S–5001

Sub. Code
22BCE1C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

First Semester

Computer Science

PROGRAMMING IN C

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is character set?
2. List the arithmetic operators.
3. Write a note on scanf( ).
4. How dose goto statement work in C?
5. Define Array.
6. List the string handling functions.
7. Write the elements of user defined function.
8. What is bit fields?
9. How to address the variable in pointer?
10. Define files.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) How to declare the variables in C program? Explain.

Or

(b) Write a note on Type Conversion in C.

12. (a) How to read and write a character?

Or

(b) Write a program to reverse the given number in C.

13. (a) Write short notes on Dynamic Arrays.

Or

(b) How to declare and initialize string variables? Explain.

14. (a) Discuss about scope visibility and life time variables.

Or

(b) Describe about structures within structures with example.

15. (a) How to initialize and declare pointer variables?

Or

(b) Write a note on command line arguments.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Illustrate the basic structure of C Program in detail.

17. Describe looping statement in C with suitable examples.

18. Explain about two dimensional arrays with suitable program.

19. Discuss about components of function definition with example.

20. Write the procedure to apply IO operations on files.

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S–5002

Sub. Code
22BCEA1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Computer Science

Allied – MS OFFICE

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. Compare notepad and wordpad.
2. List the features of MS Windows.
3. What is Wizard?
4. List the text attributes in MS Word.
5. Compare workbook and worksheet.
6. Write a note on cell.
7. What is handout?
8. List the menus available in power point.
9. What is report?
10. List the parts of access window.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) How to navigate between folders? Explain.

Or

(b) Describe the different types of menus available in windows.

12. (a) Write short notes on toolbar and icon in MS Word.

Or

(b) How to format page and paragraph? Explain.

13. (a) Discuss the concept working with data and range in Excel.

Or

(b) Write the procedure to use border and shading in Excel.

14. (a) Write the procedure to add sounds and movie in power point.

Or

(b) Write the concept of working with presentation using wizards.

15. (a) What are the steps involved to use query in MS Access?

Or

(b) Differentiate table wizard and design view for creating a table.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write the procedure to copy and move files and folders from one drive to another.

17. Explain in detail about the procedure of mail merge.

18. How to format cell in Excel? Explain.

19. What are the steps involved to create an animated presentation? Explain.

20. How do you create database in MS Access? Explain.

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S–5003

Sub. Code
22BCE2C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Second Semester

Computer Science

OBJECT ORIENTED PROGRAMMING WITH C++

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. List the benefits of OOP.
2. Why do we need Scope Resolution Operator?
3. What is static data member?
4. Write a note on destructor.
5. What is visibility mode?
6. Write the syntax for overloading binary operators.
7. What is “this” pointer?
8. Write the syntax to define field width.
9. Compare if stream and of stream.
10. What is command line argument?

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Discuss about function overloading with suitable example.

Or

(b) Write short notes on switch statement.

12. (a) Write the procedure to define a member function outside the class with example.

Or

(b) Discuss in detail about copy constructor.

13. (a) Illustrate single inheritance with suitable program.

Or

(b) Write the program to add two complex number using unary operator overloading concept.

14. (a) Write in detail about pointer to object concept with example.

Or

(b) Write a note on (i) width( ) (ii) setf( ).

15. (a) Illustrate the structure of template.

Or

(b) Describe the procedure to open and close the file with suitable program.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain a detailed note on basic concept of OOP.

17. Write a detailed note on array in a class with suitable example.

18. Illustrate the hierarchical inheritance with example.

19. Explain in detail about virtual functions with example program.

20. Write a program to use multiple parameters in class template.

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S–5004

Sub. Code
22BCEA2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Computer Science

Allied – DIGITAL PRINCIPLES AND COMPUTER ORGANIZATION

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. What is excess3 code?
2. Construct the circuit diagram of OR Gate.
3. Define octet.
4. Compare encoder and decoder.
5. Write the four rules for binary subtraction.
6. What is overflow?
7. Compare direct and indirect address.
8. Write the features of sequencer.
9. Compare RISC and CISC.
10. What is pipelining?

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Convert decimal number to binary of 58.25.

Or

(b) Write short notes on Grey code.

12. (a) Draw the logic circuit for the following:

$$Y = \left(\overline{A} + B + C\right)\left(A + B + \overline{C}\right)$$

Or

(b) Write short notes on Demultiplexer.

13. (a) Illustrate logic circuit and truth table of Half adder.

Or

(b) Give the sum of (i) $3_8 + 7_8 = ?$ (ii) $5_8 + 6_8 = ?$.

14. (a) Write short notes on time and control unit.

Or

(b) Illustrate the code format of micro instruction.

15. (a) Write any two addressing mode in detail with example.

Or

(b) Discuss about flynn's classification in detail.

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Construct the truth table and logic circuits for basic Gates.

17. Construct four variable Karnaugh Map with example.

18. Show the binary sums of

    0000 1111 + 0011 0111

    00010100+00101001

19. Write a note on

    (a) fetch routine

    (b) symbolic micro program

20. Explain in detail about auxiliary memory.

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S–5005

Sub. Code
22BCE3C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Third Semester

Computer Science

MICROPROCESSOR AND ITS APPLICATIONS

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Section A $(10 \times 2 = 20)$

Answer **all** questions.

1. What is an Accumulator?

2. Define instruction cycle.

3. Write the advantages of loosely coupled system over tightly coupled systems.

4. Differentiate between minimum and maximum mode configuration. Draw the bus request and bus grant timings in minimum mode system.

5. What is the role of a (Universal Asynchronous Receiver/Transmitter) UART in serial communication?

6. Differentiate between parallel and serial communication interfaces.

7. What are the key features of RISC (Reduced Instruction Set Computing) architecture?

8. How can the 8086 microprocessor design be optimized for low power consumption?

9. What role do control flow instructions play in ARM architecture?

10. Explain the purpose of data processing instructions in ARM architecture.

Section B ($5 \times 5 = 25$)

Answer **all** questions choosing either (a) or (b).

11. (a) Write an Assembly Language program to add a data byte located at offset 0500H in 2000H segment to another data byte available at 0600H in the same segment and store the result at 0700H in the same segment.

Or

(b) What are the different types of instructions in 8086 microprocessor?

12. (a) Write short note on: Advanced processors.

Or

(b) Write short note on: Coprocessor.

13. (a) Explain the concept of memory segmentation in the 8086 microprocessor. How does it affect memory addressing?

Or

(b) How can an 8086 microprocessor be used in a traffic light control system with LED displays?

14. (a) Explain the advantages of (Advanced RISC Machine) ARM architecture in terms of performance, power efficiency, and ecosystem support, and discuss its impact on the broader microprocessor market.

Or

(b) Explore real-world examples of RISC-based processors and their applications in various computing systems.

15. (a) Write an ARM assembly language program that reverses a given string. Your program should accept a string input from the user, reverse the order of characters in the string and then display the reversed string.

Or

(b) Write and explain briefly about any five ARM data transfer instructions with format and example.

Section C $(3 \times 10 = 30)$

Answer any **three** questions.

16. Discuss the significance of byte and string manipulation instructions in the context of the 8086 microprocessor architecture. How do these instructions contribute to efficient data processing and memory management in assembly language programming? Provide examples of their usage and explain their impact on program execution efficiency.

17. Explain in detail the structure of the system bus in the 8086 microprocessor architecture with pin diagram. Explain its signal types.

18. Describe the functions and operation of a keyboard/display controller in an 8086 microprocessor-based system with architecture diagram and pin description.

19. Explain the importance of instruction set design in microprocessor architecture. Discuss the factors influencing the design of an instruction set, including the target application domain, architectural constraints, and performance requirements.

20. Write and explain in detail about ARM control flow instructions with format and example.

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S–5006

Sub. Code
22BCE3C2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Third Semester

Computer Science

DATA STRUCTURES AND COMPUTER ALGORITHMS

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions

1. How arrays are used in data structure?

2. Delineate the rules to be followed during infix to postfix conversions.

3. Define Linked lists.

4. Write the advantages of Modularity.

5. State Elementary Data Structures (EDS).

6. Mention the different ways of representing a graph.

7. What is Binary Search?

8. Demarcate Submatrix Products.

9. Outline the scheme to construct Bi-Connected Graph.

10. List the drawbacks of dynamic programming.

Part B (5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the advantages and disadvantages of using a sparse matrix.

Or

(b) Discuss how representing the arrays in data Structure.

12. (a) Explain briefly

(i) Polynomial Addition

(ii) Binary Tree Traversal.

Or

(b) Describe traversing linked list. Give an example and write the algorithm.

13. (a) What is a priority queue and how does it work? Explicate.

Or

(b) Write down the procedure for inserting an element into a queue that uses an array for implementing the queue.

14. (a) Elucidate the performance analysis of Algorithm.

Or

(b) Exemplify the process of determining the minimum and maximum values in a binary search tree in a data structure.

15. (a) Enlighten the algorithm for job sequencing with deadlines.

Or

(b) Elaborate the algorithm used to solve the traveling sales problem. Discuss its types.

Part C $(3 \times 10 = 30)$

Answer any **three** questions.

16. (a) Summarize the circular queue and how it works.

(b) Explain about double queue and exactly how it performs.

17. Give an explanation of the Linked List Insertion Operation. How a node are inserted after a specific node.

18. Explicate the Various applications if Graph.

19. Illustrate the concept of Strassen's matrix Multiplication.

20. Discuss briefly optimal merge patterns minimum cost Spanning trees.

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S–5007	Sub. Code
	22BCEA3

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Computer Science

Allied – OPERATING SYSTEM

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is the function of dispatcher?

2. Define System Call.

3. What is segment?

4. List any two file operations with description.

5. What is deadlock?

6. Illustrate the structure of kernel.

7. List the advantages of Linux.

8. Write the syntax to make directory.

9. What is kill command?

10. Define AWK.

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) What is the key difference between trap and interrupt? Explain.

Or

(b) Write short notes on critical regions.

12. (a) How to implement files using contiguous allocation?

Or

(b) Differentiate internal and external fragmentation in detail.

13. (a) Discuss in detail about resource allocation graphs for deadlock detection.

Or

(b) Describe the architecture of android.

14. (a) Discuss the commands for files and directories with example.

Or

(b) Write the procedure to install Linux with its requirements.

15. (a) Write short notes on (i) cat (ii) cal commands with example.

Or

(b) Discuss the looping statements used in shell programming.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. How to implement threads in users space? Explain.

17. Explain about LRU page replacement algorithms.

18. What are the strategies available to prevent from deadlock? Explain.

19. Discuss in detail about essential Linux commands.

20. How to pass parameters in shell programming? Explain with example.

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S–5008

Sub. Code
22BCE4C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Fourth Semester

Computer Science

JAVA PROGRAMMING

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define WWW.
2. List the types of tokens.
3. Write the precedence of arithmetic operations.
4. Define : Operator.
5. How to implement the interface?
6. Define wrapper class.
7. List the types of errors with description.
8. Define Thread.
9. How to build applet code?
10. What is graphics class?

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Write a note on H/W and S/W requirements of java.

Or

(b) Discuss the various data types available in Java.

12. (a) Illustrate conditional statement with example.

Or

(b) Write a program to print multiplication table using do-while in Java.

13. (a) Illustrate method overloading with example.

Or

(b) How to access variables in interface? Explain.

14. (a) Write a note on thread priority.

Or

(b) Discuss about multiple catch statements in exception handling concept with suitable example.

15. (a) How to pass parameters in applets? Explain.

Or

(b) How to draw line and rectangle in java?

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Illustrate java program structure in detail with suitable example.

17. Explain the types of operators in detail.

18. How to create two dimensional arrays? Explain with example.

19. Illustrate life cycle of thread in detail.

20. Write a note on

    (a) Drawing Arcs

    (b) Drawing Polygons.

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S–5009

Sub. Code
22BCE4C2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Computer Science

OPERATING SYSTEM

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions

1. What is OS?
2. List the files manipulation commands in Unix.
3. State the features of fork command.
4. Define mutual exclusion.
5. Write the features of dispatcher.
6. Define claim edge.
7. Write a note on limit register.
8. What is lazy swapper?
9. What are the three outcomes to perform disk write?
10. List the file attributes.

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) What are the operations available in OS? Explain.

Or

(b) Write short notes on system call.

12. (a) Difference between long term, short term and middle term scheduling.

Or

(b) Write and explain the process structure in Peterson's solution.

13. (a) State the criteria in scheduling algorithm.

Or

(b) What are the four conditions for deadlock occurrence? Explain.

14. (a) How to swap two processors using disk? Explain.

Or

(b) Write short notes on Thrashing.

15. (a) Write short notes on (i) swap space use (ii) swap space location.

Or

(b) What are the operations available in files?

Part C (3 × 10 = 30)

Answer any **three** questions.

16. Illustrate about architecture of computer system.

17. Write in detail about the fundamental models of interprocess communication.

18. Describe in detail about round robin scheduling algorithm with suitable example.

19. Write a detailed note on paging with example.

20. Illustrate the structure of RAID and its levels in detail.

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S–5010

Sub. Code
22BCEA4

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Computer Science

Allied – INTERNET AND WEB DESIGN

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. What is Internet?
2. Compare telnet and FTP.
3. List the features of HTML.
4. What is Style sheet?
5. Define page layout.
6. List the input type in HTML5.
7. Write the feature of Javascript.
8. What is object?
9. List the mouse events.
10. What is anchor?

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Write short notes on WWW.

Or

(b) Illustrate the applications of Internet.

12. (a) Write the procedure to create hyperlinks in HTML file.

Or

(b) How to format paragraphs using style sheet?

13. (a) How to apply background and foreground fills? Explain.

Or

(b) Write the procedure to incorporate audio and video in HTML5.

14. (a) Discuss the operations available in Javascript.

Or

(b) Compare client side and server side Javascript with example.

15. (a) Write a note on (i) link (ii) Area.

Or

(b) Write and explain any two click event handlers.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Write a detailed note on browsers and search engine.

17. Explain in detail about the procedure for creating graphics based navigation bar.

18. How to embed video clips in HTML5? Explain in detail.

19. Write a program to generate factorial number using loop in Javascript.

20. Explain in detail about key event handlers with example.

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S–5011	Sub. Code
	22BCE5C1

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Fifth Semester

Computer Science

RELATIONAL DATABASE MANAGEMENT SYSTEMS

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define database.
2. Give example for DML commands.
3. State the first normal form with example.
4. How to deal with multivalued attributes during normalization?
5. Discuss the role of client and server in client server database architecture.
6. Define Homogeneous database.
7. Define primary key with suitable example.
8. What SQL command is used to grant a user the ability to select data from a specific table?
9. What is the purpose of trigger in SQL?
10. Define cursor.

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Describe various disadvantages of file system compare to Database management system.

Or

(b) With example explain various mapping cardinalities and total participation

12. (a) Explain 2NF, 3NF and BCNF with example.

Or

(b) What is Normalization? What is Redundancy? Compare 1NF and 2 NF with example.

13. (a) Instead of storing shared structures in shared memory, an alternative architecture would be to store them in local memory of a special process and access the shared data by inter process communication with the process. What would be the drawback of such an architecture.

Or

(b) Is a multiuser system a parallel system? Why or why not? Explain the advantages of parallel databases.

14. (a) Implement following relation using SQL query.

Student (stud–no,stud–name, sub1, sub2, total mark, percentage) Create the table, add 5 records and display the data.

Or

(b) Implement following relation using SQL query.

Employee (emp–no, emp–name, department, city, salary) Create the table, add 5 records and Find all the employee whose emp–no is less than 100 and salary more than 25000 and department is "Account."

15. (a) What is PL/SQL? Explain the advantages of PL/SQL.

Or

(b) Write a procedure to find greatest of three numbers in PL/SQL.

Part C $(3 \times 10 = 30)$

Answer any **three** questions.

16. Draw E-R diagram for Hospital management system.

17. Consider a relation R with five attribute A,B,C,D,E having following dependencies : A->B, BC-> E and ED->A

(a) List all Keys for R

(b) In which normal form table is, justify your answer.

18. Discuss in detail about homogeneous and heterogeneous databases.

19. Create a view that selects every product in the product table with a price greater than the average price. Consider the following field for product table : ProductID, ProductName, Price.

20. Explain the concept of blocks, procedures and packages in PL/SQL.

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S–5012

Sub. Code
22BCE5C2

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Fifth Semester

Computer Science

PYTHON PROGRAMMING

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Differentiate between the following operator with the help of examples: = and ==

2. What is the use of relational operators?

3. Write down the general form of if conditional statement.

4. What is the use of break statement?

5. What is the difference between tuples and lists in Python?

6. What are the different ways to create a list?

7. List out the differences between class and object.

8. Define inheritance.

9. Define relation.

10. What is the role of matplotlib?

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Construct logical expressions for representing the following conditions :

    (i) Marks scored should be greater than 300 and less than 400.

    (ii) Whether the value of grade is an upper case letter.

    (iii) The post is engineer and experience is more than four years.

    Or

    (b) Write a short note on built in function.

12. (a) Write the syntax and usage of while loop.

    Or

    (b) Explain about string slicing with examples.

13. (a) What is the difference between tuples and lists in Python?

    Or

    (b) With suitable example explain.

14. (a) Narrate about polymorphism.

    Or

    (b) Explain the procedure to add methods dynamically.

15. (a) Explain the categories of SQL operations.

    Or

    (b) Write a socket programming application for transferring files across the networks.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Elaborate on important mathematical functions.

17. Develop a program to find the largest among three numbers.

18. Analyze the basic list operations in detail with necessary programs.

19. With suitable example explain built in functions for classes.

20. Write a program that shows the moving car.

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S–5013

Sub. Code
22BCE5C3

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Fifth Semester

Computer Science

SOFTWARE ENGINEERING

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is prototyping?
2. Define Utility Program
3. What is top down cost estimate?
4. What is the use of Verification process?
5. Define Regular expressions
6. What is Finite state mechanism?
7. What is Semantic Model?
8. What is Quality of conformance?
9. Define Perfective maintenance
10. What is Software configuration management?

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Write a short note on Configuration management.

Or

(b) Enlist the pros and cons of Democratic team.

12. (a) Narrate series of cost estimation stages.

Or

(b) Explain three levels of product complexity.

13. (a) Enlist the pros and cons of milestone technique.

Or

(b) Describe the Characteristics of a Good Design.

14. (a) Explain standards and guidelines for a preferred coding style.

Or

(b) Narrate Need for Quality Assurance.

15. (a) What are the different Integration and testing tools? Explain.

Or

(b) Explain Prototyping tools.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Describe the Life cycle of Software.

17. What are the different software paradigms available? Can we combine the paradigms? Explain

18. Discuss Design techniques approaches in detail.

19. Elaborate on Software quality attributes.

20. Explain the three static analysis tools.

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S–5014

Sub. Code
22BCE5C4

B.Sc. DEGREE EXAMINATION, NOVEMBER 2024

Fifth Semester

Computer Science

COMPUTER GRAPHICS

(CBCS – 2022 onwards)

Time : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is the use of paintbrush system?
2. Define horizontal retrace.
3. What are the applications of line drawing algorithms?
4. Define DDA algorithm.
5. What are curve attributes?
6. Define pixel phasing.
7. Write the 2-D Rotation transformation matrix.
8. What is the use of differential scaling?
9. What is the need for Homogenous coordinate system?
10. Differentiate window and view port.

Part B (5 × 5 = 25)

Answer **all** questions choosing either (a) or (b).

11. (a) Write a note on Boundary Fill.

Or

(b) Write a note on Flood Fill.

12. (a) Illustrate Bresenhams Line Drawing Algorithm.

Or

(b) What are DDA and Explain DDA Line Drawing Algorithm?

13. (a) Explain Midpoint Ellipse Generating Algorithm.

Or

(b) Describe Output primitives briefly.

14. (a) Describe Matrix Representations.

Or

(b) What is Composite Transformations? Explain.

15. (a) Explain Liang-Barsky Line Clipping.

Or

(b) Write a short note on Projections.

Part C

$(3 \times 10 = 30)$

Answer any **three** questions.

16. Explain Basic Transformations with example and diagram if necessary.

17. Illustrate Scan-Line Polygon Fill Algorithm.

18. Describe the Raster Scan Systems.

19. Describe General Composite Transformations and Computational Efficiency with examples.

20. Write short notes on.

    (a) Sutherland-Hodgeman Polygon Clipping.

    (b) Two-Dimensional Viewing Functions.

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