

2BIN21015

(Pages : 2)

Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BVOC SD Degree Examination, November 2021

GECIDM03 – Discrete Mathematics

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

**PART – A**

Answer *all* questions.

Each question carries Two mark.

Ceiling -25 Marks

1. Explain Kuratowski's two graphs.
2. What do you mean by pendant vertices in a graph?
3. What is a Boolean algebra?
4. Draw the Hub of  $W_5$ .
5. Is  $K_4$  Eulerian?
6. Let  $A = \{1,2,3\}$  and  $B = \{a, b\}$ , then  $A \times B = \dots\dots\dots$
7. What is a tree?
8. Explain symmetric relation with suitable example.
9. Construct the truth table for the operator exclusive OR.
10. Vertex connectivity of a graph  $G$  is denoted as .....
11. Write down Eulerian formula.
12. What do you mean by isolated vertex in a graph?
13. Write down the duality law in mathematical logic.
14. Define chromatic number.
15. What do you mean by tautology?

**PART – B**

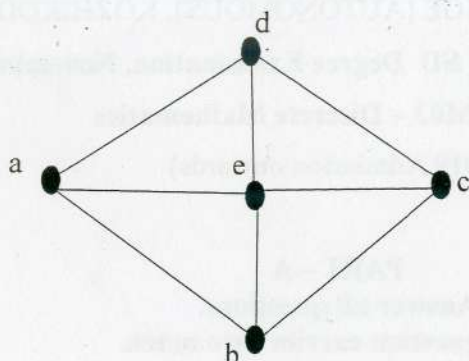
Answer *all* questions.

Each question carries Five marks.

Ceiling -35 Marks

16. Show that  $P \rightarrow (Q \rightarrow P) \leftrightarrow \sim P \rightarrow (P \rightarrow Q)$
17. Explain partial order relations.
18. Differentiate cycle and circuit with suitable example.

19. Construct a spanning tree of the following graph.



20. Explain planar graph and dual graph in graph theory.

21. Write down a short note on universal and existential quantifiers.

22. State and prove De-Morgan's laws in mathematical logic.

23. Explain any one matrix representation of graphs with suitable example.

### PART - C

Answer any *two* questions.

Each question carries Ten marks.

24. Explain greatest lower bound and least upper bound of a set with suitable example.

25. Explain travelling salesman problem.

26. What are the different logical operators in mathematical logic? Construct truth table for each.

27. Write down a relation which is reflexive and symmetric but not transitive.

**2 x 10 = 20 Marks**

2B1N21013

(Pages : 2)

Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BVOC SD Degree Examination, November 2021

SDC1IT01 – Fundamentals of Computer & Programming in C

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

**PART – A**

Answer *all* questions.

Each question carries **Two** mark.

**Ceiling -25 Marks**

1. Define the term keyword?
2. What are operators?
3. What is an algorithm?
4. What are header files in C? Give two examples.
5. Explain the use of continue and break statements?
6. What are pointers? List any two advantages of pointers?
7. Explain the use of malloc() and calloc() functions?
8. What do you mean by type casting? Explain two types of type casting in C
9. What are functions? Give the general form of a function header?
10. What are constants? Explain different numeric constants in C?
11. Define the terms scope and life of a variable?
12. What are macros? Give the general form of macro definition in C?
13. Explain command line arguments?
14. What are unions? Give the general form of union definition?
15. Define the term unary operators. Give two examples?



**PART – B**

Answer *all* questions.

Each question carries **Five** marks.

**Ceiling -35 Marks**

16. What are arguments? Illustrate various argument passing mechanisms in C with examples?
17. Explain various steps in Computer problem solving?
18. What are flowcharts? List and explain various flowchart symbols?
19. Write a C program to find the complete roots of a quadratic equation?
20. What are Data types? List and explain various primary data types in C?
21. List and explain various operations possible on a pointer variable?
22. Write a Program to swap the values of two variables using function and pointers?
23. Distinguish between structure and union?

**PART - C**

Answer any *two* questions.

Each question carries **Ten** marks.

24. With the help of a diagram, explain the structure of a C program?
25. What are looping statements? With the help of examples, explain various looping statements in C?
26. Write a C program to find the sum of two matrices?
27. List and explain different types of functions in C?

**2 x 10 = 20 Marks**

2B1N21014

(Pages : 2)

Reg. No:.....

Name: .....

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BVOC SD Degree Examination, November 2021

SDC1IT02 – Internet Programming

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

**PART – A**

**Answer all questions.**

**Each question carries Two mark.**

**Ceiling -25 Marks**

1. What is Domain Name Server?
2. What you mean by search engines?
3. What you mean by the term WWW?
4. Which are the attributes of <img> tag?
5. What is an HTML form?
6. Explain the syntax of any two form elements?
7. What is the importance of JavaScript on a webpage?
8. What do you mean by ID selector?
9. What is the difference between bulleted list and numbered list?
10. Which are the data types allowed in java script?
11. What are the advantages of Joomla?
12. What is the need of an external css file? Give an example for linking external css with html page.
13. Define Article Manager in Joomla?
14. What is Joomla? Explain.
15. What are content items, section and categories in Joomla. Explain.



**PART – B**

**Answer *all* questions.**

**Each question carries Five marks.**

**Ceiling -35 Marks**

16. Explain about DNS server and its function
17. What are the advantages of E-mail?
18. Write a short note about search engines?
19. What are the advantages of external style sheets?
20. What is an event? Write an example code for on click event.
21. Implement a JavaScript function for finding the square of a number
22. List any five features of Joomla?
23. What are Joomla Modules? Explain.

**PART - C**

**Answer any *two* questions.**

**Each question carries Ten marks.**

24. Explain in detail about the following protocols:
  - a) HTTP
  - b) FTP
25. Design a form using HTML tags for entering your personal details? The document must contain at least ten fields, a submit button and cancel button?
26. What is CSS? Explain in detail about the various ways of inserting CSS into webpage?
27. Explain in detail about the backend of Joomla? Creating Class time table using table tags?

**2 x 10 = 20 Marks**