

1B1N20655

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Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BVOC SD Degree Examination, November 2020

SDCIIT01 – 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 identifier. List any two rules to be followed while forming identifier?
2. What are variables? List by two attributes of a variable?
3. What is a flowchart?
4. What are library functions in C? Give two examples?
5. Explain the use of return and exit statements?
6. What are pointers? List any two advantages of pointers?
7. Define dynamic memory allocation. List any two benefits of it?
8. What do you mean by bitwise operators? Give examples?
9. What are arguments? List two types of function arguments?
10. What are symbolic constants? Explain how symbolic constants are defined in C?
11. Define the terms scope of a variable? List various types of variable scopes in C?
12. What are macros? Give the general form of macro definition in C?
13. Explain command line arguments?
14. What are structures? Give the general form of structure definition?
15. Explain the use of increment and decrement operators in C?

PART – B

Answer *all* questions.

Each question carries **Five** marks.

Ceiling -35 Marks

16. Write a C program to find the factorial of a number using recursion?
17. Explain the top down and bottom up approaches to problem solving?
18. Give the syntax and use of scanf() and printf() statements in C?
19. Write a C program to find the prime numbers within a limit?
20. Distinguish between entry controlled and exit controlled loops. Illustrate each with examples?
21. What are functions? Explain the general form of function definition in C?
22. Write a Program to swap the values of two variables using function and pointers?
23. List and explain various dynamic memory allocation functions in C?

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 operators? List and explain different types of operators in C?
26. Write a C program to find the trace and transpose of a matrix?
27. What are files? List and explain various file manipulation functions in C?

2 x 10 = 20 Marks

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Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BVOC SD Degree Examination, November 2020

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 a hyperlink? How it is included in HTML?
2. Name the types of selectors in CSS.
3. What are the differences between ID selector and Class selector?
4. What is WWW?
5. Mention the heading tags in HTML?
6. What are graphical browsers?
7. What is the difference between Internal and external CSS?
8. What are the differences between internal and external style sheets?
9. How do you set the border of table using CSS?
10. What is Domain Name Server?
11. Can we use POP instead of IMAP? Why?
12. Explain in detail about selectors in CSS
13. What is Joomla ?
14. List the different components of Joomla?
15. Explain about Media Manager?

PART – B

Answer *all* questions.

Each question carries Five marks.

Ceiling -35 Marks

16. What is Content Management System (CMS)?.
17. Briefly explain about the working of FTP protocol.
18. Write about Check Box with example.
19. Briefly explain lists and its types.
20. Write about alert box? Give an example for warning the error message in entering data.
21. How do we implement radio button? Give an example.
22. Explain in detail about the front end of Joomla.
23. Where can you see the use of Joomla frequently?

PART - C

Answer any *two* questions.

Each question carries Ten marks.

24. (a) Explain in detail about the applications of internet.
(b) Briefly explain the working of e-mail.
25. What are the components in Joomla? Explain.
26. Explain in detail about java script functions.
27. What is HTML table? List the tags used and its attributes. Write an HTML code for
Creating Class time table using table tags?

2 x 10 = 20 Marks

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BVOC SD Degree Examination, November 2020

GEC1DM03 – 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. What do you mean by a digraph?
2. Define Centre of a tree.
3. Write down De-Morgan's laws.
4. Explain reflexive relation with suitable example.
5. Construct the truth table for the connective OR.
6. What are the different connectives in mathematical logic?
7. Construct a relation from the set $A = \{1,2,3\}$
8. What is a set? Give an example.
9. How many pendant vertices are given in the following graph?



10. Which of the following are upper bounds of the set $\{3,2,9,7,4\}$?

a) 2 b)5 c)7 d)9 e)10

11. What is a quantifier?
12. What do you mean by degree of a vertex?
13. Explain spanning tree with suitable example.
14. Write down the max-flow min-cut theorem.
15. Show that $(p \rightarrow q) \leftrightarrow \sim p \vee q$ using truth table.

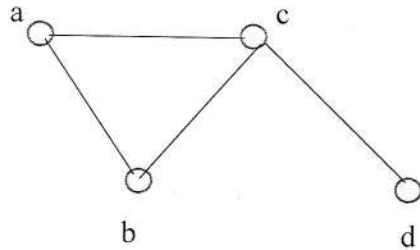
PART –B

Answer *all* questions.

Each question carries Five marks.

Ceiling -35 Marks

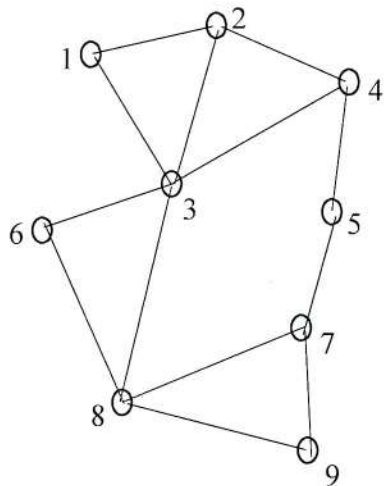
16. Let us consider the following undirected graph and construct the adjacency matrix



17. Explain the connectedness in graph theory.

18. Write down a short note on a) cut set b) cut vertices

19. Construct a cycle and a circuit from the following graph.



20. Compare simple and multigraph with suitable example.

21. Explain Boolean algebra and its properties.

22. What do you mean by level of a tree?

23. Show that $P \rightarrow (Q \rightarrow R) \leftrightarrow P \rightarrow (\sim Q \vee R) \leftrightarrow (P \wedge Q) \rightarrow R$

PART - C

Answer any *two* questions.

Each question carries Ten marks.

24. Explain equivalence relation with suitable example.

25. Compare Eulerian and Hamiltonian graphs with suitable example.

26. Explain quantifiers in mathematical logic.

27. What is a set? What are the different representations of a set?

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Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BVOC AUTO Degree Examination, November 2020

SDC1AE01 – Basic Electrical & Electronic Engineering

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

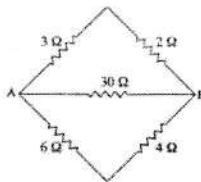
PART – A

Answer *all* questions.

Each question carries **Two** mark.

Ceiling -25 Marks

1. State and explain Kirchhoff's voltage law?
2. Find the equivalent resistance of the given network?



3. Differentiate permeability and permittivity?
4. Explain the principle behind generation of alternating current?
5. Calculate the resonant frequency for a series LCR circuit having inductance=5H, C=500μF, R=10Ω.
6. Name the 2 basic connections of 3 phases and write down their voltage current relationships?
7. Draw the circuit diagram for centre tap full wave rectifier
8. Draw the structure of NPN, PNP transistors with their symbols.
9. Explain why the Pi-Filter is used widely.
10. Write down an expression to find frequency in an LC Oscillator.
11. Explain the basic theory of FET
12. What are the different operating regions of BJT?
13. What are the requirements of a good carrier wave?
14. What are the different modes of propagation in space communication?
15. The sky waves are not used in TV transmission. Explain?

PART – B

Answer *all* questions.

Each question carries **Five** marks.

Ceiling - 35 Marks

16. What is the use of a capacitor? Derive the expression for voltage current relation in a capacitor?
17. Explain faraday's law of electromagnetic induction.
18. In a series R L circuit, $R=20\Omega$ while $L=60\text{ mH}$, the input current lags the supply voltage by 60° . Obtain the value of applied frequency?
19. A resistor of 50Ω and a capacitor of $100\mu\text{F}$ are connected in series across a 100V , 50Hz supply. Find the impedance, current, power factor and voltage across the resistor?
20. For a certain transistor common base current gain is 0.98 and emitter current is 2mA . Calculate the values of collector current and base current?
21. Explain the process of Zener diode voltage stabilization.
22. Draw the damped oscillation curve in an LC circuit.
23. Name the different advantages and disadvantages of a FM over AM?

PART - C

Answer any *two* questions.

Each question carries **Ten** marks.

24. Two coils having 150 and 200 turns respectively are wound side by side on a closed iron circuit of section 150 cm^2 and mean length of 300 cm . Determine the mutual inductance between the coils and e.m.f. induced in the second coil if current changes from zero to 10A in the first coil in 0.02 second. Relative permeability of iron = 2000 .
25. In a series R-L circuit, the inductance being 20mH , the impedance is 17.85Ω . The angle of lag of the input current from applied voltage is 63.5° , find the values of angular frequency and resistance of the circuit?
26. Explain the procedures to obtain the Q-point of a given transistor in CB configuration?
27. Classify and explain different types of LC Oscillator in detail.

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Reg. No:.....

Name:

FAROOK COLLEGE (AUTONOMOUS), KOZHIKODE

First Semester BVOC AUTO Degree Examination, November 2020

SDC1AE02 – Basic Mechanical Engineering

(2019 Admission onwards)

Time: 2 ½ hours

Max. Marks: 80

PART – A

Answer all questions.

Each question carries Two mark.

Ceiling -25 Marks

1. "No engine can be made to work on Carnot cycle" Justify the statement.
2. State the Third Law of Thermodynamics.
3. Differentiate between COP and efficiency.
4. What is a 2-stroke Engine?
5. Why different types of sounds are produced in different bikes, though they run on SI engines?
6. Define Manifold in an engine.
7. Which pump requires priming, what is the need for it?
8. Define hydraulic turbine.
9. Define compressor.
10. Explain the working of window air conditioners.
11. Name some secondary refrigerants.
12. Explain Evaporator.
13. What are the principal parts of a lathe?
14. What are the types of gears used in power transmission?
15. Explain the principle of welding.

PART – B
Answer *all* questions.
Each question carries Five marks.
Ceiling -35 Marks

16. Differentiate between enthalpy and entropy.
17. Which has more efficiency: diesel engine or petrol engines? Justify your comment.
18. Explain the lubrication system in an engine.
19. With a neat sketch explain the working of a Centrifugal pump.
20. Explain desirable properties required for refrigerants.
21. What are the basic units of mechanical refrigeration systems?
22. List and explain any three operations performed on drilling machines.
23. Distinguish between open and closed belt drives.

PART - C
Answer any *two* questions.
Each question carries Ten marks.

24. Explain the following terms: Isolated System, Open System and Closed System and give examples for each system.
25. Discuss the working of a Four Stroke SI Engine.
26. Explain hydroelectric power plants in detail.
27. Write short notes on casting and welding.

(2 x 10 = 20 Marks)