(6 pages)

a Reg. No. : .....

Code No. : 20315 E **Sub. Code : AMCS 31**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Third Semester

Computer Science — Core

JAVA PROGRAMMING

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A ———— is a user-defined data type with a template that serves to define its properties.

(a) object (b) class

(c) data members (d) methods

2. Which of the following will be the basic part of method declaration?

(a) method name (b) return type

(c) parameter list (d) all the above

3. When an interface extends another interface, ———— keyword is used.

(a) implements (b) extends

(c) implement (d) extend

4. To hide a class from a package, ———— should be declared.

(a) not private (b) not protected

(c) not public (d) not visible

5. In the life cycle of thread includes ———— states.

(a) 3 (b) 4

(c) 5 (d) 6

6. 'Dividing an integer by zero' error comes under ————

(a) Run-time error (b) Compile-time error

(c) (a) and (b) (d) None of the above

7. Which class contains the drawString( ) method?

(a) Paint (b) Graphics

(c) Shapes (d) None of the above

8. Which of the following is/are the attribute(s) of <applet> tag?

(a) CODE (b) ALT

(c) HSPACE (d) All the above

9. In applet, to draw ellipse ———— method is used.

(a) drawCircle( ) (b) drawEllipse( )

(c) drawOval( ) (d) drawRound( )

10. The drawLine( ) method takes ———— pair of coordinates as arguments.

(a) 2 (b) 3

(c) 4 (d) 5

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Give a brief note on static members.

Or

(b) Explain the concepts of nesting of methods with an example.

12. (a) How do you access interface variables? Explain.

Or

(b) List and define java API packages.

13. (a) How to stop and block a thread? Explain.

Or

(b) Write a program with multiple catch statement and explain it.

14. (a) Write about displaying numerical values using applet.

Or

(b) How do you run the applet? Explain.

15. (a) Give a brief note on line graphs of applet.

Or

(b) 'Drawing bar charts in applet' - Explain with example.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Write about accessing class members in detail its example.

Or

(b) Describe different types of inheritance in detail.

17. (a) Explain about creating an array with example.

Or

(b) Describe in detail about using a package.

18. (a) Explain how to extend a thread class.

Or

(b) Explain types of errors in detail.

19. (a) Discuss in detail about building applet code.

Or

(b) List and give a detail note on different states of applet life cycle.

20. (a) List the methods used to draw circle, ellipses and arcs. Explain with example.

Or

(b) Write a program using lines and different forms of rectangles of graphics class.

———————

(6 pages)

Reg. No. : .....

Code No. : 20316 E **Sub. Code : AMCS 32**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Third Semester

Computer Science — Core

DIGITAL DESIGN

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The binary equivalent of 20 is ————

   (a) 00011010 (b) 00100000

   (c) 10100000 (d) 00010100

2. The code where all successive numbers differ from their preceding number by single bit is ————

   (a) Alphanumeric code (b) BCD

   (c) Excess 3 (d) Gray

3. Simplify Y = AB' + (A' + B)C

(a) AB' + A (b) AB' + C

(c) A'B + AC' (d) AB + A

4. There are ———— cells in a 4-variable Karnaugh map.

(a) 12 (b) 16

(c) 18 (d) 8

5. 1's complement can be easily obtained by using ————

(a) Comparator (b) Adder

(c) Inverter (d) Subtractor

6. Which is the major functioning responsibility of a multiplexer?

(a) Decoding the binary information

(b) Generation of all minterms

(c) Generation of selected path between multiple sources and a single destination

(d) Encoding of binary information

7. In which flip flop the present input will be the next output?

(a) D (b) T

(c) JK (d) RS

8. The set-reset flip flops can be constructed by the cross-coupling of ———— gates.

(a) AND or NAND (b) XNOR or NOR

(c) NAND or NOR (d) XOR or OR

9. In serial shifting method, data shifting occurs ————

(a) One bit at a time (b) Simultaneously

(c) Two bit at a time (d) Four bit at a time

10. What is a shift register that will accept a parallel input, or a bi-directional serial load and internal shift features, called?

(a) tristate (b) end around

(c) universal (d) conversion

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What is meant by double dabble? Explain.

Or

(b) Write a note on : ASCII code.

12. (a) Prove that A(A'+C) A(A'+B+C) (A'BC+C) = 0.

Or

(b) How many entrees are there on a four-variable Karnaugh map? Give example.

13. (a) Illustrate 1-of-16 decoder with neat diagram.

Or

(b) Elucidate about the binary addition.

14. (a) Explain negative-edge triggered RS-Flip flop.

Or

(b) What is the primary different between D-flip flop and RS-Flip flop?

15. (a) Illustrate about serial in-parallel out with neat diagram.

Or

(b) Discuss about universal shift register with neat diagram.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Convert decimal number 65,535 to its hexadecimal and binary equivalents.

Or

(b) Discuss about OR gate with truth table.

17. (a) Explain briefly about sum-of-products methods with example.

Or

(b) What is simplified Boolean equation for the following logic equation expressed by minterms? $Y = F(A, B, C, D) = \Sigma m(7, 9, 10, 11, 12, 13, 14, 15)$.

18. (a) Analyze 16-to-1 multiplexer with neat diagram.

Or

(b) Describe about decimal-to-BCD encoder.

19. (a) What is RS-flip flop? Explain NOR-gate latch with neat diagram.

Or

(b) Elucidate about positive-edge-triggered JK flip flop.

20. (a) Explain about 4-bit serial input register.

Or

(b) Discuss about parallel-in-parallel out with neat diagram.

———————

(6 pages)

Reg. No. : .....

Code No. : 20317 E **Sub. Code : AMCS 41**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fourth Semester

Computer Science — Core

DATA STRUCTURES

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A ———— is a collection of objects and a set of operations that act on those object.

   (a) Variable (b) Constant

   (c) Datatype (d) None

2. The ———— complexity of a program is the amount of memory that it needs to run to completion.

(a) space (b) time

(c) both (a) and (b) (d) none

3. ———— is a pile in which items are added at one end and removed from other end.

(a) Stack (b) Queue

(c) Both (a) and (b) (d) None

4. How to represent the infix notation a*b|c into its postfix notation?

(a) abc*/ (b) abc/*

(c) */abc (d) ab*c/

5. What are the operations will be done on Binary tree?

(a) copying binary trees

(b) testing equality

(c) the satisfiability problem

(d) all the above

6. ———— are frequently used to implement priority queues.

(a) AVL tree (b) Heaps

(c) Both (a) and (b) (d) None

7. A graph with weighted edges is called ————

(a) Subgraph (b) Multigraph

(c) Network (d) None

8. BFS stands for ————

(a) Breadth First Search

(b) Breadth Frequent Search

(c) Binary First Search

(d) None

9. ———— : time until the right sector of the track is under the read/write head.

(a) Seek time (b) Latency time

(c) Transmission time (d) None

10. Arranging the numbers in order is called ————

(a) searching (b) traversing

(c) sorting (d) none

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) What do you mean by recursive algorithm?

Or

(b) Define and give a brief note on array in C.

12. (a) Give a brief note on stack and queue.

Or

(b) How to represent chains in 'C'?

13. (a) What is binary search tree?

Or

(b) How to transform a forest into a binary tree?

14. (a) Expand and explain DFS.

Or

(b) List out the observation of generating the paths in non decreasing order of length.

15. (a) Write a code for quick sort.

Or

(b) What is hash function? Give a note on division in hash function.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) What is data abstraction? Explain it in detail.

Or

(b) What is polynomial? How do you represent and add polynomial?

17. (a) How to evaluate an expression? Describe an algorithm for infix to postfix expression.

Or

(b) How to represent sparse matrix? Explain.

18. (a) What is binary tree traversal? Explain inorder and post order traversal in detail.

Or

(b) Explain in detail about heaps.

19. (a) What do you mean by graph? How to represent graph?

Or

(b) What is the use of Kruskal's algorithm? Explain with an example.

20. (a) What is sorting? Explain merge sort in detail.

Or

(b) Explain Hash tables in static hashing in detail.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20318 E **Sub. Code : AMCS 42**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fourth Semester

Computer Science — Core

COMPUTER ARCHITECTURE

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. ———— is concerned with the way the hardware components operate to form computer system.

   (a) Computer organization

   (b) Computer design

   (c) Computer architecture

   (d) Computer implementation

2. The ———— input in the register determines the action to be taken with each clock pulse.

(a) buffer (b) register

(c) load (d) zero

3. The register that keeps track of the instructions in the program stored in memory is ————

(a) control register (b) program register

(c) status register (d) direct register

4. The stack operation of insertion is called ————

(a) push (b) pop

(c) load (d) move

5. In addition algorithm, the signs of A and B are ————

(a) identical (b) different

(c) dissimilar (d) asymmetry

6. The addressing mode the operands are in registers that reside within CPU is ————

(a) register mode

(b) register indirect mode

(c) implied mode

(d) indexed addressing mode

7. ———— requires a sequence of add and shift micro operations.

(a) Booth multiplication algorithm

(b) Hardware multiplication algorithm

(c) Array multiplier

(d) Partial reminder

8. ———— is used to eliminate the speed mismatch between processor and IO devices.

(a) IO interface (b) Priority

(c) Daisy chain (d) Interrupt

9. The average time required to reach a storage location in memory and obtain its contents is called the

(a) seek time (b) turnaround time

(c) access time (d) transfer time

10. Which of the following is lowest in memory hierarchy?

(a) Cache memory (b) Secondary memory

(c) Registers (d) RAM

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Elaborate the basic computer registers and memory with diagram.

Or

(b) Describe the control unit of basic computer.

12. (a) Differentiate between push operation and POP operation in a stack.

Or

(b) Write down the register with common ALU.

13. (a) Point out the flowchart of the hardware multiply algorithm.

Or

(b) Explain the booth algorithm for multiplication of signed 2's complement numbers.

14. (a) Elaborate the I/O bus and interface modules.

Or

(b) Write a note on asynchronous serial transfer.

15. (a) Differentiate between the functions of RAM and ROM.

Or

(b) What are the types of auxiliary memory devices? Explain.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Draw and explain the direct and indirect address in instruction codes.

Or

(b) What are the phases of instruction cycle? Explain.

17. (a) Discuss the various operations of data transfer instructions.

Or

(b) Outline the typical program control instructions with example.

18. (a) Evaluate the hardware implementation of addition algorithm.

Or

(b) Determine the multiplication of floating point numbers with diagram.

19. (a) Illustrate the block diagram of a typical asynchronous communication interface.

Or

(b) Summarize the method of daisy-chaining priority.

20. (a) Outline the implementation of the address mapping using pages in virtual memory.

Or

(b) Explain in detail the different mappings used for cache memory.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20319 E **Sub. Code : AMCS 51**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fifth Semester

Computer Science — Core

RELATIONAL DATABASE MANAGEMENT SYSTEM

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The output of the DDL is placed in the data dictionary, which contains ————————

   (a) Query (b) Transaction

   (c) Metadata (d) Log

2. User which interact with the system using database query language is called as

   (a) Sophisticated User

   (b) Naive User

   (c) Database Administrator

   (d) Application Programmer

3. Database ———— which is the logical design of the database, and the database ———— which is a snapshot of the data in the database at a given instant in time

(a) Instance, Schema

(b) Schema, Instance

(c) Relation, Schema

(d) Relation, Domain

4. A ———— is a set of one or more attributes that, taken collectively, allow us to identify uniquely a tuple in the relation.

(a) Super Key (b) Primary Key

(c) Foreign Key (d) Candidate Key

5. The ———— clause is a list of the relations to be accessed in the evaluation of the query.

(a) Select (b) Where

(c) From (d) Order by

6. Which of the following is not a built in aggregate function in SQL?

(a) avg (b) max

(c) count (d) total

7. Which of the following gives a logical structure of the database graphically?

   (a) Entity-relationship diagram

   (b) Entity diagram

   (c) Database diagram

   (d) Architectural representation

8. Tables in second normal form (2NF) :

   (a) Eliminate all hidden dependencies

   (b) Eliminate the possibility of a insertion anomalies

   (c) Have all non-key

   (d) Have a composite key fields depend on the whole primary key

9. How can you change "Thomas" into "Michel" in the "LastName" column in the Users table?

   (a) UPDATE User SET LastName = 'Thomas' INTO LastName = 'Michel'

   (b) MODIFY Users SET LastName = 'Michel' WHERE LastName = 'Thomas'

   (c) MODIFY Users SET LastName = 'Thomas' INTO LastName = 'Michel'

   (d) UPDATE Users SET LastName = 'Michel' WHERE LastName = 'Thomas'

10. ———————— is a program that performs some common action on database data and also stored in the database.

(a) Stored Procedure (b) Trigger

(c) Stored Function (d) None of the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Narrate the various applications of DBMS.

Or

(b) State and explain database languages and their purpose in DBMS.

12. (a) Identity various Keys used in DBMS.

Or

(b) Discuss natural join with suitable examples.

13. (a) Explain in detail aggregate functions in SQL with example.

Or

(b) Describe the different data types in SQL. Explain them with example.

14. (a) Elaborate mapping cardinalities in E-R schema.

Or

(b) Compare and Contrast between specialization and generalization in extended ER features.

15. (a) Create Student Table using oracle with the following fields Roll number, Student name, Date of Birth Department name, Percentage obtained.

(i) Create the mentioned table (Define Roll number as primary key)

(ii) Insert 3 records

(iii) Update the Student percentage as 80 whose id roll number is 103.

Or

(b) Discuss about creating views in oracle.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss the database system architecture with neat diagram.

Or

(b) Classify the different types of data models.

17. (a) Enumerate the operations performed in Relational Algebra. Give each an example.

Or

(b) Describe the basic structure of SQL Queries with suitable example.

18. (a) Recall various string operations in SQL with an example.

Or

(b) Briefly explain about nested subqueries in SQL.

19. (a) Outline the different types of attributes in E-R Diagram.

Or

(b) Explain Boyce Codd Normal Form and lossless decomposition.

20. (a) Briefly explain the concept of creating sequences using oracle.

Or

(b) Elaborate the concept of procedure with program.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20320 E **Sub. Code : AMCS 53**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fifth Semester

Computer Science – Core

PHP AND MYSQL

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Expand PHP.

   (a) PHP stands for Preprocessor Home Page

   (b) PHP stands for Pretext Hypertext Processor

   (c) PHP stands for Hypertext Preprocessor

   (d) PHP stands for Personal Hyper Processor

2. Which is the right way of declaring a variable in PHP?

(a) $3hello (b) $_hello

(c) $this (d) $5_Hello

3. Which of the following are correct ways of creating an array?

(i) state[0] = “karnataka”;

(ii) $state[] = array(“karnataka”);

(iii) $state[0] = “karnataka”;

(iv) $state = array(“karnataka”);

(a) (iii) and (iv) (b) (ii) and (iii)

(c) Only (i) (d) (ii), (iii) and (iv)

4. Which one of the following function is used to start a session?

(a) start_session( ) (b) session_start( )

(c) session_begin( ) (d) begin_session( )

5. Which one of the following function is capable of reading a specific number of characters from a file?

(a) fgets( ) (b) fget( )

(c) fileget( ) (d) filegets( )

6. Which of the following function is used to read an existing file in PHP?

(a) openfile( ) (b) readfile( )

(c) readf( ) (d) read_f( )

7. Which operators test whether a subquery returns any rows?

(a) IN and NOT IN

(b) EXISTS and NOT EXISTS

(c) PRESENT

(d) ABSENT

8. Character data can be stored as

(a) Fixed length string

(b) Variable length string

(c) Either Fixed or Variable length string

(d) None of the mentioned

9. Which one of the following statements instantiates the mysqli class?

(a) $mysqli = new mysqli( )

(b) mysqli = new mysqli( )

(c) $mysqli->new.mysqli( )

(d) mysqli->new.mysqli( )

10. Which one of the following methods is responsible for sending the query to the database?

(a) send_query( ) (b) query( )

(c) sendquery( ) (d) query_send( )

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Compare and contrast between local and global variables in PHP.

Or

(b) Give a short note on PHP data types.

12. (a) Distinguish between implode and explode function in PHP with an example.

Or

(b) Demonstrate the usage of cookies in PHP.

13. (a) Discuss various file opening modes in PHP.

Or

(b) Explain the following (i) fgets( ) (ii) fgetc( ).

14. (a) Explain the datatypes supported by MySQL.

Or

(b) Discuss the aggregate functions in MySQL with an example.

15. (a) Describe the procedure to validate the input.

Or

(b) Briefly explain about various date and time functions in MySQL.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Classify and explain any four operators in PHP. Write one example of each.

Or

(b) Discuss all the looping statements. Write PHP code to explain for a loop.

17. (a) Briefly explain the concept of arrays with suitable example.

Or

(b) Enumerate different types of user-defined functions and write PHP code to explain any one function.

18. (a) How do looping over a file content with feof( ) function? Explain with an example.

Or

(b) Write a brief note on reading and writing binary files in PHP.

19. (a) Describe sorting and filtering data in MySQL. Also explain advanced filtering data manipulation functions.

Or

(b) Discuss about set operators and full text searching in MySQL.

20. (a) Discuss PHP and MySQL database connection process.

Or

(b) Write about error handling in PHP with an example.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20321 E **Sub. Code : AACS 31**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Third Semester

Computer Science – Allied

SCRIPT LANGUAGES

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. _____ requests the title of the specified resource.

(a) POST (b) PUT

(c) HEAD (d) TRACE

2. The _____ reference uses a short name to represent the character.

(a) character entity

(b) numeric character

(c) string entity

(d) data entity

3. _____ uses rule to define how the browser should display content on the webpage.

(a) CSS3 (b) HTML

(c) XML (d) SHTML

4. The list attribute in the _____ tag refers to the data list id attribute value for the data list to use.

(a) <meta> (b) <font>

(c) <h1> (d) <input>

5. The _____ attribute marks the form field so that the browser won't upload the form if that field is empty.

(a) required (b) response

(c) placeholder (d) class

6. The _____ shadow helps the element stand out with almost a 3-D effect on the webpage.

(a) line (b) text

(c) square (d) box

7. _____ operators compare two values to test their equality.

(a) Assignment (b) Arithmetic

(c) Comparison (d) Conditional

8. _____ is intended to be self-contained.

(a) Function

(b) Array

(c) Variable

(d) Logical operator

9. The _____ function allows you to change the text contained within an element.

(a) .val() (b) .text()

(c) .string() (d) .css()

10. Key pressing and releasing event is known as _____

(a) onkeypress (b) onkeydown

(c) onkeyup (d) onkeyout

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain making sense of markup language.

Or

(b) Discuss about headings in HTML5.

12. (a) Explain about working with the box model.

Or

(b) Discuss about working with form field in HTML5.

13. (a) Explain about styling images.

Or

(b) Describe audio the HTML5 way in detail.

14. (a) Elucidate about data types available in JavaScript.

Or

(b) Illustrate the document object model tree.

15. (a) Elucidate about working with HTML.

Or

(b) What is meant by page events? Explain.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain about server-side programming.

Or

(b) Discuss about making a list with example.

17. (a) Discuss about styling table in CSS.

Or

(b) Illustrate password entry and check box in HTML5.

18. (a) Explain about looking at the CSS3 colors.

Or

(b) Elucidate about digital audio format.

19. (a) Analyze the different types of conditional statement in JavaScript.

Or

(b) Describe about working with function.

20. (a) Explain about finding elements in JQuery.

Or

(b) Summarize about the JQuery event function.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20322 E **Sub. Code : AACS 41**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fourth Semester

Computer Science — Allied

MACHINE LEARNING

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — ($10 \times 1 = 10$ marks)

Answer ALL questions.

Choose the correct answer :

1. Identify the successful applications of Machine Language ————————

   (a) Learning to classify new astronomical structures

   (b) Learning to recognize spoken words

   (c) Learning to drive an autonomous vehicle

   (d) All the above

2. Analysis of machine learning algorithm needs _____

(a) Statistical Learning Theory

(b) Computational Learning Theory

(c) Both (a) and (b)

(d) None

3. Linear regression is a machine learning algorithm based on _____ learning.

(a) Reinforcement

(b) Un supervised

(c) Supervised

(d) None

4. _____ data is the data we use to train an algorithm or machine learning model to predict the outcome we design our model to predict.

(a) Test (b) Train

(c) Both (a) and (b) (d) None

5. Identify the difficulties with the K-Nearest Neighbor algorithm _____

(a) Curse of Dimensionality

(b) Calculate the distance of the test case formal training cases

(c) Both (a) and (b)

(d) None

6. The objective of applying ————————, to find the best line in two dimensions or the best hyperplane in more the two dimensions in order to help us separate our space into classes.

   (a) SVM

   (b) K-Means clustering

   (c) Both (a) and (b)

   (d) None

7. Which one of the following performs well in multiclass prediction ————————

   (a) Logistic Regression

   (b) Naive Bayes Classifier

   (c) Both (a) and (b)

   (d) None

8. The decision tree can be explained using the entities ————————

   (a) Nodes (b) Leaves

   (c) Both (a) and (b) (d) None

9. ———————— are two types of unsupervised learning

   (a) clustering (b) Association

   (c) Both (a) and (b) (d) None

10. K-means clustering algorithm is used to solve the clustering problems in ————————

(a) Machine Learning

(b) Data Science

(c) Either (a) or (b)

(d) None

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What is Machine Language?

Or

(b) Is Matplotlib used in Machine language?

12. (a) What is Supervised Learning?

Or

(b) Differentiate: Test Data Versus Training Data.

13. (a) What is Support Vector Machine?

Or

(b) What are the popular algorithms available in machine learning?

14. (a) What are the advantages of Naive Bays algorithm?

Or

(b) What is the difference between heuristic for rule learning and heuristics for decision trees?

15. (a) Differentiate K-Means and KNN.

Or

(b) List out the Ethical and Moral issues available in Machine Learning.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What is Data vizualization in Machine language? Why is it important?

Or

(b) Expand and explain about AI.

17. (a) Discuss in detail about Gradient Descent optimization.

Or

(b) Explain Linear Regression and Logistic Regression in detail.

18. (a) How does K - Nearest Neighbor algorithm work?

Or

(b) Why is data normalization used in Machine Learning?

19. (a) Explain Decision Tree algorithm in detail.

Or

(b) What is classification algorithm? List out and explain any one algorithm in detail.

20. (a) What do you mean by clustering? Explain it in detail.

Or

(b) Compare Machine Learning and Data Science.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20323 E **Sub. Code : ASCS 31**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Third Semester

Computer Science

Skill Based Subject — INTRODUCTION TO BIG DATA ANALYTICS

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. One terabyte is equals to ———— bytes.

(a) 10^{12} (b) 10^{15}

(c) 10^{21} (d) 10^{17}

2. Sensors placed on the objects provide information about their environment, the conditions of use and the objects operations

(a) autonomy (b) monitoring

(c) control (d) data collection

3. The analytics which focuses on reporting on what happened in the past

(a) *data collection*

(b) *modeling and analysis*

(c) *interpretation*

(d) *descriptive*

4. An algorithm is a ————————; a user can introduce data (inputs) and they will obtain the results (outputs).

(a) procedure (b) instructions

(c) black box (d) goal

5. ———————— is the analysis of data contained in natural language text.

(a) Text mining

(b) Machine learning

(c) Artificial intelligence

(d) None of the above

6. The collected, cleaned and prepared data can now be explored in ———— phase.

(a) second (b) third

(c) fourth (d) fifth

7. A *supervised learning* task is called "classification" if the outputs are discrete or ———— if the outputs are continuous.

(a) Cluster (b) Modeling

(c) Regression (d) None of the above

8. ———— are graph structures where each potential decision creates a new node, resulting in a tree-like graph.

(a) Random forest (b) Decision trees

(c) Neural networks (d) Classification

9. ———— goal coupling big data and ML is to enable customization, merchandising and A/B testing of new features to enhance the user experience.

(a) eBay's (b) spotify

(c) IBM (d) None of the above

10. ————— extract knowledge from a set of data containing input-output pairs.

(a) Unsupervised algorithms

(b) Supervised algorithms

(c) Clustering

(d) Text mining

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Write the definition of big data.

Or

(b) Write notes on Beyond 3v's.

12. (a) What is data analytics?

Or

(b) Explain the analytics culture within companies.

13. (a) What is machine learning?

Or

(b) Write notes on

(i) *Defining the tasks to be accomplished*

(ii) *Which technology to adopt?*

14. (a) Describe supervised learning.

Or

(b) Write notes on neural network.

15. (a) Write about algorithm selection in detail.

Or

(b) Write notes on

(i) Amazon

(ii) NetFlix.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) What are the challenges the companies has to overcome in bigdata?

Or

(b) Explain about the data revolution.

17. (a) Explain

(i) Advanced analytics in new paradigm

(ii) Statistical and computational paradigm.

Or

(b) Explain the data analytics address.

18. (a) Mention the disciplines that support the big data analytics process.

Or

(b) How the fifth phase works for transform data into actionable knowledge?

19. (a) What is classifications? Write any two classification algorithm.

Or

(b) Explain about principles of clustering algorithm.

20. (a) Differentiate supervised or unsupervised algorithm : in which case do we use each one?

Or

(b) Discuss about other Ml algorithm.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20324 E **Sub. Code : ASCS 41**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fourth Semester

Computer Science

Skill Based Subject — MULTIMEDIA APPLICATIONS

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Video is represented as a series of images formally known as ————————

(a) pictures (b) shots

(c) frames (d) snaps

2. The faster the frames are displayed ————————

(a) the rougher the video appears

(b) the smoother the video appears

(c) it gets blurry

(d) none of the mentioned

3. Multimedia files stored on a remote server are delivered to a client across the network using a technique known as ————————

(a) download (b) streaming

(c) flowing (d) leaking

4. Real time streaming is most useful for ————————

(a) short video clips

(b) long video clips

(c) extremely short and low quality videos

(d) none of the mentioned

5. Streaming stored audio/video, files are compressed and stored on a ————————

(a) IP (b) Server

(c) Domain (d) Internet

6. Joint Photographic Experts Group (JPEG) is used to compress ————————

(a) Music (b) Pictures

(c) Images (d) Frames

7. Audio compression can be used for ————————

(a) Speech or music (b) Voice and data

(c) Picture and colors (d) Video and voice

8. In audio and video compression, term RBG expresses ————————

(a) Red, blue, green (b) Red, black, grey

(c) Rate, bit, giga bit (d) Red, bluish, greyish

9. In lowest resolution a color frame is made of ————————

(a) 1024×768 pixels (b) 800×600 pixels

(c) 1152×864 pixels (d) 1280×1080 pixels

10. In audio and video compression, each frame is divided into small grids, called ————————

(a) Frame (b) Packets

(c) Pixels (d) Mega pixels

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Write down the approach uses the terms serif font and sans serif font.

Or

(b) Summarize the multimedia in schools.

12. (a) Describe the purpose of bitmap software.

Or

(b) Explain the 3-D drawing and rendering.

13. (a) Point out the animation by computer.

Or

(b) Write a note on analog video.

14. (a) Distinguish between the Windows and Macintosh.

Or

(b) Elaborate the structure the elements of a multimedia project proposal.

15. (a) Mention the process of identifying appropriate talent for a production.

Or

(b) How will you prepare for delivery of multimedia project? Explain.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) What are the different types of font editing and design tools? Explain.

Or

(b) Distinguish between the ASCII character set and extended character set.

17. (a) Illustrate the crucial aspects of prepare a digital audio files.

Or

(b) Compare the MIDI and digital audio.

18. (a) Outline the purpose of video format converters.

Or

(b) How will you create an animated scene? Explain.

19. (a) Discuss the intangible elements needed to make good multimedia.

Or

(b) Elaborate the estimate the cost, timeline, and tasks required to complete a project.

20. (a) Illustrate the fundamental organizing structures used in multimedia projects.

Or

(b) How will you delivering on the World Wide Web? Explain.

———————

(6 pages)

Reg. No. : .....

Code No. : 20325 E **Sub. Code : ANCS 31**
ANSE 31

U.G. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Third Semester

Computer Science/Software Engineering

Non Major Elective - FUNDAMENTALS OF INTERNET AND EMERGING TECHNOLOGY

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. Components that provide internal storage to the CPU are ————.
   (a) Registers
   (b) Program Counters
   (c) Controllers
   (d) Internal chips

2. Saving data and instructions to make them readily available is the job of ————————.

(a) Storage Unit (b) Cache Unit

(c) Input Unit (d) Output Unit

3. Which of the following is used to hold running program instructions?

(a) Primary Storage (b) Virtual Storage

(c) Internal Storage (d) Minor devices

4. Brain of computer is ————————.

(a) Control Unit

(b) Arithmetic and Logic unit

(c) Central Processing Unit

(d) Memory

5. Causing the CPU to step through a series of micro operations is called ————————.

(a) Execution

(b) Runtime

(c) Sequencing

(d) Pipelining

6. In object oriented programming the program is divided into ————————.

(a) class (b) object

(c) function (d) method

7. The term 'Cloud' in cloud-computing refers to ————————.

(a) The Internet

(b) Cumulus Clouds

(c) A Computer

(d) Thin Clients

8. LAN stands for ————————.

(a) Long Area Network

(b) Local Area Network

(c) Local Audible Network

(d) Limited Area Network

9. The topology with highest reliability is ———————— topology.

(a) bus (b) star

(c) ring (d) mesh

10. A ———————— is a set of rules that governs data communication.

(a) protocol

(b) forum

(c) standard

(d) none of the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Distinguish between the man and machines.

Or

(b) Draw and explain the basic structure of computer.

12. (a) Elaborate the functions of CRM and ERP.

Or

(b) Summarize the advantages of java programming.

13. (a) Write down the digital transformation in business.

Or

(b) Explain the functions of Local Area Network (LAN).

14. (a) Describe the physical safety and security.

Or

(b) What are the various types of computer viruses? Explain.

15. (a) Differentiate between the autonomous car and driverless car.

Or

(b) Write a note on computer vision.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) What are the human capability of five senses? Explain.

Or

(b) Summarize the characteristics of computer.

17. (a) Explain the advantages of FORTRAN and COBOL.

Or

(b) Compare the C++ language and C# language.

18. (a) Discuss the architecture of Open System Interconnection (OSI) model.

Or

(b) Illustrate the big data analytics in healthcare.

19. (a) Elaborate the cloud computing and virtualization.

Or

(b) Compare the functions of Public Cloud and Hybrid Cloud.

20. (a) Discuss the applications of artificial intelligence.

Or

(b) Outline the need of information security and privacy.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20326 E **Sub. Code : AECS 51**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fifth Semester

Computer Science

Major Elective – MOBILE APPLICATION DEVELOPMENT

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Android is based on which of the following language?

   (a) Java

   (b) C++

   (c) C

   (d) COBOL

2. How can we stop the services in android?

   (a) By using the stopSelf( ) and stopService( ) method

   (b) By using the finish( ) method

   (c) By using system.exit( ) method

   (d) None of the above

3. What is an activity in android?

   (a) Android class

   (b) Android package

   (c) A single screen in an application with supporting Java code

   (d) Android file

4. ADB stands for?

   (a) Android debug bridge

   (b) Android delete bridge

   (c) Android destroy bridge

   (d) Android develop bridge

5. On which of the following, developers can test the application, during developing the android applications?

   (a) Third-party emulators

   (b) Emulator included in Android SDK

   (c) Physical android phone

   (d) All of the above

6. Which of the following kernel is used in Android?

(a) MAC (b) Windows

(c) Linux (d) Redhat

7. Which of the following is the first callback method that is invoked by the system during an activity life-cycle?

(a) onClick( ) method

(b) onCreate( ) method

(c) onStart( ) method

(d) onRestart( ) method

8. Which of the layer is below the topmost layer of android architecture?

(a) System Libraries and Android Runtime

(b) Linux Kernel

(c) Applications

(d) Applications Framework

9. Which of the following method in android is used to log debug messages?

(a) Log.r( ) (b) Log.R( )

(c) Log.d( ) (d) Log.D( )

10. Which of the following layout in android arranges its children into rows and columns?

(a) RelativeLayout (b) TableLayout

(c) FrameLayout (d) ViewLayout

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What are the activity and layouts in android? Explain.

Or

(b) How will you add the string array to strings.xml.

12. (a) What happens when the user clicks the send message button? Explain.

Or

(b) How the activity code will work?

13. (a) Write down the LinearLayout displays.

Or

(b) Point out the purpose of position views using constraints.

14. (a) Explain the use list views to navigate to data.

Or

(b) How to add a fragment to your project? Explain.

15. (a) Bring out the SQLite helper manages database.

Or

(b) Mention the new Starbuzz app structure.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Examine the steps to create an android virtual device.

Or

(b) Determine the use of string resource in your layout.

17. (a) How will you create the second activity and layout? Explain.

Or

(b) Illustrate the updated StopwatchActivity code.

18. (a) Draw and explain the position views using constraints.

Or

(b) Elaborate the steps to adding images to buttons.

19. (a) Discuss the get list views to respond to clicks with a listener.

Or

(b) Analysis the MainActivity needs to implement the interface.

20. (a) Demonstrate the downgrade your database with onDowngrade( ).

Or

(b) Formulate the return all the records from a table.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20327 E **Sub. Code : AECS 52**

B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2022.

Fifth Semester

Computer Science

Major Elective – INTRODUCTION TO SECURITY IN COMPUTING

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. ———————— action that compromises the security of information owned by an organization.

   (a) Security attacks

   (b) Security Mechanism

   (c) Data service

   (d) Security services

2. ———————— is the original intelligible message or data that is fed into the algorithm as input.

(a) Presstext (b) PlainText

(c) Secret Key (d) Ciphertext

3. Which of the following modes of operation in DES is used for operating?

(a) Cipher Feedback Mode (CFB)

(b) Cipher Block Chaining (CBC)

(c) Electronic Code Book (ECB)

(d) Output Feedback Modes (OFB)

4. Data encryption standard is a block cipher and encrypts data in blocks of size of ———————— each.

(a) 16 bits

(b) 64 bits

(c) 32 bits

(d) All of the mentioned above

5. In SHA-3, which function does the operation L[2, 3]<- C[1] XOR L[2,3] XOR ROT(C[3],1) represent?

(a) Theta (b) Rho

(c) Pi (d) Chi

6. How many rounds are present in each iteration function of SHA-3?

(a) 3 (b) 4

(c) 5 (d) 6

7. There are ———————— types of firewall.

(a) 5 (b) 4

(c) 3 (d) 2

8. In SHA-3, which step function does not affect W[0, 0]?

(a) Theta (b) Iota

(c) Pi (d) Chi

9. In SHA-3, for a message digest size of 256, what is the bitrate 'r' (capacity 512)?

(a) 576 (b) 1088

(c) 1152 (d) 832

10. Packet filtering firewalls are deployed on

(a) routers

(b) switches

(c) hubs

(d) repeaters

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Discuss about the Active Attacks.

Or

(b) Discuss about Linear Cryptanalysis.

12. (a) What is Euler's totient function? Explain.

Or

(b) What are the principal elements of a public-key cryptosystem? – Explain.

13. (a) What is meant by Message Authentication?

Or

(b) List out the attacks during the communication across the network.

14. (a) Define Intruder. Name three different classes of intruder.

Or

(b) Define: Malicious software.

15. (a) Mention four SSL protocols.

Or

(b) What do you mean by S/MIME?

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Describe about Security Services (X.800).

Or

(b) Explain about the Principles of DES.

17. (a) Describe about the Fermat's Theorem.

Or

(b) Describe about the RSA Algorithm.

18. (a) Write a detailed note on Digital signatures.

Or

(b) Compare the performance RIPEMD-160 algorithm and SHA-1 algorithm.

19. (a) Explain kerberos authentication mechanism with suitable diagram.

Or

(b) Explain about Malicious Software.

20. (a) Write a Detail notes on Intrusion Detection System.

Or

(b) Discuss about the Firewall Design Principles.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20328 E **Sub. Code : AECS 53**

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022

Fifth Semester

Computer Science

Major Elective – CLOUD COMPUTING

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following are the features of cloud computing?

   (a) Security

   (b) Availability

   (c) Large Network Access

   (d) All of the mentioned

2. Which of the following is an example of a PaaS cloud service?
   (a) Heroku
   (b) AWS Elastic Beanstalk
   (c) Windows Azure
   (d) All of the above

3. Identify the Type 1 hypervisor among the following.
   (a) KVM
   (b) Virtual Server 2005 R2
   (c) Wind River Simics
   (d) VMS

4. In Which Type of VM, full virtualization can be possible?
   (a) Type 4 (b) Type 2
   (c) Type 3 (d) Type 1

5. Service Oriented Architecture (SOA) is
   (a) Strongly Coupled (b) Loosely Coupled
   (c) Strongly Cohesive (d) Loosely Cohesive

6. Which of the following is a key mechanism for protecting data?
   (a) Access control (b) Auditing
   (c) Authentication (d) All of the mentioned

7. This phase involves selecting a cloud provider based on the Service Level Agreement (SLA), which defines the level of service the provider receives.

(a) Maintenance and Technical Service

(b) Selecting Cloud Computing Provider

(c) Both (a) and (b)

(d) None of the above

8. Which of the following describes a message-passing taxonomy for a component-based architecture that provides services to clients upon demand?

(a) SOA (b) EBS

(c) GEC (d) All of the mentioned

9. Match the provider with cloud based service

(a) Amazon-Azure

(b) IBM-Elastic compute cloud

(c) EMC-Decho

(d) Microsoft-cloudburst

10. Amazon (EC2) provides virtual computing environments, known as ———————

(a) chunks (b) instances

(c) messages (d) None

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Write about

(i) Cluster computing

(ii) Grid computing

Or

(b) Portray Software as-a service.

12. (a) Give details about cloud computing architecture-phase 1.

Or

(b) How Server virtualization works?

13. (a) Explicate SOA infrastructure.

Or

(b) State the cloud risk management framework.

14. (a) What are the challenges of the cloud disaster recovery?

Or

(b) Categorize the types of SLAS.

15. (a) Depict message passing interface.

Or

(b) Exemplify cloud computing in

(i) healthcare

(ii) politics

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, by choosing (a) or (b)

Each answer should not exceed 600 words.

16. (a) (i) Mention the cloud computing characteristics.

(ii) Write advantages and disadvantages of cloud computing.

Or

(b) Describe the

(i) History of cloud computing

(ii) cloud service management

17. (a) Explain cloud computing life cycle.

Or

(b) Elucidate load balancing in cloud computing

18. (a) Express about

(i) SOA Components

(ii) Need of SOA

Or

(b) Illustrate Business process management platform as a service.

19. (a) Summarize trust management

Or

(b) (i) What are the threats in cloud?

(ii) Write note on drop box cloud.

20. (a) Illustrate Hadoop architecture.

Or

(b) Write about firewall characteristics.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20329 E **Sub. Code : AMCA 31**

B.C.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Third Semester

Computer Application — Core

JAVA PROGRAMMING

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. What is the extension of compiled java classes?

   (a) .class (b) .java

   (c) .txt (d) .js

2. What is the size of short in java programming?

   (a) 1 byte (b) 2 bytes

   (c) 4 bytes (d) 8 bytes

3. What is the return type of a method that does not return any value?

(a) int (b) void

(c) double (d) float

4. In a multi-level inheritance in java, the last subclass inherits methods and properties of _____

(a) Few classes above it

(b) Only one immediate superclass

(c) All classes above it

(d) None

5. _____ are containers for classes.

(a) Directories (b) Packages

(c) Applets (d) All the above

6. All exception types are subclasses of the built-in class _____

(a) Throwable

(b) Runnable

(c) ArithmeticException

(d) IOException

7. URL is an acronym for?

(a) Uniform Resource Locator

(b) Unified Resource Locator

(c) Uniform Restore Locator

(d) Unified Restore Locator

8. Java implements datagrams on top of the ———— protocol.

(a) TCP (b) IP

(c) http (d) UDP

9. The AWT classes are contained in the ———— package.

(a) java.io (b) java.awt

(c) java.lang (d) java.applet

10. ———— are components that allow a user to interact with your application in various ways.

(a) Controls (b) Menus

(c) Layout managers (d) None of the above

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Explain all arithmetic operators in Java with example.

Or

(b) Describe type conversion and casting.

12. (a) Explain the command line arguments in java briefly.

Or

(b) Describe recursion in detail.

13. (a) Write a java program using try and catch block to handle exception.

Or

(b) Explain the inheritance concept in interfaces with example program.

14. (a) Explain URL class in java.

Or

(b) Describe Action Event and AdjustmentEvent.

15. (a) Discuss about any five AWT classes.

Or

(b) Create a windowed program in Java.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Explain the buzzwords in Java.

Or

(b) Write a java program to add two matrices.

17. (a) Describe method overriding.

Or

(b) Explain string class in java with program.

18. (a) Explain packages in detail.

Or

(b) Describe interthread communication in detail.

19. (a) Explain basics of networking.

Or

(b) Explain delegation event model in detail.

20. (a) Discuss about choice and button controls with example.

Or

(b) Explain the following with example.

(i) Using a text field

(ii) Using a text area.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20330 E **Sub. Code : AMCA 53**

B.C.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fifth Semester

Computer Application — Core

RDBMS

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The optional parameters are enclosed within a pair of ———— brackets.

(a) ( ) (b) [ ]

(c) { } (d) < >

2. ———— constraint is also known as referential integrity constraint.

(a) FOREIGN KEY (b) PRIMARY KEY

(c) UNIQUE (d) NOT NULL

3. Which one of the following is used to change the column's heating?

(a) column aliases (b) table aliases

(c) concatenation (d) column command

4. The ———— function always returns the next higher integer value.

(a) EXTRACT (b) FLOOR

(c) CEIL (d) NVL

5. The joint with a join condition involving common columns from two tables is called ————

(a) Equijoin (b) Non equijoin

(c) Outer join (d) Self-join

6. The oracle objects that are used to create alternate names for tables and other objects are ————

(a) SYNONYMS (b) INDEX

(c) SEQUENCE (d) VIEWS

7. ———— is a block that is called implicitly by a DML statement.

(a) Package (b) Trigger

(c) Named block (d) Procedure

8. DCL stands for ————

(a) Data Control Language

(b) Data Communication Language

(c) Decision Control Language

(d) Decision Communication Language

9. In a ———— cursor, a cursor variable that can refer to different SQL statements at different times.

(a) Implicit (b) Explicit

(c) Dynamic (d) Static

10. The components in a PL/SQL records are called ————

(a) tables (b) fields

(c) data (d) all the above

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).
Each answer should not exceed 250 words.

11. (a) Explain briefly the SQL statements and its types.

Or

(b) What is a constraint? Explain the various constraints with examples.

12. (a) Describe in detail about updating existing rows/records.

Or

(b) How having clause can restrict the group? Explain with examples.

13. (a) Define Top-N analysis. Explain the importance of Top-N analysis.

Or

(b) Explain how the user's access needs to be controlled in a shared multi-user oracle environment.

14. (a) Describe the uses of anchored declaration in PL/SQL.

Or

(b) Give an account on the conditional or selection statement available for decision making in PL/SQL.

15. (a) Write about the explicit cursor with suitable examples.

Or

(b) Explain in detail about Varrays in PL/SQL.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Write short note on client-server database.

Or

(b) Give a brief note on displaying table information.

17. (a) Explain adding new rows/records with suitable examples.

Or

(b) Describe briefly about grouping data.

18. (a) What is a join? Explain the various types of join.

Or

(b) Define sequences. Explain how a query can be modify and drop a sequence with example.

19. (a) Explain about the various data types in PL/SQL.

Or

(b) Give an account on control structures with example.

20. (a) State the different types of exception. Explain any two.

Or

(b) Describe about PL/SQL tables in detail.

———————

Reg. No. : .....

Code No. : 20331 B **Sub. Code : ANCA 42**

U.G. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fourth Semester

Computer Application

Non Major Elective — MS WORD

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. மைக்ரோசாஃப்ட் வேர்ட் ———————— மென்பொருள்.

(அ) விண்ணப்பம் (ஆ) கம்பைலர்

(இ) சிஸ்டம் (ஈ) புரோகிராமிங்

Microsoft word is ———————— software.

(a) Application (b) Compiler

(c) System (d) Programming

2. MS வேர்ட்யில் இல்லாதது எது?

(அ) சாய்வு (ஆ) மேஜிக் டூல்

(இ) எழுத்துரு (ஈ) தடித்த

Which is not in MS word?

(a) Italic (b) Magic tool

(c) Font (d) Bold

3. பின்வருவனவற்றில் எது MS Word இல் இல்லை?

(அ) வார்த்தை எண்ணிக்கை

(ஆ) எழுத்துரு அளவு

(இ) தூரிகை

(ஈ) பக்க விளிம்பு

Which of the following is NOT present in MS Word?

(a) Word Count

(b) Font Size

(c) Brush

(d) Page Margin

4. விரைவு அணுகல் கருவிப்பட்டி MS Word இல் அலுவலக பொத்தானின் ————————இல் உள்ளது.

(அ) மேலே (ஆ) கீழே

(இ) இடது (ஈ) வலது

Quick Access Toolbar is present at ———————— of Office Button in MS Word.

(a) Up (b) Down

(c) Left (d) Right

5. MS Word இல் பின்வரும் டேப் எது இயல்புநிலையாக உள்ளது?

(அ) முகப்பு (ஆ) செருகு

(இ) பக்க தளவமைப்பு (ஈ) குறிப்பு

Which of the following tab is the default in MS Word?

(a) Home

(b) Insert

(c) Page Layout

(d) Reference

6. ஆவணத்தில் எழுத்துப்பிழை கண்டறியப்பட்டால் ———————— கோடு அடிக்கோடிடப்படும்.

(அ) சிவப்பு (ஆ) பச்சை

(இ) மஞ்சள் (ஈ) ஆரஞ்சு

A ———————— line wilt be drawn underlined if a spelling mistake is found in the document.

(a) Red (b) Green

(c) Yellow (d) Orange

7. MS Word இல் வார்த்தை எண்ணிக்கை எங்கே காட்டப்படுகிறது?

(அ) ரிப்பன் (ஆ) டாஸ்க் பார்

(இ) ஸ்டேட்டஸ் பார் (ஈ) பார்க்கவும்

Where is the Word Count shown in MS Word?

(a) Ribbon

(b) Task Bar

(c) Status Bar

(d) View

8. MS Word இல், Ctrl + S என்பது ————————க்கு பயன்படுத்தப்படுகிறது.

(அ) காட்சிகள்

(ஆ) அளவு

(இ) சேமிக்கவும்

(ஈ) எழுத்துப்பிழை சரிபார்ப்பு

In MS Word, Ctrl + S is used to ————————.

(a) Scenarios

(b) Size

(c) Save

(d) Spelling Check

9. அச்சிடப்பட்ட பக்கத்தில் உரை மற்றும் கிராபிக்ஸ் எவ்வாறு தோன்றும் என்பதை எந்தப் பார்வையில் பார்க்கலாம்?

(அ) இயல்பான

(ஆ) அச்சு தளவமைப்பு

(இ) அவுட்லைன்

(ஈ) வலை தளவமைப்பு

With which view can you see how text and graphics will appear on the printed page?

(a) Normal

(b) Print Layout

(c) Outline

(d) Web Layout

10. ஒரு ———————— என்பது முன் வரையறுக்கப்பட்ட வடிவமைப்பு கூறுகள் மற்றும் வண்ணத் திட்டங்களின் தொகுப்பாகும்.

(அ) அம்சம் (ஆ) ஹைப்பர்லிங்

(இ) தட்டு (ஈ) தீம்

A ———————— is a collection of predefined design elements and color schemes.

(a) Feature

(b) Hyperlink

(c) Palette

(d) Theme

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (அ) MS Word இன் முக்கிய அம்சங்கள் என்ன? விளக்கு.

What are the main features of MS Word? Explain.

Or

(ஆ) உரையை தடிமனாக மாற்றுவதற்கான படிகளை எழுதுங்கள்.

Write down the steps to make the text bold.

12. (அ) MS Word ஆவணங்களின் தலைப்பில் தானியங்கி பக்க எண்ணை எவ்வாறு சேர்க்கலாம்?

How can you add automatic page numbering in the header of an MS Word documents?

Or

(ஆ) நிரல் மீட்பு பற்றிய குறிப்பை எழுதவும்.

Write a note on program recovery.

13. (அ) MS Word ஆவணத்தில் அட்டவணையில் உள்ள கலங்களுக்கு இடையே வழிசெலுத்துவதற்கான விசைப்பலகை முறைகளை விவரிக்கவும்.

Describe the keyboard methods for navigating between the cells in a table in MS Word document.

Or

(ஆ) ஒரு வார்த்தையில் அடிக்குறிப்பு மற்றும் இறுதிக்குறிப்பை எவ்வாறு சேர்ப்பது?

How to add footnote and endnote in a word?

14. (அ) MS Word 2007 இல் உள்ள சேவ் பிரிவில் இயல்புநிலை இருப்பிடத்தை மாற்றுவதற்கான செயல்முறையை எழுதவும்.

Write Down the procedure of changing default location in the save in section in MS Word 2007.

Or

(ஆ) மேக்ரோக்களின் அமைதியான அம்சங்களைக் குறிப்பிடவும்.

Mention the silent features of macros.

15. (அ) MS Word 2007 இல் அச்சிடுவதற்கான அடிப்படை அம்சங்கள் என்ன?

What are the basic features of printing in MS-Word 2007?

Or

(ஆ) MS Word 2007 இல் எழுத்துரு பாணிகளை எவ்வாறு பயன்படுத்துவீர்கள்? விளக்கு.

How will you apply font styles in MS-Word 2007? Explain.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (அ) MS Word ஆவணத்திற்கான தனிப்பயன் விளிம்புகள் மற்றும் காகித அளவை எவ்வாறு அமைக்கலாம் என்பதை விவரிக்கவும்.

Describe how you can set custom margins and paper size for an MS Word document.

Or

(ஆ) உங்கள் MS ஆவணங்களில் டிஜிட்டல் கையொப்பதை எவ்வாறு சேர்ப்பீர்கள். விளக்குக.

How will you add digital signature to your MS documents? Explain.

17. (அ) MS Word இல் Mail Merge பற்றி உதாரணத்துடன் விவாதிக்கவும்.

Discuss the Mail Merge in MS Word with example.

Or

(ஆ) ஆவணத் தகவல் பேனலில் ஆவணத்தை நிர்வகிப்பதற்கான பண்புகளை விளக்கவும்.

Illustrate the manage document properties in the document information panel.

18. (அ) MS Word இல் கோப்பு அளவுகளைக் குறைத்தல் மற்றும் ஊழல் மீட்டெடுப்பை மேம்படுத்துதல் ஆகியவற்றை விளக்கவும்.

Explain the reduce file sizes and improve corruption recovery in MS Word.

Or

(ஆ) ஹோம் பேனலில் என்னென்ன விருப்பங்கள் உள்ளன? விளக்குக.

What are the options available in home panel? Explain.

19. (அ) பக்க அமைப்பில் பக்க பின்னணியை உதாரணத்துடன் விவரிக்கவும்.

Describe the page background in page setup with example.

Or

(ஆ) MS Word இல் காட்சிகளை ஆவணப்படுத்துவதற்கான படிகளை கோடிட்டுக் காட்டுங்கள்.

Outline the steps to document views in MS word.

20. (அ) விளக்கப்படங்களின் நன்மைகள் என்ன? விளக்குக.

What are the advantages of charts? Explain.

Or

(ஆ) MS Word ஆவணத்தில் தலைப்பு மற்றும் அடிக்குறிப்பைப் பற்றி விவாதிக்கவும்.

Discuss the header and footer in MS Word document.

———————

(6 pages) **Reg. No. :** .....

Code No. : 20331 E **Sub. Code : ANCA 42**

U.G. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fourth Semester

Computer Application

Non Major Elective — MS WORD

(For those who joined in July 2020 onwards)

Time : Three hours Maximum : 75 marks

PART A — ($10 \times 1 = 10$ marks)

Answer ALL questions.

Choose the correct answer.

1. Microsoft word is ———————— software.

   (a) Application (b) Compiler

   (c) System (d) Programming

2. Which is not in MS word?

   (a) Italic (b) Magic tool

   (c) Font (d) Bold

3. Which of the following is NOT present in MS Word?

(a) Word Count

(b) Font Size

(c) Brush

(d) Page Margin

4. Quick Access Toolbar is present at ———————— of Office Button in MS Word.

(a) Up (b) Down

(c) Left (d) Right

5. Which of the following tab is the default in MS Word?

(a) Home

(b) Insert

(c) Page Layout

(d) Reference

6. A ———————— line wilt be drawn underlined if a spelling mistake is found in the document.

(a) Red (b) Green

(c) Yellow (d) Orange

7. Where is the Word Count shown in MS Word?

(a) Ribbon

(b) Task Bar

(c) Status Bar

(d) View

8. In MS Word, Ctrl + S is used to ————————.

(a) Scenarios

(b) Size

(c) Save

(d) Spelling Check

9. With which view can you see how text and graphics will appear on the printed page?

(a) Normal

(b) Print Layout

(c) Outline

(d) Web Layout

10. A ———————— is a collection of predefined design elements and color schemes.

(a) Feature (b) Hyperlink

(c) Palette (d) Theme

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What are the main features of MS Word? Explain.

Or

(b) Write down the steps to make the text bold.

12. (a) How can you add automatic page numbering in the header of an MS Word documents?

Or

(b) Write a note on program recovery.

13. (a) Describe the keyboard methods for navigating between the cells in a table in MS Word document.

Or

(b) How to add footnote and endnote in a word?

14. (a) Write Down the procedure of changing default location in the save in section in MS Word 2007.

Or

(b) Mention the silent features of macros.

15. (a) What are the basic features of printing in MS-Word 2007?

Or

(b) How will you apply font styles in MS-Word 2007? Explain.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe how you can set custom margins and paper size for an MS Word document.

Or

(b) How will you add digital signature to your MS documents? Explain.

17. (a) Discuss the Mail Merge in MS Word with example.

Or

(b) Illustrate the manage document properties in the document information panel.

18. (a) Explain the reduce file sizes and improve corruption recovery in MS Word.

Or

(b) What are the options available in home panel? Explain.

19. (a) Describe the page background in page setup with example.

Or

(b) Outline the steps to document views in MS word.

20. (a) What are the advantages of charts? Explain.

Or

(b) Discuss the header and footer in MS Word document.

———————