures – MHIC3(8)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. _____ is called a list of the finite number of elements of similar data types.
2. _____ is a linear collections of node.
3. Stack allows insertion and deletion at one end called _____.
4. _____ is a nonlinear data structures.
5. _____ is used in finding the location of record with the given key value.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. Linear arrays are also called

   a) Horizontal array b) one dimensional array c) Vertical array d) None

7. Which of the following data structure is linear type?

   a) Graph b) Tree c) Stack d) BinaryTree

8. A linear list in which each node has pointer to point the predecessor and successor node is called as

   a) Singly linked list b) Doubly Linked list c) Linear linked list d) None

9. List of node belongs to same parent is called

   a) Siblings b) leaf node c) root node d) None

10. Merge sort uses _____ technique to sort the elements.

    a) Linear array b) Divide and conquer c) Graph d) None

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. What is an array?
12. Define the term Traversing.
13. What is Queue?
14. Define the term Graph.
15. Define Bubble sort.

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I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.C.A

Advanced Data Structures – MHIC3(8)

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Explain Complexity of Algorithm.
17. Write a note on searching a node in a linked list with algorithm.
18. What are the operations performed on the stack? Explain.
19. Explain about Inorder traversal with an example.
20. Write a note on Heap sort.
21. Explain about Garbage Collection.
22. Explain about Infix to Postfix Conversion with an example.
23. Discuss about BFS traversal Algorithm.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Write in detail about Insertion and Deletion Algorithm of Linear Array.
25. Discuss about the operations on Doubly Linked List.
26. Explain about the Towers of Hanoi with an example.
27. Describe about AVL search trees with an example.
28. Explain in detail Merge Sort with an example.

---------- ***All the Best*** ----------

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I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.C.A

Advanced Data Structures – MHIC3(8)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

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13. What is Queue?
14. Define the term Graph.
15. Define Bubble sort.

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I SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.C.A

Advanced Data Structures – MHIC3(8)

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

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22. Explain about Infix to Postfix Conversion with an example.
23. Discuss about BFS traversal Algorithm.

Section – C

(3 x 15 = 45 Marks)

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---------- ***All the Best*** ----------

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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III M.C.A.

Digital Image Processing – MHVC15(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. The smallest discernible change in intensity level is called _____.
2. Image shrinking has an undesirable feature that is _____.
3. _____ is the name of the filter that is used to turn the average value of a processed image zero.
4. Convolution in spatial domain is multiplication in _____.
5. Compressed Image can be recovered by _____.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. Continuous image is digitised at _____ points.
   a) Random b) Vertex c) Contour d) Sampling
7. The method that is used to generate a processed image that have a specified histogram
   a) Histogram linearization b) Histogram equalization
   c) Histogram matching d) Histogram processing
8. In spatial domain, which of the following operation is done on the pixels in sharpening the image?
   a) Integration b) Average c) Median d) Differentiation
9. PDF in image processing is called
   a) Probability degraded function b) Probability density function
   c) Probabilistic degraded function d) Probabilistic density function
10. Acronym of JPEG is
    a) Joint Photographic Experts Group b) Joint Photo Experts Group
    c) Joint Photographic Expansion Group d) Joint Phase Experts Group

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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III M.C.A.

Digital Image Processing – MHVC15(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. What do you mean by image sensing and Acquisition?
12. Define image enhancement.
13. How are domain filters useful?
14. Identify the need for image restoration.
15. State image compression.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Discuss in detail about image acquisition using sensor strips.
17. Analyse briefly on Histogram processing.
18. Briefly give a note on 1-D and 2-D Discrete Fourier Transform.
19. Explain Noise Models in image restoration.
20. Give a note on lossy compression.
21. Classify interpolation in detail.
22. Illustrate with an example the arithmetic and logical operation performed for image enhancement.
23. Evaluate about the various methods of thresholding in image segmentation.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate on the different colour models.
25. Elucidate the importance of spatial filters and explain the different types of spatial filters.
26. Elucidate on the various classification of frequency Domain filters.
27. Analyze and discuss about different filters used in image restoration.
28. Explain the steps involved in JPEG compression.

---------- ***All the Best*** ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III M.C.A.

Big Data Analytics – MHVC16(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. _____ should be able to accommodate new platforms and tool based on the business requirement.
2. _____ is one of the first commercial Hadoop based Big Data Analytics Platform offering Big Data solution.
3. _____ is a distributed file system that handles large data sets running on commodity hardware
4. In _____, data is staged and aggregated over time, and analytics are performed in a batch mode on these large data corpus.
5. _____ is an open-source non-relational distributed database modeled after Google's Big table and written in Java.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. What are the five V's of Big Data?'

   a) Volume b)Velocity c) Variety d) All the Above

7. Data in _____ bytes size is called Big Data.

   a) Tera b) Giga c) Peta d) Meta

8. According to analysts, for what can traditional IT systems provide a foundation when they're integrated with big data technologies like Hadoop?

a) Big data Management and Data Mining b) Data Warehousing and business intelligence

c) Management and Hadoop Clusters d) Collecting and Storing unstructured data

9. What are the main components of Big Data?

   a) MapReduce b) HDFS c) YARN d) All of the aboveCPU

10. Which of the following are incorrect Big Data Technologies?

    a) Apache Hadoop b) Apache Spark

    c) Apache Kafka d) Apache Pytarch

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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III M.C.A.

Big Data Analytics – MHVC16(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Define Big Data.
12. State Data Stream Management.
13. Write about HDFS.
14. Where MapReduce is used?
15. What is Zookeeper in HDFS?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Classify any five characteristics of Big Data.
17. Discuss 14 insights of Info sphere in data stream.
18. Show, how do you analyze the data in Hadoop.
19. Analyze in detail the concept of developing the Map Reduce Application.
20. Prepare a detail note on HBASE.
21. Explain the three categories of Prediction methodologies.
22. How security does is done in Hadoop.Justify.
23. What is HiveQL? Explain its features.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Determine the following in detail
    a. Conventional challenges in big data
    b. Nature of Data.
25. Elaborate the Real Time Analysis Platform (RTAP).
26. Enumerate Hadoop streaming is suited with text processing explain.
27. Elucidate the failures in Map Reduce.
28. Construct how to query the data in HIVE?

---------- ***All the Best*** ----------

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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III M.C.A.

Big Data Analytics – MHVC16(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. _____ should be able to accommodate new platforms and tool based on the business requirement.
2. _____ is one of the first commercial Hadoop based Big Data Analytics Platform offering Big Data solution.
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6. What are the five V's of Big Data?'

   a) Volume b)Velocity c) Variety d) All the Above

7. Data in _____ bytes size is called Big Data.

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c) Management and Hadoop Clusters d) Collecting and Storing unstructured data

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CHENNAI – 600 018

V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III M.C.A.

Big Data Analytics – MHVC16(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Define Big Data.
12. State Data Stream Management.
13. Write about HDFS.
14. Where MapReduce is used?
15. What is Zookeeper in HDFS?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Classify any five characteristics of Big Data.
17. Discuss 14 insights of Info sphere in data stream.
18. Show, how do you analyze the data in Hadoop.
19. Analyze in detail the concept of developing the Map Reduce Application.
20. Prepare a detail note on HBASE.
21. Explain the three categories of Prediction methodologies.
22. How security does is done in Hadoop.Justify.
23. What is HiveQL? Explain its features.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Determine the following in detail
    a. Conventional challenges in big data
    b. Nature of Data.
25. Elaborate the Real Time Analysis Platform (RTAP).
26. Enumerate Hadoop streaming is suited with text processing explain.
27. Elucidate the failures in Map Reduce.
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---------- ***All the Best*** ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III M.C.A.

Android Programming – MHVC17(6)

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1= 5 Marks)**

1. Android is developed in _____ language.
2. _____ media format is not supported by Android.
3. _____ virtual machine is used by the Android operating system.
4. Android is mainly developed for _____ devices.
5. _____ is the latest Android version.

II. Choose the correct answer **(5 x 1= 5 Marks)**

6. Android is

   a) an operating system b) a web browser

   c) a web server d) None of the above

7. Which of the following android component displays the part of an activity on screen?

   a) View b) Manifest c) Intent d) Fragment

8. Which of the following is the parent class of service?

   a) context b) object c) contextThemeWrapper d) contextWrapper

9. What does API stand for?

   a) Application Programming Interface b) Android Programming Interface

   c) Android Page Interface d) Application Page Interface

10. APK stands for -

    a) Android Phone Kit b) Android Page Kit

    c) Android Package Kit d) None of the above

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V SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III M.C.A.

Android Programming – MHVC17(6)

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Define Android.
12. What is fragments?
13. Define activity.
14. What is container?
15. State APK.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Describe the Anatomy of an Android Application.
17. Explain about Different types of Android views.
18. Discuss in detail about Menus in Android.
19. Write short notes on socket Programming.
20. How to create Android services?
21. What are all the basic intents structure for activity navigation?
22. Determine about Android screen components.
23. Analyze about Threading.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Discuss in Detail about Android Activities for creating an application.
25. Explain fundamental components of Android.
26. Elaborate about content provider in Android.
27. Enumerate in detail about Android Web-services.
28. How to establish communication between activity and services.

---------- ***All the Best*** ----------

April 2022

2021/UGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

II SEMESTER **(Regular)**– Applicable to candidates admitted in the year 2021

I B.Sc. Computer Science — **Data Structures – QIIC4(7)**

I B.C.A. — **Data Structures – RIIC4(7)**

Time: Three Hours — **Maximum Marks : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. — **20 Marks**

I. Fill in the blanks — **(5X1=5 Marks)**

1. _____ is called a list of the finite number of elements of similar data types.
2. _____ is a linear collections of node.
3. Stack allows insertion and deletion at one end called _____.
4. _____ is a nonlinear data structures.
5. _____ is used in finding the location of record with the given key value.

II. Choose the correct answer — **(5X1=5 Marks)**

6. Linear arrays are also called

   a) Horizontal array b) one dimensional array c) Vertical array d) None

7. Which of the following data structure is linear type

   a) Graph b) Tree c) Stack d) Binary Tree

8. A linear list in which each node has pointer to point the predecessor and successor node is called as

   a) Singly linked list b) Doubly Linked list c) Linear linked list d) None

9. List of node belongs to same parent is called

   a) Siblings b) leaf node c) root node d) None

10. Merge sort uses _____ technique to sort the elements

    a) Linear array b) Divide and conquer c) Graph d) None

III. Answer the following in One or Two Sentences — **(5X2=10 Marks)**

11. What is an array?
12. Define the term Traversing.
13. What is Queue?
14. Define the term Graph.
15. Define Bubble sort.

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
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II SEMESTER **(Regular)**– Applicable to candidates admitted in the year 2021

I B.Sc. Computer Science **Data Structures – QIIC4(7)**

I B.C.A. **Data Structures – RIIC4(7)**

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Explain Complexity of Algorithm
17. Write a note on searching a node in a linked list with algorithm.
18. What are the operations performed on the stack? Explain.
19. Explain about Inorder traversal with an example.
20. Write a details note on Heap sort.
21. Explain about Garbage Collection.
22. Explain about Infix to Postfix Conversion with an example.
23. Discuss about BFS traversal Algorithm.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Write a details an Insertion and Deletion Algorithm of Linear Array.
25. Discuss about the operations on Doubly Linked List
26. Explain about the Towers of Hanoi with an example.
27. Describe about Binary search trees with an example.
28. Explain in details Merge Sort with an example.

----------**All the Best** ----------

April 2022 2021/UGR

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

II SEMESTER **(Regular)**– Applicable to candidates admitted in the year 2021

I B.Sc. Computer Science.
Object Oriented Programming with C++ – QIIC3(7)

I B.C.A **Object Oriented Programming with C++ – RIIC3(7)**

Time: Three Hours **Maximum Marks : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. The feature by which one object can interact with another object is _____
2. The concept of deciding which function to invoke during runtime is called _____
3. Constructor is executed when _____.
4. Members which are not intended to be inherited are declared as _____
5. By default, all the files in C++ are opened in _____ mode.

II. Choose the correct answer **(5X1=5 Marks)**

6. Who invented OOP?
   a) Andrea Ferro b) Adele Goldberg
   c) Alan Kay d) Dennis Ritchie
7. Where does the object is created?
   a) Class b) Constructor
   c) Destructors d) Attributes
8. How many approaches are used for operator overloading?
   a) 1 b) 2 c) 3 d) 4
9. What is Inheritance in C++?
   a) Wrapping of data into a single class
   b) Deriving new classes from existing classes
   c) Overloading of classes
   d) Classes with same names
10. Which stream class is to only write on files?
    a) ofstream b) ifstream
    c) fstream d) iostream

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II SEMESTER **(Regular)**– Applicable to candidates admitted in the year 2021

I B.Sc. Computer Science. **Object Oriented Programming with C++ – QIIC3(7)**

I B.C.A **Object Oriented Programming with C++ – RIIC3(7)**

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. List out the example Keywords
12. What is Inline function?
13. Identity the operations of constructors.
14. Name the different types of inheritance.
15. Define Error handling.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Illustrate the benefits of OOPS concepts.
17. Describe the use of friend function with an Example.
18. Discuss about constructor overloading with example program.
19. Write short notes on Virtual Function give example.
20. Explain the Sequential input and output operation by C++.
21. Classify the Control structures in C++ with example
22. Demonstrate the concept of updating file Random Access.
23. Explain File Pointers and their Manipulations.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. What are different type Control Structures with an example.
25. Illustrate Class and syntax for defining a member function with an example.
26. Discuss about the Parameterized and copy constructors.
27. Distinguish the types of Inheritance give Example.
28. Explain about the Working with file with simple program.

----------**All the Best** ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.C.A. **Computer Networks – RIVC6(6)**

Time: Three Hours **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. A set of layers and protocols is called a _____
2. The number of bit positions in which 2 codewords differ is called the _____
3. _____ approach in congestion control, will use dropping the old packets than new to avoid congestion.
4. TCP is a _____ protocol.
5. In _____ cryptography, the same key is used in both directions.

II. Choose the correct answer **(5X1=5 Marks)**

6. Which layer contains the HTTP protocol

   a) Datalink Layer b) Session layer

   c) Application Layer d) Physical layer

7. The technique of temporarily delaying outgoing acknowledgements so that they can be hooked onto the next outgoing data frame is called

   a) Parity check b) Cyclic redundancy check

   c) Piggybacking d) Fletcher's checksum

8. Which of the following routing algorithms can be used for network layer design?

   a) Link state routing b) distance vector routing

   c) Shortest path algorithm d) All the above

9. One of the main duties of the transport layer is to provide _____ communication

   a) Node-to-node b) host-to-host

   c) process-to-process d) port-to-port

10. Which of the following is an application layer service?

    a) File Transfer, Access, Management b) Mail Service

    c) Network Virtual Terminal d) All the above

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.C.A. **Computer Networks – RIVC6(6)**

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. What are the types of transmission technology in computer networks?
12. What are the functions of data link layer?
13. Define multicast routing?
14. What are Berkeley Sockets?
15. Define DNS.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Explain in detail about TCP/IP reference model.
17. Write short notes on - Elementary data link protocols.
18. What is tunneling and fragmentation? Explain.
19. Explain briefly about the elements of transport protocols.
20. What is AES? Explain the concept briefly.
21. What is guided media? Explain the types guided media.
22. Explain briefly about Electronic Mail.
23. Write short notes on Congestion Control in Datagram Subnets.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Discuss briefly about multiplexing and switching concepts.
25. Explain in detail about error deduction and correction.
26. Elucidate about the routing algorithm and their types in computer networks.
27. Write short notes on (a) Public key algorithms (b) Digital signatures.
28. Explain in detail about the internet transport protocols.

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*, CHENNAI – 600 018

IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.C.A. **Database Management Systems – RIVC7(6)**

Time: Three Hours **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1 = 5 Marks)**

1. _____ is an organised collection data.
2. Language that enables users to access and manipulate data in a database is _____.
3. _____ key is a unique value that identifies a row in a table .
4. A _____ enables users to view, enter, and change data directly in database objects such as tables.
5. DBA is abbreviated as _____.

II. Choose the correct answer **(5 x 1 = 5 Marks)**

6. What is information about data called?
   a) Hyper data b) Tera data
   c) Meta data d) Relations
7. The ability to query data, as well as insert, delete, and alter tuples, is offered by
   a) TCL (Transaction Control Language) b) DCL (Data Control Language)
   c) DDL (Data Definition Language) d) DML (Data Manipulation Language)
8. Which forms have a relation that contains information about a single entity?
   a) 4NF b) 2NF c) 5NF d) 3NF
9. Data integrity means
   a) Providing first access to stored data
   b) Ensuring correctness and consistency of data
   c) Providing data sharing d) Creating tables
10. If both data and database administration exist in an organization, the database administrator is responsible for which of the following?
    a) Data modelling b) Database design
    c) Meta data d) Storage of data

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.C.A. **Database Management Systems – RIVC7(6)**

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Define DBMS.
12. What is subquery?
13. What are the advantages of normalization?
14. How does data trigger work?
15. What is distributed databases?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Analyse various class Diagrams in dbms and explain.
17. Discuss in detail DML commands with an example.
18. Explain the different types of keys in dbms.
19. Explain direct manipulation of Graphical objects in detail.
20. Determine the backup and recovery steps taken by Data Base Administrator.
21. Classify the various components of dbms.
22. Discuss in detail the various subqueries with an example.
23. Explain Data Dictionary in detail.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate the following (i) Data types (ii) Events.
25. Analyse the various joins in dbms.
26. Compare and Contrast third normal form and Boyce Codd normal form in detail.
27. Elaborate on (i) Data triggers (ii) Multiple user and Concurrent Access.
28. Elucidate the role of DBA and Client server databases.

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*, CHENNAI – 600 018

VI SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.C.A. **Internet of Things – RVIC12(6)**

Time: Three Hours **Maximum Marks : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5 x 1 = 5 Marks)**

1. An IOT network is a collection of _____ devices.
2. ICT means _____.
3. IOT stands for _____.
4. VNC stands for _____.
5. The term IOT was coined in the year _____.

II. Choose the correct answer **(5 x 1 = 5 Marks)**

6. The term Internet of things was coined by _____

a) Kevin Ashton b) IBM c) Ross Ihaka d) Guido Van Rossum

7. What is the Aurdino UNO?

a) Software b) Hardware device c) Network d) Protocol

8. How many types of capacitive touch sensors in IOT?

a) 2 b) 3 c) 7 d) 9

9. Which of the following is the way in which an IOT device is associated with data?

a) Internet b) Cloud c) Automata d) Network

10. Who operates the core element?

a) Paas b) Iaas c) IOT service Provider d) Saas

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. What is IOT?
12. Define Gateways.
13. Differentiate between Data and Information.
14. What is functional view?
15. Why we need Smart cities?

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VI SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.C.A. **Internet of Things – RVIC12(6)**

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Differentiate between M2M value chains and IOT value chains.
17. Discuss about Local and wide area networking.
18. What is Big Data? Explain the characteristics of Big Data.
19. Elaborate the functional view of IOT reference architecture.
20. Explain about IOT layered architecture.
21. Describe about IETF architecture in detail.
22. Analyse about Security model in detail.
23. Explain about Data Management within IOT system.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate on M2M towards IOT –The global context in detail.
25. Discuss about M2M and IOT analytics-Knowledge management.
26. Illustrate about ETSI M2M high level architecture.
27. Elaborate IOT architecture reference model.
28. Describe about participating sensing and explain steps in PS process.

---------- All the Best ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.Sc. Computer Science **Programming in Java - QIVC4(6)**
II B.C.A **Programming in Java - RIVC8(6)**

Time: Three Hours **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions **20 Marks**

I. Fill in the blanks **(5 x 1 = 5 Marks)**

1. A _____ in the context of Java is a template used to create objects and to define object data types and methods.
2. A Java _____ contains static constants and abstract methods.
3. The _____ facilitates us to control the positioning and size of the components in GUI forms.
4. _____ are the Java programs that run on the Java-enabled web server or application server.
5. The object of _____ maintains a cursor pointing to a row of a table.

II. Choose the correct answer **(5 x 1 = 5 Marks)**

6. The _____ is a collection of instructions that performs a specific task. It provides the reusability of code

   a) variable b) method
   c) Procedure oriented d) token

7. _____ method is used to display in applet.

   a) Inline b) start() c) paint() d) init()

8. The _____ class is used to display menubar on the window or frame. It may have several menus.

   a) JMenuBar b) JMenu c) constructor d) none

9. _____ stands for hyper text transfer protocol.

   a) HTTP b) HITP c) HTTPI d) both (a) & (b)

10. A _____ is a field (or collection of fields) in one table, that refers to the primary key in another table.

    a) primary key b) iostream c) foreign key d) None

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.Sc. Computer Science **Programming in Java - QIVC4(6)**

II B.C.A **Programming in Java - RIVC8(6)**

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. What is the use of arrays
12. What are exception in java?
13. What does AWT stands for?
14. Define about stream.
15. What is metadata?

Section – B

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)** **(5 x 7 = 35 Marks)**

16. Illustrate about operators in java.
17. Describe about string handling in suitable example.
18. Discuss in brief packages.
19. Discuss about applet life cycle.
20. Create a employee database with tables and necessary fields in SQL.
21. Demonstrate the concept of AWT controls.
22. Illustrate about Interfaces suitable example.
23. Write a java program for JDBC and SQL connectivity.

Section – C

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)** **(3 x 15 = 45 Marks)**

24. Explain in detail about multithreaded programming.
25. Illustrate Applet programming with necessary example.
26. Explain in detail about working with graphics.
27. Explain about servlet programming with suitable example.
28. Illustrate on JDBC objects in detail.

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VI SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc. Computer Science — **Python Programming - QVIC9(6)**

III B.C.A — **Python Programming - RVIC13(6)**

Time: Three Hours — **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions — **20 Marks**

I. Fill in the blanks

(5 x 1 = 5 Marks)

1. In Python _____ refers to spaces that are used in the beginning of a statement.
2. _____ loop will never terminates and executes forever so Ctrl+C is used in that case.
3. A function without a name is called ____ function and it is not defined by keyword *def*.
4. It is not possible to modify or update an element in a _____ since it is immutable.
5. An _____ is a runtime error handled by the programmer.

II. Choose the correct answer

(5 x 1 = 5 Marks)

6. _____ is a name given to variable or function or class.

   a) keyword b) data type c) constant d) Identifier

7. In Python **in** and **not in** are two _____ operators.

   a) logical b) relational c) membership d) bitwise

8. A function that calls itself is called _____.

   a) recursion b) lambda c) class d) exception

9. A List consists of elements in J=[1,'JBAS','F','TEYNAMPET'] what is the output if **print(J[0:2:1])**

   a) [1,'JBAS'] b) [1,'JBAS','F'] c) [1,'JBAS','TEYNAMPET'] d) ['JBAS','F']

10. ____ mode is used to write and read data from a file and previous data in the file will be deleted.

    a) w b) r c) w+ d) a+

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VI SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc. Computer Science — **Python Programming - QVIC9(6)**

III B.C.A — **Python Programming - RVIC13(6)**

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Identify the difference between Interactive mode and script mode.
12. Mention the difference between **continue** and **pass** in Python.
13. State the difference between function and method in python.
14. What is meant by List comprehension?
15. Specify the use of Command Line Arguments.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Illustrate the I/O functions in Python with an example.
17. Elaborate on **if-elif-else** control statement in python with an example.
18. Develop a Python Program to create a **lambda** function that returns a square value of a number.
19. Explain about how to create and access tuple elements with an example?
20. Analyze on Built-on modules in Python.
21. List out the feature of Python.
22. Compare the various loops in Python with an example.
23. Discuss on Slicing and concatenation of strings with example.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate on Sequences in Python with an example.
25. Illustrate various operators in Python with example.
26. Explain about various String functions and methods in Python with example.
27. Describe the Dictionary methods in detail.
28. Discuss about File operations in Python with example.

---------- **All the Best** ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*, CHENNAI – 600 018

VI SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc. Computer Science **Operating Systems - QVICE3A(6)**

III B.C.A **Operating Systems - RVICE3A(6)**

TIME: Three Hours **Maximum Marks : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions **20 Marks**

I. Fill in the blanks **(5 x 1 = 5 Marks)**

1. The objective of _____ is to have some process running at all times, so as to maximize the CPU utilization.
2. The _____ scheduling algorithm is designed especially for time sharing systems.
3. Deadlocks can be described more precisely in terms of a directed graph called a _____.
4. _____ is the separation of user logical memory from physical memory.
5. Disks are split into one or more _____.

II. Choose the correct answer **(5 x 1 = 5 Marks)**

6. The storage capacity of common disk drives are measured in
   a) Giga bytes b) Bytes
   c) Kilo bytes d) Mega bytes
7. Following is an example of synchronization tool.
   a) Deadlock b) Semaphore
   c) Monitor d) Signal
8. Banker's algorithm is used for
   a) Deadlock Prevention b) Deadlock detection
   c) Deadlock Recovery d) Deadlock Characterization
9. Virtual memory is commonly implemented by
   a) Demand segmentation b) Process creation
   c) Demand Paging d) Thrashing
10. UFS stands for
   a) Unix File System b) Unique File system
   c) United file system d) Under file system

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VI SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2019

III B.Sc. Computer Science — **Operating Systems - QVICE3A(6)**

III B.C.A — **Operating Systems - RVICE3A(6)**

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. Define Operating System.
12. Write the syntax of Monitor.
13. List out the names of method that are used for handling deadlock.
14. State the principle followed in LRU page replacement algorithm.
15. Identify any four file attributes.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Write a note on Cooperating process.
17. Discuss about the critical section problem.
18. How is the occurrence of a deadlock prevented? Explain.
19. Describe the various aspects of demand paging system.
20. Enumerate various file operations in brief.
21. Illustrate Process Control Block. Briefly describe its contents.
22. Explain about the Dining philosopher Problem.
23. Define Semaphore. Briefly explain its usage.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate the concept of Inter Process Communication.
25. Explain any two scheduling algorithms.
26. Describe various aspects related to segmentation scheme.
27. Write notes on the following:
    i) Optimal Page Replacement
    ii) Thrashing
28. Discuss an overview on Directory Structure.

---------- **All the Best** ----------

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.B.A **Computing Tools For Management – UIVA4(6)**

TIME: THREE HOURS **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

SECTION-A

Answer all the questions.

I. Fill in the blanks **20 Marks**

(5 x 1 = 5 Marks)

1. Word Processor is the best example of _____.
2. In Excel, the combination of row and column is called as _____.
3. _____ option can be used to set custom timings for slides in a presentation.
4. _____ option is used in tally to make changes in created company.
5. The option used to close a opened company in Tally is _____.

II. Choose the correct answer **(5 x 1 = 5 Marks)**

6. _____ programme is used in Word Processor to check the spellings.
   a) Speller b) Outlook express c) Spell check d) All of these
7. _____ is not a valid data type in Excel.
   a) Number b) Label c) Date/Time d) Character
8. Slide sorter can be accessed from _____ menu.
   a) View b) Edit c) File d) Insert
9. _____ command is used to create a copy of company details in Tally.
   a) Backup b) Restore c) Split company data d) Copy data
10. There are _____ voucher types are readily available in Tally.
    a) 16 b) 20 c) 18 d) 15

III. Answer the following in One or Two Sentences **(5 x 2 = 10 Marks)**

11. List the content of File menu in Word Processor.
12. What is meant by cell reference?
13. What is the use of auto content wizard in PPT?
14. What is Tally?
15. Define Web browser.

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II B.B.A **Computing Tools For Management – UIVA4(6)**

Section – B

(5 x 7 = 35 Marks)

Answer any five questions. ***All questions carry equal marks.(Each answer should not exceed 300 words)***

16. Write short notes on insert and review menu in Word Processor.
17. List the Logical and Mathematical functions available in Excel.
18. What are the views demonstrated by Power Point?
19. Write short notes on security features of Tally.
20. Explain the steps involved in company creation in Tally.
21. Write the steps in Mail-Merge.
22. Write a short note on any five menus available in Excel.
23. Write short note on the features of Tally.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. ***All questions carry equal marks.(Each answer should not exceed 600 words)***

24. What are the components of Word Processor's document window?
25. Discuss in detail the chart types available in Excel.
26. Discuss the menus in Power Point.
27. List the advantages of Tally.
28. Elaborately discuss about Group-Sub Group in Tally.

**************ALL THE BEST************

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*, CHENNAI – 600 018

VI SEMESTER **(Regular)** –Applicable to candidates admitted in the year 2019

III B.Com. Information Systems Management

Computer Networks – QPSVIC14(3)

III. Answer the following in One or Two Sentences **(5x2=10 Marks)**

11. Define MAN.
12. What is meant by circuit switching?
13. Describe Hamming distance.
14. What is the use of fragmentation?
15. Define electronic mail.

Section – B **(5 x 7 = 35 Marks)**

Answer any five questions. ***All questions carry equal Marks. (Each answer should not exceed 300 words).***

16. Discuss the uses of computer networks in mobile network.
17. Explain the coaxial cable with neat diagram.
18. Write a short note on framing.
19. Discuss about tunneling.
20. Explain the addressing element of transport protocol.
21. Give a short note about LAN.
22. Discuss about the communication satellite.
23. Explain the simplex stop-and-wait protocol.

Section – C **(3 x 15 = 45 Marks)**

Answer any three questions ***All questions carry equal Marks. (Each answer should not exceed 600 words).***

24. Explain the OSI reference model with neat diagram.
25. Briefly explain the wireless transmission with an example.
26. Explain the error-correcting and error-detecting codes in detail.
27. Briefly discuss about the distance vector routing in detail.
28. What are the services provided to the upper layers in transport layer? Explain with neat diagram.

----------**All the Best**----------

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VI SEMESTER **(Regular)** –Applicable to candidates admitted in the year 2019

III B.Com. Information Systems Management

Computer Networks – QPSVIC14(3)

Time: Three Hours **Maximum Marks: 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section - A **20 Marks**

Answer all the questions **(5x1=5 Marks)**

I. Fill in the blanks

1. PANs Stands for _____.
2. _____ consist simply of wires and insulators.
3. _____ layer providing a well-defined service interface to the network layer.
4. IS-IS stands for _____.
5. _____ release treats the connection as two separate unidirectional connections and requires each one to be released separately.

II. Choose the correct answer **(5x1=5 Marks)**

6. A _____ is an agreement between the communicating parties on how communication is to proceed
   a) Peers b) Interface c) Header d) Protocol

7. Links that can be used in both directions at the same time, like a two-lane road are called _____ links.
   a) single-mode b) full-duplex c) Multi-mode d) Half-duplex

8. The physical layer process and some of the data link layer process run on dedicate hardware called a _____.
   a) FIC b) TIC c) NIC d) MIC

9. Too many packets present in the network causes packet delay and loss that degrades performance. This situation is called _____
   a) Integrated service b) Deficit c) Multi-group d) Congestion

10. DNS stands for _____.
    a) Domain Name System b) Domain Name Service
    c) Data Link Network Service d) Data Link Name System

April 2022

JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

II SEMESTER **(Regular)** –Applicable to candidates admitted in the year 2021

I B.Com. Information Systems Management

Basics of Cloud Computing – QPSIIC4(4)

III. Answer the following in One or Two Sentences **(5x2=10 Marks)**

11. What is horizontal scaling?

12. State virtual private cloud.

13. List the IT resources that can be virtualized.

14. What is information security?

15. What is the use of pay-per-use Monitor?

Section – B **(5 x 7 = 35 Marks)**

Answer any five questions. ***All questions carry equal Marks. (Each answer should not exceed 300 words).***

16. Briefly describe the technology innovations of cloud computing.

17. Summarize the benefits of Cloud computing.

18. Discuss the concept of operating system based virtualization.

19. Write note on risk management.

20. Explain briefly about load balancer.

21. Compare the pros and cons of horizontal and vertical scaling.

22. Discuss the common characteristics of cloud.

23. Write note on failover system.

Section – C **(3 x 15 = 45 Marks)**

Answer any three questions ***All questions carry equal Marks. (Each answer should not exceed 600 words).***

24. Describe the basic concepts and aspects of cloud computing.

25. Summarize the three common cloud delivery models.

26. Elaborate the technologies and components of data center.

27. Explain with neat diagram the role of threat Agents.

28. Discuss in detail the cloud storage levels.

----------**All the Best**----------

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II SEMESTER **(Regular)** –Applicable to candidates admitted in the year 2021

I B.Com. Information Systems Management

Basics of Cloud Computing – QPSIIC4(4)

Time: Three Hours **Maximum Marks: 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section - A

Answer all the questions **20 Marks**

I. Fill in the blanks **(5x1=5 Marks)**

1. _____ is the group of independent IT resources that are interconnected and work as a single system.
2. The ____ is responsible for the creation and on-going maintenance of the public cloud and its IT resources.
3. A ____ is a device that is connected to multiple networks through which it forward packets.
4. _____ is the possibility of loss or harm arising from performing an activity.
5. The _____ mechanism is used to group multiple IT resource instances.

II. Choose the correct answer **(5x1=5 Marks)**

6. _____strategy means adding capacity to an IT resources in anticipation of demand.

   a) Lead b) lag c) Match d) Data

7. The ____ cloud is a cloud environment comprised of two or more different cloud deployment models.

   a) Private b) Public c) Hybrid d) Community

8. ____ Protocol use the IP to provide standardized end-to-end communication support

   a) Physical layer b) Transport layer

   c) Data link layer d) Network layer

9. _____ is the characteristics of not having been altered by an unauthorized party

   a) Confidentiality b) Integrity c) Availability d) Vulnerability

10. Collections of data are grouped into ____ that are located in folders.

    a) Files b) Blocks c) Datasets d) Objects

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IV SEMESTER **(Regular)** –Applicable to candidates admitted in the year 2020

II B.Com. Information Systems Management

Programming in Java – QPSIVC8(3)

Time: Three Hours **Maximum Marks: 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section - A

Answer all the questions **20 Marks**

I. Fill in the blanks **(5x1=5 Marks)**

1. A _____ is defined by a set of declaration statements and methods containing executable statements.
2. _____ constructs provides an exit-controlled loop.
3. The mechanism of deriving a new class from an old one is called _____.
4. An _____ is a group of contiguous data items that share a common name.
5. An _____ is a condition that is caused by a run-time in the program.

II. Choose the correct answer **(5x1=5 Marks)**

6. A _____ is an executable combination of token ending with a *semicolon* mark

   a) Function b) Statement c) String d) Array

7. The Character pair _____ is a ternary operator

   a) || b) && c) ?- d) ?:

8. Use _____ if the field is to be visible everywhere in the current package only.

   a) Public b) Private c) Default d) Protected

9. Dynamic arrays that hold objects of any type and any number are called as _____.

   a) String b) Interface c) Vector d) Abstract

10. The _____method actually displays the result of the applet code on the screen

    a) Init() b) start() c) paint() d) stop()

III. Answer the following in One or Two Sentences **(5x2=10 Marks)**

11. Define identifiers.
12. Mention the special operators in java.
13. Write the syntax for defining a subclass.
14. What is interface?
15. State the types of Errors.

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IV SEMESTER **(Regular)** –Applicable to candidates admitted in the year 2020

II B.Com. Information Systems Management

Programming in Java – QPSIVC8(3)

Section – B **(5 x 7 = 35 Marks)**

Answer any five questions. ***All questions carry equal Marks. (Each answer should not exceed 300 words).***

16. Discuss various constants with an example.
17. Describe briefly about of switch statement.
18. Summarize the visibility modifiers in Java.
19. How to create an array in Java?
20. Explain the life cycle of Applet.
21. Write note on type casting.
22. Illustrate with an example the use of constructor.
23. Explain briefly about most commonly used string methods.

Section – C **(3 x 15 = 45 Marks)**

Answer any three questions ***All questions carry equal Marks. (Each answer should not exceed 600 words).***

24. List and Explain the data types used in java with an example.
25. Distinguish between method overloading and overriding methods.
26. Explain multilevel inheritances with example.
27. Elaborate implementing interface in java.
28. Discuss in detail the exception handling mechanism in java.

----------**All the Best**----------

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CHENNAI – 600 018

II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc. Computer Science

Artificial Intelligence and Deep Learning – MGIICE2A(7)

I M.C.A **Artificial Intelligence and Deep Learning - MHIICE2A(8)**

Time: Three Hours **MAXIMUM MARKS: 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. _____ System provides excellent tools for structuring AI programs.
2. _____ is a knowledge based system.
3. _____ allows machines to mimic human intuition when provided with information that is vague in nature.
4. _____ is a subset of machine learning.
5. Variables in Tensor Flow are also known as _____.

II. Choose the correct answer **(5X1=5 Marks)**

6. The correct ways to solve a problem of state-space search are
   a) Forward form the initial state b) Backward form the goal
   c) Both a & b d) None
7. Knowledge in AI can be represented as
   a) Predicate logic b) Propositional logic c) Both a and b d) None
8. The Bayesian Network gives _____
   a) A complete description of the problem b) Partial Description of the domain
   c) A complete description of the domain d) None of the above
9. Which of the following is a subset of machine learning?
   a) Numpy b) Scipy c) Deep learning d) None
10. Which of the following are main advantages of Tensor Flow?
    a) It has auto differentiation capabilities b) It has platform flexibility
    c) It is easily customizable and open-source d) All of the above

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II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc. Computer Science

Artificial Intelligence and Deep Learning – MGIICE2A(7)

I M.C.A **Artificial Intelligence and Deep Learning - MHIICE2A(8)**

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. Define AI.
12. What is logic programming?
13. Define fuzzy logic
14. What is Deep Learning?
15. What is Tensor flow?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Explain about Problem Characteristics.
17. Illustrate forward Vs backward reasoning.
18. Write a note on dempster shafer theory.
19. Describe about The Leaky RLU function.
20. Discuss about Forward Propagation.
21. Write a note on Production system.
22. Discuss about non-monotonic reasoning.
23. List out Application of Deep Learning.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Write a detailed note on Hill climbing with example.
25. Discuss about Procedural versus declarative knowledge.
26. Explain about Bayesian networks with suitable example.
27. What are Layers in Neural Network? Explain in detail.
28. Describe about Sequential model and Functional model in Tensor Flow.

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II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc. Computer Science **Artificial Intelligence and Deep Learning – MGIICE2A(7)**

I M.C.A **Artificial Intelligence and Deep Learning - MHIICE2A(8)**

Time: Three Hours **MAXIMUM MARKS: 100**

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Section-A

Answer all the questions. **20 Marks**

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6. The correct ways to solve a problem of state-space search are
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I M.Sc. Computer Science

Artificial Intelligence and Deep Learning – MGIICE2A(7)

I M.C.A **Artificial Intelligence and Deep Learning - MHIICE2A(8)**

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

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13. Define fuzzy logic
14. What is Deep Learning?
15. What is Tensor flow?

Section – B

Answer any five questions **(5 x 7 = 35 Marks)**

All questions carry equal marks.(Each answer should not exceed 300 words)

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17. Illustrate forward Vs backward reasoning.
18. Write a note on dempster shafer theory.
19. Describe about The Leaky RLU function.
20. Discuss about Forward Propagation.
21. Write a note on Production system.
22. Discuss about non-monotonic reasoning.
23. List out Application of Deep Learning.

Section – C

Answer any three questions. **(3 x 15 = 45 Marks)**

All questions carry equal marks.(Each answer should not exceed 600 words)

24. Write a detailed note on Hill climbing with example.
25. Discuss about Procedural versus declarative knowledge.
26. Explain about Bayesian networks with suitable example.
27. What are Layers in Neural Network? Explain in detail.
28. Describe about Sequential model and Functional model in Tensor Flow.

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.C.A. **Android Programming – MHIVC10(7)**

Time: Three Hours **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A

Answer all the questions.

I. Fill in the blanks **20 Marks**

(5X1=5 Marks)

1. Android is an _____ source, Linux-based software stack.
2. A _____ is a message that Android displays outside the app's UI to provide the user with reminders.
3. Android provides two types of physical storage locations: _____ and _____.
4. A _____ manages access to a central repository of data.
5. A _____ is a thread of execution in a program.

II. Choose the correct answer **(5X1=5 Marks)**

6. What is the life cycle of services in android?

   a) onCreate()->onStartCommand()->onDestory() b) onRecieve()

   c) final() d) Service life cycle is same as activity life cycle.

7. What is anchor view?

   a) Same as list view

   b) provides the information on respective relative positions

   c) Same as relative layout d) None of the above

8. Which of the following Android View sub-classes use the Web Kit rendering engine to display web pages?

   a) PageView b) WebView c) MapView d) HttpClient

9. Which of the following a Notification Object must contain?

   a) A small icon b) A detailed text c) A title d) All of the above

10. Which of the following is not a Features of Android?

    a) Connectivity b) Storage

    c) Slide Mobango d) Multi-touch

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.C.A. **Android Programming – MHIVC10(7)**

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. What is Fragment?
12. Define UI.
13. Identify how to share data in Android.
14. State about SMS.
15. List out the Android services.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Discuss about ADT Tools.
17. Distinguish the different components of a Screen.
18. Describe about Image views to display pictures.
19. Explain how to Track Cell Location Changes.
20. Briefly discuss about deploying APK Files.
21. Enumerate the Socket Programming.
22. Narrate the Android Application Lifecycle with Lifecycle Events?
23. Highlight the elements in User Interface.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Express about Calling Built-In Applications using Intents.
25. Summarize How will you manage and do changes to screen orientation.
26. Discuss about pictures and their menus views.
27. Elaborate the steps on Displaying maps to get the location data.
28. Cite about creating your own services in android developing.

**************ALL THE BEST*************

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc. Computer Science **.Net Technologies – MGIIC5(7)**

Time: Three Hours **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. Collection of data and method is known as _____.
2. _____ the form in which Post back occur.
3. The _____ is responsible for displaying one View control at a time.
4. _____ is faster and consume lesser memory.
5. _____ imparts data querying capabilities to .Net languages using a syntax. which is similar to the tradition query language SQL.

II. Choose the correct answer **(5X1=5 Marks)**

6. Find the term: The .NET framework which provides automatic memory management using a technique called _____?

   a) Serialization b) Assemblies c) Garbage Collection d) Overriding

7. Which of the following object is not an ASP component?

   a) LinkCounter b) Counter c) AdRotator d) File Access

8. Attribute must be set on a validator control for the validation to work.

   a) ControlToBind b) ControlToValidate c) ValidateControl d) Validate

9. _____ is used to retrieve data from a data source in a read-only and forward-only mode

   a) Data Set b) Connection c) Data Adapter d) Data Reader

10. _____ is the XML description of service.

    a) WSDL b) RMI c) HTTP d) URL

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. Difference between reference type and object type in C#
12. What is .Net Framework with Example?
13. How to create a Cookie?
14. Define data binding.
15. State the term of the XML.

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II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc. Computer Science **.Net Technologies – MGIIC5(7)**

Section – B

(5 x 7 = 35 Marks)

Answer any five questions **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Highlight the various control structure in C# programming.
17. Give a brief account on Components of .Net Framework.
18. Describe the Data Grid Control in ASP.NET.
19. Enumerate various different types of data providers.
20. Elaborate detail in Ajax control.
21. Explain different Error Handling Technique used in ASP.Net application.
22. State and explain any five Application events supports by ASP.NET.
23. How XML file is configured in Ad Rotator Control?

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Enumerate various different types of inheritances available in C#.
25. Explain details about the ASP.NET Application Life Cycle.
26. Construct the principal of validation control with example.
27. Elaborate in various OLEDB Classes used in ASP.Net Application.
28. Discuss in details about LINQ with example.

---------- **All the Best** ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.Sc. Computer Science **Big Data Analytics – MGIVCE5A(6)**

Time: Three Hours **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. _____ is a collection of data that is huge in volume.
2. RTAP stands for _____.
3. In order to interact with HDFS, a command line interface named _____ is provided.
4. Fixed-size pieces of MapReduce job is known as _____
5. _____ is a NoSQL database that runs on top of Hadoop.

II. Choose the correct answer **(5X1=5 Marks)**

6. Choose the primary characteristics of big data among the following

a) Volume b) Variety c) Value d) All the above

7. _____ is the term used to refer to analytics that are able to be accessed as they come into a system.

a) Data Analytics b) Real Time Analytics

c) Business Analytics d) Real Time Sentiment Analytics

8. Choose the core component of Hadoop

a) HDFS b) MapReduce c) both a&b d) None

9. _____ is general-purpose model and runtime framework for distributed data analytics

a) MapReduce b) Spark

c) Hive d) Hbase

10. Zookeeper has file system like data model composed of _____.

a) Namenode b) Datanode c) Znode d) Clientnode

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.Sc. Computer Science **Big Data Analytics – MGIVCE5A(6)**

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. What is Big Data?
12. Define the term RTAP.
13. Define HDFS.
14. What is Map Reduce?
15. What is Zookeeper?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Write a note on Analytic Processes Tools.
17. Discuss about Real Time Analysis Platform.
18. Explain the Hadoop distributed file system architecture with a neat sketch.
19. Write a note on Map Reduce Features.
20. What are the Data processing operators in Pig? Explain.
21. What is HBase? Write a query to create table in HBase.
22. Discuss about Examples of Data Stream Applications.
23. Illustrate HBase versus RDBMS.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Discuss in details Modern Data Analytic Tools.
25. Explain in detail Stream data model and Architecture.
26. Briefly Explain Job Scheduling in Map Reduce.
27. What are the Components of Hadoop? Explain.
28. Describe the Architecture of HIVE with neat sketch.

---------- All the Best ----------

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II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.C.A

Advanced Database Management Systems(Integrated) - MHIIC5(8)

Time: Three Hours **MAXIMUM MARKS: 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. The Assignment operation denoted by _____ works like assignment in a programming language.
2. SQL allows the use of _____ values to indicate the absence of information about the value of an Attribute.
3. Functional dependency is a type of _____ that is generalization of the notion of key.
4. Three basic steps involved in processing a query are parsing and translation, _____ and Evaluation.
5. A _____ is a unit of program execution that accesses and possibly updates various data items.

II. Choose the correct answer **(5X1=5 Marks)**

6. Primary key of the entity set becomes the primary key of the relation is called ____ entity set.

   a) Strong b) Weak c) Relationship d) Combined

7. _____ functions that take a collection of values input and return a single value.

   a) Set b) DDL c) DML d) Aggregate

8. _____ file organization stores related records of two or more relations in each block.

   a) Heap b) Sequential c) Hash d) Clustering

9. _____ Index record appears for only some of the search-key values.

   a) Sparse b) Dense c) Primary d) Multilevel

10. Serializability order of the transactions can be obtained through ____ sorting determines the linear Order consistent with precedence graph.

    a) Topological b) Heap c) Linear d) Radical

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II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.C.A

Advanced Database Management Systems(Integrated) - MHIIC5(8)

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. Define DML.
12. Define Triggers.
13. State 1NF.
14. State Query Optimization.
15. Mention the purpose the Single-User System.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Describe about the role of Database Users and Administrators.
17. Explain the basic structure of SQL expression.
18. Enumerate the desirable properties of decomposition in a relational database.
19. Summarize the Selection Operations in detail.
20. Review on Recoverability in detail.
21. Design and explain the E-R Database Schema.
22. Illustrate the concept of Referential Integrity in SQL.
23. Elaborate on Sorting of relations.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Explain about Relational Algebra in detail.
25. Discuss about the Embedded SQL and Dynamic SQL.
26. Describe about File Organization in detail.
27. Classify the various Join operations in SQL.
28. Analyze the Server System Architecture in detail.

---------- All the Best ----------

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II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021
I M.C.A **Advanced Java - MHIIC4(8)**

Time: Three Hours **MAXIMUM MARKS: 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. JVM stands for _____.
2. Once an interface has been defined, one or more _____ can implement that interfaces.
3. A _____ is an object that generates an event.
4. In general, Swing components are derived from the _____ class.
5. CGI stands for _____

II. Choose the correct answer **(5X1=5 Marks)**

6. It is the mechanism that binds together code and the data it manipulates.
   a) Encapsulation b) Abstraction
   c) Inheritance d) Polymorphism
7. To set a thread's priority, use the following method.
   a) setPriority b) setPriority( )
   c) set_Priority( ) d) SET_Prority( )
8. it is an object that is notified when an event occurs.
   a) Thread b) Container
   c) Listner d) Component
9. PLOF stands for
   a) Pluggable Look a Leaf b) Priority Look a Leaf
   c) Premium Look a Leaf d) Point Look a Leaf
10. To create servlets, we will need access to a servlet.
    a) Container b) Listener
    c) Component d) Client

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II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.C.A **Advanced Java - MHIIC4(8)**

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. Define Variable.
12. Identify the two existing Packages in Java.
13. What is Thread?
14. State the purpose of PrintWriter class.
15. What is Servlet?

Section – B

(5 x 7 = 35 Marks)

Answer any five questions **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Describe various data types in Java.
17. Summarize the concept of Inheritance with an example.
18. Write notes on Layout Managers.
19. Give a brief account on Swings.
20. Explain the life cycle of a Servlet.
21. Discuss about arrays in Java.
22. Highlight the importance of Interfaces in Java.
23. Write notes on Multithreaded programming.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate the history and evolution of Java.
25. Discuss an overview on Exception handling.
26. Explain various AWT controls in Java with example.
27. How reading console input and writing console output can be done in Java? Explain with examples.
28. Write notes on the following:
    i) JDBC Driver types
    ii) JSP Tags

---------- All the Best ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

II SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2021

I M.Sc. Computer Science **Compiler Design – MGIIC4(7)**

Time: Three Hours **MAXIMUM MARKS: 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. A _____ is a program that takes as input a program written in one programming language and produces output a program in another language.
2. The basic symbols of which strings in the language are composed we shall call _____.
3. _____ is a sequence of statements typically of the form A := B op C
4. _____ can be detected at compile time and at run time.
5. DAG stands for _____.

II. Choose the correct answer **(5X1=5 Marks)**

6. The output of the lexical analyzer is a stream of tokens which is passed to the next phase called
   a) Intermediate code generation b) Syntax analysis
   c) Code generation d) Code optimization
7. It is an efficient way of implementing recursive – descent parsing by handling the stack of active records explicitly.
   a) Predictive Parser b) LR Parser
   c) SLR Parser d) Shift – Reduce Parser
8. Postfix form of the given infix expression (a + b) * c is
   a) a+b*c b) ab+c* c) ab*c+ d) abc*+
9. It is useful to portray the basic blocks and their successor relationships by a directed graph called
   a) DAG b) Parse Tree
   c) Flow graph d) Dominator tree
10. Which optimization technique is used to reduce the multiple jumps?
    a) Loop optimization b) Local optimization
    c) Peephole optimization d) Code optimization

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III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. Identify various types of translator.
12. Define Context Free Grammar.
13. What is syntax tree?
14. List any two common examples of syntax errors.
15. State the purpose of DAG.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Illustrate Regular expressions with example.
17. Describe LR parser with neat diagram.
18. Explain any one method of translating Boolean expression.
19. Write notes on syntactic phase error.
20. Discuss about Peephole optimization.
21. Construct NFA for the following string:

    (a|b)*abb

    Also draw the transition table.
22. Explain about shift reduce parser.
23. Brief note on the following with example

    i) Post fix notation ii) Parse tree.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Discuss various phases of a compiler with neat diagram.
25. Construct the sets of SLR items for the following

    S → Cc
    C → cC/d
26. Describe various data structures for symbol table.
27. Explain the DAG representation of basic block.
28. Elaborate a simple code generator.

---------- All the Best ----------

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JUSTICE BASHEER AHMED SAYEED COLLEGE FOR WOMEN *(Autonomous)*,
CHENNAI – 600 018

IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.Sc Computer Science **Cloud Computing - MGIVC10(6)**

II M.C.A **Cloud Computing - MHIVC9(7)**

Time: Three Hours **MAXIMUM MARKS: 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. _____ is a powerful toolkit focused on converting a computer cluster into an Infrastructure-as-a-Service (IaaS) cloud for scientific communities.
2. _____ is a cryptographic output used to verify the authenticity of data.
3. _____ is a scalable and flexible architecture that offers the cloud consumers an option to use the IT resources that are cloud-based to meet the high demands of usage.
4. The _____ mechanism is used to collect audit tracking data for networks and IT resources in support of, or dictated by, regulatory and contractual obligations.
5. _____ is an agreement between an IT Service provider and a customer.

II. Choose the correct answer **(5X1=5 Marks)**

6. Total types of cloud computing services are?
   a) 4 b) 1 c) 2 d) 3
7. Identify the technique used for creating cloud computing.
   a) Insubordination b) Virtualization
   c) Cannibalization d) Transubstantiation
8. Which architecture is a form of cloud computing platform used in storing and maintaining data on a larger scale?
   a) Cloud Bursting Architecture b) Multipath Resource Access Architecture
   c) Resource Pooling Architecture d) Dynamic data-normalization architecture
9. Identify among the components which are known as a hypervisor.
   a) VMC b) VC c) VMM d) LUN
10. Which of the following is not a Cloud service provider?
    a) Amazon Web Service (AWS) b) Microsoft Azure
    c) Apple d) Google

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II M.Sc Computer Science **Cloud Computing - MGIVC10(6)**

II M.C.A **Cloud Computing - MHIVC9(7)**

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. Define the term "CloudSim".
12. State on Virtualization.
13. List any two Cloud architecture.
14. State on Audit monitor.
15. Name any two Cloud provider.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Summarize the Cloud characteristics.
17. Outline the function and any application of Virtualization technology.
18. Explain the basic principles of Workload distribution architecture.
19. Discuss the major features of Resource cluster.
20. Compile the SLA guidelines.
21. Discuss on Hashing with an illustration.
22. Highlight the purpose of Redundant storage architecture.
23. Summarize the functions of Cloud usage monitor.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Describe the significances of the following Cloud Deployment Models:

    a) Eucalyptus b) Open Nebula

25. Explain the concept of Symmetric and Asymmetric encryption in detail.
26. Illustrate the functions of Dynamic Failure Detection and Recovery Architecture
27. Elaborate on Remote Administration System and Resource Management system.
28. Highlight the important of Cloud provisioning contracts and its structure.

---------- All the Best ----------

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.Sc. Computer science

Soft Skills IV – Software Engineering – MGIVK4(6)

Time: Two Hours **Maximum Marks:40**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A **(3 x 2= 6 Marks)**

Answer any three questions. **All questions carry equal Marks.(Each answer should not exceed 50 words)**

1. List the activities involved in the process framework for software engineering?
2. What is FURPS?
3. What is mean by verification and validation?
4. State the characteristics that define an effective project manager?
5. What are the design goals for designing the webpage suggested by Jean Kaiser?

Section – B **(2 x 5 = 10 Marks)**

Answer any two questions **All questions carry equal Marks. (Each answer should not exceed 250 words)**

6. Explain the spiral model in detail.
7. Discuss about the design issues in user interface design.
8. Write short notes about model-based testing.
9. What is function point metric? Explain briefly about function point metric.
10. Discuss about the testing considerations for each interface mechanism in webapp.

Section – C **(3 x 8 = 24 Marks)**

Answer any three questions. **All questions carry equal Marks. (Each answer should not exceed 400 words).**

11. Define waterfall model and incremental model? Discuss about the difference between the 2 models?
12. Discuss about the cohesion and coupling concepts in detail.
13. Explain briefly about basis path testing.
14. Discuss about characteristics of object-oriented design.
15. Explain the different models for WebApps mentioned in the Requirements Modeling output.

********ALL THE BEST********

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.C.A. **Software Engineering – MHIVCE5A(7)**

Time: Three Hours **MAXIMUM MARKS : 100**

The first ten minutes should be used for reading the question paper only. The students should not begin to answer the questions in the first ten minutes.

Section-A

Answer all the questions. **20 Marks**

I. Fill in the blanks **(5X1=5 Marks)**

1. SDLC stands for _____.
2. _____ prototypes does not associated with prototyping model.
3. The _____ model helps in representing the system's dynamic behavior.
4. _____ testing focuses on a set of tests that attempt to uncover errors in webapp.
5. _____ coupling occurs when modules share a composite data structure and use only a part of it.

II. Choose the correct answer **(5X1=5 Marks)**

6. What is the first step in the software development life cycle?
   a) System design
   b) Coding
   c) System testing
   d) Preliminary investigation and analysis
7. Which of the following does not relate to evolutionary process model?
   a) Incremental model
   b) Concurrent model
   c) WINWIN spiral model
   d) All of the above
8. What is Software Engineering?
   a) Designing a software
   b) Testing a software
   c) Application of Engineering principles to the design of a software
   d) Testing a project
9. What is a Functional requirement?
   a) Specifies the tasks the program must complete
   b) Specifies the tasks the program should not complete
   c) Specifies the tasks the program must not work
   d) Specifies the requirements
10. Identify the worst type of coupling.
    a) Data coupling
    b) Control coupling
    c) Stamp coupling
    d) Content coupling

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IV SEMESTER **(Regular)** – Applicable to candidates admitted in the year 2020

II M.C.A. **Software Engineering – MHIVCE5A(7)**

III. Answer the following in One or Two Sentences **(5X2=10 Marks)**

11. Define Engineering.
12. Give note on Quality of design.
13. State the purpose of requirement engineering.
14. Define Testing.
15. State the need of Web Applications.

Section – B

(5 x 7 = 35 Marks)

Answer any five questions **All questions carry equal marks.(Each answer should not exceed 300 words)**

16. Give note on the Objectives and importance of Software Engineering.
17. Explain the elements of Use-Case.
18. Analyze the Importance of Architecture model.
19. Classify about metrics for Software quality in detail.
20. List out about the attributes of web-based systems.
21. Explain about the 5 tasks involved in incremental model.
22. Discuss system testing steps in detail.
23. Illustrate Spiral model with neat diagram.

Section – C

(3 x 15 = 45 Marks)

Answer any three questions. **All questions carry equal marks.(Each answer should not exceed 600 words)**

24. Elaborate Waterfall model with neat diagram.
25. Analyze various Requirement Engineering task.
26. Elucidate the designing class based components.
27. Differentiate between black box testing and white box testing.
28. Elaborate Software quality assurance in detail.

**************ALL THE BEST*************