D–7105

Sub. Code
51711

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION - MAY 2021

First Semester

PRINCIPLES OF INFORMATION TECHNOLOGY

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Define information systems.
2. What is software? Give examples.
3. List out the type of computers.
4. Define computer memory.
5. What is operating system?
6. What is WAN? Explain.
7. What is the use of uniform resource locator? (URL)
8. Define intranet.
9. What are the types of IP address?
10. Explain the types of communications.

SECTION B — (5 × 5 = 25 marks)

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

11. (a) Explain the concepts of information technology.

Or

(b) Write short note on digital computer systems.

12. (a) Explain in detail about history of computers.

Or

(b) Discuss the characteristics of computer systems.

13. (a) Briefly explain about various features of word processing.

Or

(b) Briefly explain about various charts in spread sheet processing.

14. (a) What is computer network? Explain its types.

Or

(b) Write short note on firewall.

15. (a) State the difference between Analog and digital signals with neat diagram.

Or

(b) Discuss about ISN line.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss the application areas of information technology with suitable examples.

17. Describe about anatomy of computer system with neat diagram.

18. Explain in detail about the functions of operating system with neat diagram.

19. Discuss about network topology with diagram.

20. Explain about internet functional concepts and its tools.

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D–7106

Sub. Code
51712

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION - MAY 2021

First Semester

OPEN SOURCE SOFTWARE

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. What is open source software?

2. List out any four popular open source software.

3. What do you mean kernel mode in Linux?

4. Mention the three classes of processes in LINUX?

5. What is My SQL and why is My SQL so popular?

6. What are the tables in My SQL?

7. How is sequence handled in My SQL?

8. Define Metadata.

9. How to run a PHP script?

10. What is type casting in PHP?

SECTION B — ($5 \times 5 = 25$ marks)

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

11. (a) Discuss about the advantages of open source software.

Or

(b) What are the factors led to the development of open source software?

12. (a) Explain cloning.

Or

(b) Write short note on scheduling.

13. (a) How can we delete a column or a row in MySQL? Explain.

Or

(b) What are the different ways to join tables in MySQL?

14. (a) Explain sorting query results in MYSQL.

Or

(b) Define metadata and explain it with example.

15. (a) Discuss on PHP functions with an example.

Or

(b) Explain in detail debugging and error handling.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the discrete set of process states with example.

17. Explain the process management in LINUX with suitable system call?

18. (a) Explain SELECT statement by providing examples for the following:

    (i) Retrieving individual columns

    (ii) Retrieving multiple columns

    (iii) Retrieving ALL columns

    (iv) Retrieving distinct rows.

    (b) Write a MYSQL query for the following using DATE and TIME functions.

    (i) Display current date and time

    (ii) Display time in 10:10:10 format

    (iii) Display the name of the day of a particular date

    (iv) Display the date "one year ago" from today's date.

19. Write a program to create the various statements for content management system for accessing My SQL data base.

20. Explain in detail about PHP operators.

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D–7107

Sub. Code
51713

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS (DCA)
EXAMINATION - MAY 2021

First Semester

OFFICE AUTOMATION

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Write any two features of MS word.

2. Define header.

3. What is a cell?

4. How can you add a new Excel worksheet?

5. What are macros?

6. What do you mean by relative address in excel?

7. How will you save a presentation?

8. What is a handout?

9. What are the parts of access window?

10. Define database.

SECTION B — (5 × 5 = 25 marks)

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

11. (a) How text editing is done in Microsoft word?

Or

(b) Explain in detail about bullets and numbering in MS word.

12. (a) How will you resize the rows and columns in Excel?

Or

(b) How to replace one value with another in Excel?

13. (a) How do add an image from a file in MS Excel.

Or

(b) Explain the steps to create a line graph in excel.

14. (a) Explain the features of power point.

Or

(b) How will you create and manipulate slides in power point?

15. (a) How will you create a table using design view?

Or

(b) How will you create a form in MS access?

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the mail merge in detail with an example.

17. Explain about how formulas and functions are handled in excel worksheet with example.

18. How do you create Pivot charts in excel?

19. Explain about auto content wizard to create presentation.

20. How will you create a query in MS-Access? Give an example.

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D–7108

Sub. Code
51721

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS
EXAMINATION - MAY 2021

Second Semester

DIGITAL LOGIC FUNDAMENTALS

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is universal gate?

2. Define ASCII code.

3. Write the distributive property of Boolean law.

4. Draw the logical diagram of exclusive OR (XOR) gate.

5. Write short note on encoder.

6. What is sequential circuit?

7. What is the use of T flip flop?

8. Define BCD counter.

9. What do you meant by overflow?

10. Write note on error detecting code?

SECTION B — ($5 \times 5 = 25$ marks)

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

11. (a) Define number system. Explain different types of number system.

Or

(b) What are the types of logic gates? Explain any four.

12. (a) Convert the following: (i) $(1111001)_2$ Binary to Octal (ii) $(1AE)_{16}$ Hexadecimal to Binary.

Or

(b) Write short notes on sum of product and product of sum.

13. (a) What is the use of multiplexer? Explain.

Or

(b) Draw, explain the logic symbol of half adder and write truth table.

14. (a) Explain RS flip flop.

Or

(b) Discuss on Binary counter.

15. (a) What are the different types of compliments? Explain.

Or

(b) Explain about floating point representation of data.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Write the different types of numeric code and explain BCD, Excess-3 code and Gray code.

17. Explain the fundamental concepts of Boolean algebra.

18. Simplify the following logical expression using K-Map $Y = \sum_m (7,9,10,11,12,13,14,15)$.

19. Describe the JK Flip Flop.

20. What is shift register? What are the various types of shift register? Explain.

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D–7109

Sub. Code
51722

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS EXAMINATION - MAY 2021

Second Semester

PROGRAMMING IN C

(CBCS 2021 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What are keywords? Give example.
2. How will you define symbolic constants?
3. What is the purpose of an array?
4. How will you terminate a loop?
5. Illustrate declaring and initializing variables.
6. List any two string handling functions.
7. How will you access the member of structure?
8. Define pointer.
9. What are the different modes of opening file in C?
10. Define file.

SECTION B — (5 × 5 = 25 marks)

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

11. (a) Tabulate the arithmetic operators and their precedence.

Or

(b) Write a C program to read and write strings.

12. (a) Differentiate between '*while*' and '*do-while*' statement with example.

Or

(b) Write a C program to add two given matrices A and B of size (3 x 3).

13. (a) Define function. How will you declare and call user defined function? Give example.

Or

(b) Write a C program to display month names using strings.

14. (a) What is structure? Illustrate the use of structures.

Or

(b) How will you access the address of integer, char, float and double variable? Give example.

15. (a) Write short note on: Sequential access file.

Or

(b) Write short note on: Macro substitution.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain about type conversion in expressions. Give example.

17. Write a C program to count the number of vowels in a given string using switch statement.

18. (a) How will you pass 'C Programming' string as argument to a function. Explain. (6)

    (b) Illustrate the use of function returning values. (4)

19. Write a C program to open, write 'Welcome text file' and close text file.

20. Explain about the nested 'if' structure with suitable example.

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D–7110

Sub. Code
51723

DISTANCE EDUCATION

DIPLOMA IN COMPUTER APPLICATIONS
EXAMINATION - MAY 2021

Second Semester

DATA STRUCTURES AND ALGORITHMS

(CBCS 2020 – 2021 Academic Year Onwards)

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Define data structure.

2. List the types of data structure.

3. Define algorithm.

4. What do you mean by time complexity of algorithm?

5. Define array.

6. List the advantages of queue.

7. How can you represent stack?

8. Define binary tree.

9. Name various types of lists.

10. Define hashing.

SECTION B — (5 × 5 = 25 marks)

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

11. (a) What are various primitive data types? Explain.

Or

(b) What are the characteristics of arrays?

12. (a) How can you initialize arrays? Give example.

Or

(b) Write short note on: Polish notation.

13. (a) Write short note on: Merge lists.

Or

(b) Discuss various applications of queue data structure.

14. (a) Provide the linked representation of stack. Explain.

Or

(b) How can you represent binary tree? Give example with suitable diagram.

15. (a) Write short note on: Binary tree and its types. Give examples.

Or

(b) Briefly explain about linear search technique with suitable example.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss in detail about two dimensional arrays and its operations with example.

17. Explain about the insert and delete operations of circular queue with diagram.

18. How can you insert and delete an element in to single linked list? Explain with example and neat sketch.

19. Discuss about various hashing techniques with examples.

20. Explain in detail about binary search technique with suitable example.

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