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DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION, MAY 2022.

First Semester

PRINCIPLES OF INFORMATION TECHNOLOGY

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions

1. Define information system.

2. What is called data?

3. What are the various types of computers?

4. Expand the term RAM.

5. Name the various types of application software.

6. Define the term operating system.

7. What do you mean by LAN?

8. Write down the purpose of modem

9. What is DNS?

10. Write a note on Usenet newsgroup.

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b) in each

11. (a) Explain the role of IT in business and industry.

Or

(b) Write short notes on Global positioning system.

12. (a) Describe the history of computes.

Or

(b) Explain the various types of computer memory.

13. (a) Write short notes on database software and its use.

Or

(b) Explain the functions of OS.

14. (a) Differentiate between Internet and Intranet.

Or

(b) Write short notes on firewalls.

15. (a) Explain about E-Mail communication system.

Or

(b) Explain about chatting and conferencing in internet.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions

16. Explain the applications of IT in science, Engineering and Mathematics.

17. Describe the anatomy of computers with neat sketch.

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18. Explain the features of word processing software.

19. Describe the various network topologies with neat sketch.

20. Discuss on:

    (a)   Analog and Digital signals

    (b)   Internet search engine.

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DISTANCE EDUCATION

COMMON FOR DIPLOMA IN COMPUTER APPLICATION
AND CERTIFICATE PROGRAMME IN WEB DESIGNING
EXAMINATION, MAY 2022.

First Semester

OPEN SOURCE SOFTWARE

(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 advantages of open source software?

2. How open source software differs from commercial software?

3. How does Linux work?

4. List any four advantages of application development with Linux.

5. Write the default port number for the MySql database application.

6. Write the example string function code to remove trailing spaces in MySql.

7. What are the date types available in PHP?

8. What is conditional assignment opertor?

9. What is the difference between SQL and NoSQL databases?

10. Write a note on PHP templates.

PART B — (5 × 5 = 25 marks)

Answer ALL questions

11. (a) Make a brief introduction about open source software.

Or

(b) Explain the necessity of open source software.

12. (a) Discuss in detail: Kernel mode and User mode in Linux operating system.

Or

(b) Explain the concept of signals in Linux.

13. (a) Write the detailed procedure to set up a MySql account.

Or

(b) Explain with example about Record selection technique in MySql.

14. (a) Discuss in detail about PHP programming in web environment.

Or

(b) Explain with example about String manipulation and regular expressions.

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15. (a) Brief on PHP email communication.

Or

(b) Explain LDAP functions.

PART C — (3 × 10 = 30 marks)

Answer any THREE questions

16. Elaborate on the applications of open sources.

17. Explain the concept of scheduling.

18. Explain with example about query result sorting concept in MySql.

19. Explain with example about OOP concept in PHP.

20. Describe the security features in PHP and SQL.

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DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION, MAY 2022.

First Semester

OFFICE AUTOMATION

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions

1. What is mail merge?

2. Explain how to open an existing document in MS word?

3. How to insert a new worksheet in Excel?

4. How will you obtain the current date in excel?

5. List the names of any five types of chart.

6. What is the use of auto fill handle in Excel?

7. How to create a presentation from template?

8. Write a procedure to resize the textbox in power point.

9. Write a procedure to print data report in MS-Access.

10. Define the term query. List its types.

PART B — (5 × 5 = 25 marks)

Answer ALL questions

11. (a) Brief on the features in word.

Or

(b) Briefly explain about spelling and grammar.

12. (a) How do you add and resize rows and columns in Excel? Explain the steps.

Or

(b) Explain any five functions in Excel.

13. (a) What is chart? Explain the way to create a chart in worksheet.

Or

(b) How to copy a chart from Excel into a Word document? Explain steps.

14. (a) How to prepare slides in power point? Illustrate.

Or

(b) Write short notes on: (i) Applying design template (ii) Changing slide layouts.

15. (a) Explain the steps to find and replace data in a table.

Or

(b) How to create a form using wizard in MS-Access? Explain.

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PART C — (3 × 10 = 30 marks)

Answer any THREE questions

16. Discuss in detail about header and footer creation and editing in word.

17. Detail on the features of MS-Excel.

18. Elaborate on the concept of graphics in Excel.

19. "Working with slides" - Discuss in detail.

20. Explain the steps to create a new table in access database.

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DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION,
MAY 2022.

Second Semester

DIGITAL LOGIC FUNDAMENTALS

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL the questions

1.   Who is the father of number system?

2.   Write two different number systems you know.

3.   Which number system is used in Boolean algebra?

4.   What is meant by combinatorial circuit?

5.   Write the meaning of the term MinTerm.

6.   What is standard sum of product?

7.   Write the Boolean expression for half adder?

8.   What is the job of docoder?

9.   What is a sequential circuit? Give an example.

10. What is the need for data representation?

PART B — (5 × 5 = 25 marks)

Answer ALL the questions

11. (a) Explain decimal number system with illustrations.

Or

(b) Write short notes on Character codes. Give examples.

12. (a) How Boolean algebra is used in digital circuit design? Explain.

Or

(b) Write the binary equivalent of the number 6 in decimal. Narrate the steps.

13. (a) Write short notes on product of sums method with an example.

Or

(b) What are the rules for K –Map simplification? Explain.

14. (a) What is subtractor? Discuss about its types.

Or

(b) What is meant by flip flop? Discuss about its types.

15. (a) What do you mean by registers in memory? Explain about its types.

Or

(b) What is meant by data type? Discuss different variety of data types.

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PART C — (3 × 10 = 30 marks)

Answer any THREE questions

16. Explain in detail about the process of converting a decimal number to binary and then to Hexadecimal number systems. Illustrate with examples.

17. What are the three fundamental operations in Boolean algebra? Explain in detail with an example.

18. How do you simplify a four variable karnaugh map? Explain with an example.

19. What is called a multiplexer? Discuss in detail about its applications.

20. Explain in detail the following: (a) Binary counters (b) Fixed point representations.

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DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS
EXAMINATION, MAY 2022.

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. Define the term constant.

2. Write the syntax of declaring a variable.

3. What is meant by control statement?

4. Write the syntax of while statement in C.

5. Write the general form of array declaration.

6. Write any two string handling functions in C.

7. What are the elements of user defined functions?

8. Define the term recursion.

9. How will you declare a structure variable?

10. What do you mean by pointer?

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b) in each

11. (a) Describe the basic structure of a C program.

Or

(b) List down the keywords in C.

12. (a) Write about formatted input and output functions.

Or

(b) Explain the syntax of FOR statement and give examples.

13. (a) How will you declare two-dimensional array? Explain with syntax.

Or

(b) Write down the characteristics of object-oriented programming.

14. (a) With syntax, explain function declaration, definition and function call.

Or

(b) Differentiate between structure and union.

15. (a) How will you access the value of a variable through its pointer? Explain with an example.

Or

(b) Write down the command for opening and closing a data file.

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PART C — (3 × 10 = 30 marks)

Answer any THREE question

16. Explain about operator precedence and associativity.

17. Explain switch statement with a sample code.

18. Write a C program to arrange n numbers in ascending order.

19. Write a C program to find the factorial of a given number using recursion.

20. Explain the I/O operations on files.

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DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION, MAY 2022.

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.   Define the term primitive data type.

2.   What do you mean by Time complexity of algorithm?

3.   What is meant by traversing in an array?

4.   List down the applications of stack.

5.   Define the term Queue.

6.   Distinguish between array and linked list.

7.   Write the steps to add an item to the beginning of the list.

8.   Define the term complete binary tree.

9.   What is meant by hashing in data structure?

10. What is meant by sequential search?

PART B — (5 × 5 = 25 marks)

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

11. (a) Discuss about the characteristics of an algorithm.

Or

(b) Write an algorithm to find largest of three numbers.

12. (a) How to represent array in memory? Explain.

Or

(b) Discuss about multi dimensional array.

13. (a) Describe push operation in stack.

Or

(b) Write in detail about recursion.

14. (a) Explain single linked list with an example.

Or

(b) Discuss on circular linked list.

15. (a) Elaborate on collision resolution techniques in hashing.

Or

(b) How to traverse an element in binary tree? Explain.

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PART C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Illustrate how to perform number sorting in an array with an example.

17. Elaborate on the operations in circular queue.

18. Describe the operations in doubly linked list.

19. Write short notes on the following with reference to binary search tree. (a) in order traversal (b) preorder traversal. Give examples.

20. Explain binary search technique.

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