D–1024	Sub. Code
	51711

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION,
MAY 2023.

First Semester

PRINCIPLES OF INFORMATION TECHNOLOGY

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

PART A — ($10 \times 2 = 20$ marks)

Answer ALL the questions

1. What do you mean by information system?

2. What is the difference between software and firmware?

3. Where are voice recognition systems used?

4. List out operations of CPU.

5. Mention the use of open-source software. Give examples

6. Delineate Operating System.

7. State Firewalls.

8. Mention some of the commonly used Internet services.

9. List out the different types of ISDN line.

10. Enlighten web browser and its types.

PART B — ($5 \times 5 = 25$ marks)

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

11. (a) Discuss the role of IT in Education and training.

Or

(b) Explain Global Positioning System and its advantages.

12. (a) What is input device? Describe different input devices in detail.

Or

(b) Illustrate the basic anatomy of computer.

13. (a) Illuminate the advantages of database software.

Or

(b) Deliberate Presentation Graphics Software.

14. (a) Explain the Basic Networking Devices.

Or

(b) Differentiate between control bus, data bus and address bus.

15. (a) Expound Modem and communication Software.

Or

(b) Write Short notes on

(i) ISDN

(ii) Cable Modems

(iii) Email Communication

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Discuss in detail about types of Information Technology.

17. Describe the various types of storage devices with examples.

18. Explain ISO/OSI model in computer networks with diagrams.

19. Illustrate in detail about Network topologies.

20. Elaborate in detail about use Net Newsgroup and its hierarchies.

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D–1025

Sub. Code
51712/22412

DISTANCE EDUCATION

COMMON FOR DIPLOMA IN COMPUTER APPLICATIONS & CERTIFICATE PROGRAMMING IN WEB DESIGNING DEGREE EXAMINATION, MAY 2023.

First Semester

OPEN SOURCE SOFTWARE

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

PART A — ($10 \times 2 = 20$ marks)

Answer ALL the questions

1. What is the Need of open Source System?

2. What is system software?

3. What is the use of LINUX Directory structure?

4. What are the two main types of open source software licenses?

5. What are the two stages in boot Process of Linux?

6. What are all the data types available in MySQL?

7. What are the features of MySQL?

8. What does PEAR stand for PHP?

9. What is the difference between Svar and SSvar?

10. Explain LDAP?

PART B — ($5 \times 5 = 25$ marks)

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

11. (a) Discuss about system calls.

Or

(b) What are the applications of open source software?

12. (a) Discuss about disk cloning in Linux?

Or

(b) Elaborate on various Linux Shells?

13. (a) Explain Starting, terminating MySQL.

Or

(b) Explain Sorting Query Results in MySQL with examples.

14. (a) Explain the procedures to handle file in PHP.

Or

(b) Discuss about working of Arrays in PHP with example.

15. (a) Provide the syntax for various math functions in PHP.

Or

(b) Explain Error handling function in PHP.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Describe the Advantages and disadvantages of open source software.

17. Explain the process management in LINUX with diagrams?

18. Explain the operators in MySQL with suitable examples.

19. Describe PHP Connectivity in detail.

20. How Security and templates can be implemented using PHP.

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D–1026	Sub. Code
	51713

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION, MAY 2023.

First Semester

OFFICE AUTOMATION

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL the questions

1. Specify any five toolbars available in Ms-Word?

2. Mention about Dropcap option with example in Ms-Word?

3. Write short notes on subscript and superscript with examples.

4. List the types of spreadsheets?

5. Define Macros.

6. How do you apply a single format to all the sheets present in a workbook?

7. How do I change the shape of a Text box?

8. Which object is used to hold text on the slide?

9. Mention some of the common types of forms in MS Access?

10. What are the advantages of MS Access over MS SQL Server?

PART B — ($5 \times 5 = 25$ marks)

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

11. (a) Explicate the advantages of MS-Word.

Or

(b) Explain the steps to create Mail-merge in Ms-word with example?

12. (a) How do you freeze panes in Excel? Explain.

Or

(b) Enlighten the various categories of functions available in Excel?

13. (a) Discuss how to alternating the text and numbers with Auto Fill.

Or

(b) Describe about the graphics in how to adding a clip Art and add an image from a file.

14. (a) How to insert a new slide and how to applying a design template.

Or

(b) Illustrate custom slide show and its funtions.

15. (a) Give explanation the Microsoft Access data types with examples?

Or

(b) Examine the various types of forms in MS Access.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Illustrate formatting, moving, copying and pasting Text styles in Ms-Word?

17. Describe Formatting Cells, Formatting Date and Times and Auto Formatting.

18. Explain in detail about Pivot table with suitable example.

19. Discuss in detail about different types of slide layout in power point.

20. Explain the various types of queries with example in MS Access.

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D–1027	Sub. Code
	51721

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS
EXAMINATION, MAY 2023.

Second Semester

DIGITAL LOGIC FUNDAMENTALS

(CBCS 2020 – 21 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

PART A — ($10 \times 2 = 20$ marks)

Answer ALL questions.

1. What is Bit?

2. What is meant by word length of computers?

3. Give the 2's complement of 11010101110_2.

4. What is the use of Grey code?

5. State the Associative and Distributed Boolean laws.

6. Simplify : $(A + C)(AD + AD) + AC + C$

7. Define: MUX.

8. Give the Truth-table for S-R Flip-flop.

9. Define: RAM.

10. Expand: EBCDIC.

PART B — ($5 \times 5 = 25$ marks)

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

11. (a) Convert 46687_{10} into Binary, Octal and Hexadecimal numbers.

Or

(b) Perform binary division: $24_{10} / 3_{10}$.

12. (a) Simplify using Boolean Laws:

$$\overline{(\overline{A}.\ B.\ \overline{C})} + \overline{(A.\ \overline{B}.\ C)}$$

Or

(b) Write a note on DeMorgan's theorems.

13. (a) Explain about SOP and POS with an example.

Or

(b) State the steps for simplifying Boolean functions using Quine-McClukey method.

14. (a) Draw and explain the working of Half-adder and Half-subtractor.

Or

(b) Write a note on BCD counter.

15. (a) Draw and explain the working of J-K Flip-flop. How to derive a T flip-flop from J-K flip-flop?

Or

(b) Write a note on ASCII codes.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Perform the following:

(a) Convert decimal to binary : $(10.7)_{10} = (?)_2$

(b) Convert binary to octal : $(1001110101011)_2 = (?)_8$

(c) Convert hexa-decimal to binary : $(4F2D)_{16} = (?)_2$

(d) Convert binary to Gray code : $(011010011)_2 = (?)_{Gray}$

17. Simplify the following using K-map.

$F(A, B, C, D) = \sum m(3,5,6,7,8,10,12,13,14)$

18. Draw and explain the working of 4-bit BCD adder.

19. Design and discuss the working of 2×4 decoders and 4×2 encoders.

20. Explain the types of shift registers.

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D–1028

Sub. Code
51722

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION, MAY 2023.

Second Semester

PROGRAMMING IN C

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions

1. List the restrictions for assigning variable names.

2. What is Token? What are the different types of token available in C language?

3. Define Decision Making.

4. State formatted input and output.

5. How to declare array? Write the syntax with example.

6. Initialize the string with examples.

7. Write the about Function calls in C.

8. What is meant by Recursive function?

9. Define Pointer? How a variable is declared to the pointer?

10. Discriminate putchar ( ) and getchar ( ).

PART B — ($5 \times 5 = 25$ marks)

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

11. (a) Explain with example, the various constants available in C language.

Or

(b) What is type conversion? Explain two types of conversion with examples.

12. (a) Discuss unconditional control statements? Explain any two with syntax and example.

Or

(b) List the differences between while..loop and do-while loop with examples.

13. (a) Examine Multi dimensional array with suitable examples.

Or

(b) Give Explanation about String handling functions.

14. (a) Elucidate function definition and function prototype with examples.

Or

(b) Differentiate between call by value and call by reference with examples.

15. (a) Illuminate the syntax of structure declaration in C with examples.

Or

(b) Elaborate how the pointer variable declared and initialized?

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. List all the operators used in C. Give examples.

17. Explain I/O operations.

18. Explain the declaration and initialization of one dimensional and two dimensional arrays with an example.

19. Differentiate user defined and library functions.

20. Write the syntax for opening a file with various modes and closing a file.

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D–1029

Sub. Code
51723

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION,
MAY 2023.

Second Semester

DATA STRUCTURES AND ALGORITHMS

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions

1. What are the basic data structures?

2. Define: Algorithm.

3. State the principles of Array index.

4. How to declare a two dimensional numeric array?

5. Define: Queue.

6. Define: Polish notation.

7. List any two uses of Linked list.

8. Define: Binary tree.

9. Define: Hash table.

10. What is the space complexity of Linear Search?

PART B — ($5 \times 5 = 25$ marks)

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

11. (a) Write a note on primitive data types.

Or

(b) Why time complexity measured? Explain.

12. (a) Write a program to count the characters of an array.

Or

(b) Write a note on n-dimensional array.

13. (a) Discuss the applications of Queue.

Or

(b) How Circular Queue is checked whether it is full or not?

14. (a) Write a note on representation of Linked list.

Or

(b) Write a program to create a Binary tree.

15. (a) Explain the types of Binary tree with neat diagrams.

Or

(b) Write a program to illustrate linear search.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Explain the operations on Multi-dimensional array with examples.

17. Write a program to illustrate insert and delete operations in Queue.

18. Describe the concept of traversing on Linked List with example.

19. Elaborate on Binary tree traversal operations with example.

20. Explain the concept of Binary searching technique with example code.

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