U.G. DEGREE EXAMINATION – JUNE 2021
COMPUTER APPLICATION
FIRST YEAR
COMPUTER FUNDAMENTALS & PC SOFTWARE

Time : 3 Hours   **Maximum Marks : 75**

PART – A   (5 x 5 = 25 Marks)

Answer any FIVE questions

1. What is operating system? Explain its importance.

2. What is vector processing? Explain.

3. Explain about the serial transmission.

4. Explain full duplex communication.

5. How to add and remove application in windows?

6. How does Macros work?

7. Describe the Working with text.

PART – B   (5 x 10 = 50 Marks)

Answer any FIVE questions

8. Explain about the types of operating system.

9. Discuss about the System software and applications software.

10. Explain the different types of network.

11. Illustrate the need for computer security.

12. What is GUI? Explain the Running user programs.

13. How to protect a document? Explain.

14. How to prepare power point presentation? Explain.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

FIRST YEAR

COMPUTER FUNDAMENTALS & PC SOFTWARE

Time : 3 Hours   **Maximum Marks : 70**

PART — A   (5 × 2 = 10 Marks)

Answer any FIVE questions in 50 words.

1. What are the different types of ROM?

2. Give the components of data communication.

3. What is a folder?

4. How to create an index in MS-Word?

5. What is an operating system? Give examples.

PART — B   (4 × 5 = 20 Marks)

Answer any FOUR questions in 150 words.

6. Explain various types of software.

7. What is multiprogramming? Explain.

8. What are the accessories? Explain.

9. How do you save a word document? Specify the commands.

10. What is template? Mention the usage of templates.

11. Discuss about Half Duplex mode of communication.

12. How many types of networks are available? Explain any one in detail.

PART — C (4 × 10 = 40 Marks)

Answer any FOUR questions in 350 words.

13. Write short notes on
    (a) Pipelining
    (b) Vector processing.

14. Describe analog and digital data transmission.

15. How to prepare power point presentation? Explain.

16. Explain ISDN in detail.

17. Explain cryptography with its classification in detail.

18. Describe analog and digital data transmission.

19. What is GUI? Explain about the elements of windows and working with dialog box.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

FIRST YEAR

'C' PROGRAMMING AND DATA STRUCTURE

Time : 3 Hours   **Maximum Marks : 75**

PART – A   (5 x 5 = 25 Marks)

Answer any FIVE questions

1. Develop a program in C using Precedence of operations.

2. Write a program in C to find the sum of n numbers stored.

3. Explain about the pointer as function argument.

4. Write short notes no representation of arrays in memory.

5. Explain the DFS with examples.

6. Write about various operations on Stack.

7. Distinguish between linear and non-linear data structures.

PART – B   (5 x 10 = 50 Marks)

Answer any FIVE questions

8. Describe the various types of operators with example.

9. Discuss the various storage classes in C.

10. Explain the various types Arrays in C with examples.

11. Discuss briefly about operations on pointers with examples.

12. Discuss the various traversal techniques of a binary tree.

13. Write short notes on:

    a. Balanced tree

    b. Breadth-first search.

14. Explain about doubly linked list with insertion and deletion algorithm.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

FIRST YEAR

'C' PROGRAMMING AND DATA STRUCTURE

Time : 3 Hours   Maximum Marks : 70

PART — A   **(5 × 2 = 10 Marks)**

Answer any FIVE questions in 50 words.

1. What is a global variable?

2. Define Structure.

3. List out the advantages of using a linked list.

4. Abbreviate DFS and BFS.

5. What is Inorder Traversal? Give one example.

PART — B   **(4 × 5 = 20 Marks)**

Answer any FOUR questions in 150 words.

6. What are C-Tokens? List and define different C-Tokens with examples.

7. List the differences between while loop and do-while loop.

8. Differentiate linear and non-linear data structure.

9. Explain AVL tree in detail.

10. Write a C program to find the biggest of three numbers.

11. Discuss the two way merge with example.

12. Define stack. Explain the functions of stack with example.

PART — C (4 × 10 = 40 Marks)

Answer any FOUR questions in 350 words.

13. What is data type? List and explain different data types with examples.

14. What is array? Explain the declaration and initialization of one dimensional and two dimensional array with an example

15. Explain the operations of singly linked lists.

16. Explain different types of graph search algorithm and give the various applications with example.

17. What is a pointer? Write a C program to find the sum and mean of all elements in an array using pointer

18. What is type conversion? Explain different types of conversion.

19. Write a C program to search a name in a given list using binary search technique.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

FIRST YEAR

INTRODUCTION TO SYSTEM SOFTWARE

Time: 3 Hours   **Maximum Marks: 75**

PART – A   **(5 x 5 = 25 Marks)**

Answer any FIVE questions

1. Mention the elements of programming language.

2. Discuss the importance of Compiler.

3. Write short notes on Structure of operating system.

4. What is Deadlocks? Explain it.

5. Write some Change mode in Unix.

6. How to inspect files in Unix? Explain.

7. Discuss its importance Simple shell programs.

PART – B   **(5 x 10 = 50 Marks)**

Answer any FIVE questions

8. Explain the Approaches to compiler development.

9. Discuss about the implementation of macro and macro preprocessor.

10. Explain the Multiprogramming with fixed and dynamic partition..

11. Discuss about the File management in operating system.

12. Explain the file system and special files in Unix.

13. Describe the shell programming with example.

14. How to maintain user accounts in Unix? Explain.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

FIRST YEAR

INTRODUCTION TO SYSTEM SOFTWARE

Time: 3 Hours   Maximum Marks: 70

PART - A   (5 × 2 = 10 Marks)

Answer any FIVE questions.

1. Define system software.

2. What is the advantage of Multiprogramming?

3. What is UNIX?

4. What are shell variables?

5. What is Demand paging?

PART - B   (4 × 5 = 20 Marks)

Answer any FOUR questions.

6. Explain in detail about basic assembler functions.

7. Explain the Banker's algorithm for deadlock avoidance

8. Brief about the commands used in the vi Editor.

9. How decision making is done? Explain with program

10. What are the main features of UNIX? Explain.

11. How to maintain the user account in UNIX OS.

12. Discuss about macro processors.

PART - C (4 × 10 = 40 Marks)

Answer any FOUR questions.

13. Discuss in detail about debugging functions and capabilities.

14. Explain in detail inter process communication.

15. What information is presented when the following commands are entered?

   (a) date   (b) who   (c) password   (d) bc   (e) script

16. Write a shell program for counting characters, words and line.

17. Discuss in detail about paging.

18. Explain in detail the various page replacement strategies .

19. Explain the method of changing file access permission.

UG-A-503	BCA-04

U.G. DEGREE EXAMINATION – JUNE 2021
COMPUTER APPLICATION
FIRST YEAR
INTRODUCTION TO COMPUTER ORGANIZATION

Time: 3 Hours   Maximum Marks: 75

PART – A   (5 x 5 = 25 Marks)

Answer any FIVE questions

1. Discuss briefly on floating point.

2. Explain about fixed point representation.

3. Differentiate SRAM and DRAM.

4. Enumerate on different types of ROM.

5. Describe instruction set.

6. Discuss briefly about instruction set.

7. Explain Assembly language program development tools.

PART – B   (5 x 10 = 50 Marks)

Answer any FIVE questions

8.   Diagrammatically explain Von Neumann Architecture.

9.   Give elaborate discussion on flip flop with proper illustrations.

10. Distinguish between Main Memory and Cache Memory.

11. Explain the types of cache mapping.

12. Give detail discussion on ALU.

13. Elaborate Control Unit.

14. Create an assembly language program of your own.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

FIRST YEAR

INTRODUCTION TO COMPUTER ORGANIZATION

Time : 3 Hours   Maximum Marks : 70

PART — A   **(5 × 2 = 10 Marks)**

Answer any FIVE questions.

1. Define Absolute Addressing.

2. What is called underflow?

3. What is program Counter?

4. How cache memory reduces the execution time?

5. What is timing diagram? Give one example.

PART — B   **(4 × 5 = 20 Marks)**

Answer any FOUR questions.

6. Compare and contrast Static RAM and Dynamic RAM.

7. Explain about universal gates.

8. Explain (a) Maskable Interrupt (b) Non maskable interrupt.

9. State the differences between machine language and assembly language.

10. What is an Instruction cycle? Explain.

11. What is a Microprocessor? Give examples.

12. Write about RS flip-flop.

PART — C   **(4 × 10 = 40 Marks)**

Answer any FOUR questions.

13. Explain about the types of Micro operations.

14. Explain about logic gates with truth table.

15. Explain the mapping process of cache memory.

16. What is an Interrupt? Explain the different types of Interrupts.

17. Discuss in detail DMA transfer.

18. Write an assembly language program to subtract two numbers.

19. Explain any five addressing modes in detail.

U.G. DEGREE EXAMINATION – JUNE 2021
COMPUTER APPLICATION
FIRST YEAR

ELEMENTS OF SYSTEM ANALYSIS AND DESIGN

Time: 3 Hours   Maximum Marks: 75

PART – A   (5 x 5 = 25 Marks)

Answer any FIVE questions

1. What are the characteristics of a Software system?

2. Write the elements of system Analysis.

3. Write about structured system design methodologies.

4. Write about Prototype design.

5. Write about the task of system development.

6. What are the types of system control Documentation?

7. What are the attributes of a good Analyst?

PART – B   (5 x 10 = 50 Marks)

Answer any FIVE questions

8. Write about software development life cycle model in detail.

9. Explain Data Flow Diagram in detail with an example.

10. Explain the types of system design in detail.

11. Write in detail about Input design and control in system analysis.

12. Explain in detail about designing test data in system development.

13. Elaborate the overview of Management Information system.

14. What are the components of Multimedia and explain the hardware and software?

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

FIRST YEAR

ELEMENTS OF SYSTEM ANALYSIS AND DESIGN

Time : 3 Hours   Maximum Marks : 70

PART — A   **(5 × 2 = 10 Marks)**

Answer any FIVE questions.

1. What is called EDP?

2. What is structured design?

3. Define quality assurance.

4. What is called Ergonomics?

5. Abbreviate EIS.

PART — B   **(4 × 5 = 20 Marks)**

Answer any FOUR questions in 150 words.

6. Write short notes on schematic model.

7. Explain with example of an Information System.

8. Briefly discuss on the interpersonal skills relevant to systems development.

9. Discuss the advantages of Questionnaire.

10. Explain the various symbols used in DFD.

11. Explain the need for testing.

12. Write short notes on HIPO charts.

PART — C   (4 × 10 = 40 Marks)

Answer any FOUR questions in 350 words.

13. List the characteristics of a system. Explain.

14. Write short notes on :

    (a)   Interdependence of system.

    (b)   Open systems.

15. What is Background analysis? Explain with an example.

16. Explain the criteria for hardware and software selection.

17. Explain the role of database administrator.

18. Explain the different levels of quality assurance.

19. Explain the various types of software with examples.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

FIRST YEAR

INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS

Time : 3 Hours   Maximum Marks : 75

PART – A   **(5 x 5 = 25 Marks)**

Answer any FIVE questions

1. Explain the various levels of Data Abstraction.

2. List out the advantages of relational approach.

3. Discuss the concept of outer join of two relations with an example.

4. Explain standard functions of SQL.

5. Write short notes on nested sub queries.

6. Explain object oriented technology.

7. Explain the object identify in the object oriented data model.

PART – B   **(5 x 10 = 50 Marks)**

Answer any FIVE questions

8. Describe the various types of Data models.

9. Explain entity relationship (E-R) model.

10. Discuss about the normalization using multi valued dependencies.

11. Explain third and boyce-codd normal form.

12. Describe the distributed transaction model in detail.

13. Discuss the advantages and disadvantages of data distribution.

14. Explain the difference between relational DBMS and OODBMS.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

FIRST YEAR

INTRODUCTION TO DATA BASE MANAGEMENT SYSTEMS

Time : 3 Hours   **Maximum Marks : 70**

PART — A   **(5 × 2 = 10 Marks)**

Answer any FIVE questions.

1. What is a data dictionary?

2. List the set operations of SQL.

3. List out the statements associated with a database transaction.

4. What is the need for triggers?

5. What is a super key?

PART — B   **(4 × 5 = 20 Marks)**

Answer any FOUR questions.

6. Discuss on the terms Entities, Attributes, Logical and Physical Data and schema.

7. Explain the properties of relation with example.

8. Discuss briefly the advantages of B–tree indexes.

9. Explain the basic operations of relational model with an example.

10. What is Normalization? Explain modification anomalies with an example.

11. Write short notes on distributed databases.

12. Discuss about OLE and its advantages.

PART — C (4 × 10 = 40 Marks)

Answer any FOUR questions.

13. What are the features of DBMS? Compare it with traditional file systems.

14. Explain about conversion of Hierarchical and Network structure into relation.

15. Describe the multi list file organization.

16. Discuss on Joins, Selection, Projection and Division.

17. Explain the aggregate functions in SQL with examples.

18. Discuss in detail about components of client/Server computing.

19. Discuss on the techniques available for the knowledge representation.

U.G. DEGREE EXAMINATION – JUNE 2021
COMPUTER APPLICATION
SECOND YEAR
WINDOWS PROGRAMMING

Time : 3 Hours   **Maximum Marks : 75**

PART – A   **(5 x 5 = 25 Marks)**

Answer any FIVE questions

1. Discuss about Windows and its Elements.

2. Explain the Mouse Events with example.

3. Discuss about User-defined data types.

4. Write short notes on Third party control in VB.

5. Discuss about Graphical User Interface.

6. Discuss the significances of Property window.

7. Discuss about Event Procedure.

PART – B   **(5 x 10 = 50 Marks)**

Answer any FIVE questions

8. Illustrate with an example about the creation and running a simple project in VB.

9. Describe the concept of Error object and its creation.

10. Explain "For" and "Do-While" Loops with example.

11. Describe in detail about Object Linking and Embedding.

12. Describe in detail about user interface design.

13. How do you create ActiveX control project? Discuss with example.

14. Explain a simple MDI application with an example.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

SECOND YEAR

MULTIMEDIA

Time : 3 Hours   Maximum Marks : 75

PART – A   (5 x 5 = 25 Marks)

Answer any FIVE questions

1. Discuss about I/O devices and its functions.

2. Write short notes on Software support for Multimedia.

3. Bring out the role of Multimedia in Entertainment and Edutainment.

4. Illustrate in detail on Distributed learning environment.

5. Bring out the features of Multimedia authoring software.

6. What are the elements of hypertext? Discuss.

7. Discuss about Copyright issues.

PART – B   (5 x 10 = 50 Marks)

Answer any FIVE questions

8. Describe in detail about Production and Distribution of Multimedia.

9. Explain the following: a) Digital Audio b) Digital Video

10. Describe the significances of Multimedia Interactive systems for teaching and learning.

11. Explain the applications of Multimedia in Business and Business communication.

12. Discuss the features of the following:

    a) Image Q   b) QuickTime

13. Describe in detail about interface design.

14. Explain the Planning steps for Multimedia programme/Application.

U.G. DEGREE EXAMINATION - JUNE 2021

COMPUTER APPLICATION

SECOND YEAR

RELATIONAL DATABASE MANAGEMENT SYSTEMS

Time: 3 Hours   Maximum Marks: 75

PART – A   **(5 x 5 = 25 Marks)**

Answer any FIVE questions.

1. Discuss briefly about Data Dictionary.

2. Discuss Primary key and Foreign key constraints with examples.

3. With example explain Second Normal form.

4. Define: (a) Entity (b) Entity type (c) Entity set.

5. Discuss briefly about the objects of Access Database.

6. Discuss briefly how to set toolbars to our working style.

7. List out the steps to change the color of the text and font size of a label.

PART – B   **(5 x 10 = 50 Marks)**

Answer any FIVE questions.

8. Discuss in detail the advantages and disadvantages of using a database system.

9. Illustrate the Components of ER diagram with an example.

10. Explain in detail first normal form and third normal form.

11. Briefly explain about the Cardinality ratio.

12. List out the steps involved in modifying the fields in a table.

13. How will you create a form with sub form? Explain.

14. Explain on views and security using SQL.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

SECOND YEAR

COMPUTER NETWORK

Time: 3 Hours   Maximum Marks: 75

PART – A   (5 x 5 = 25 Marks)

Answer any FIVE questions

1. What is network topology? Explain the different network topologies.

2. Discuss the design issues of the data link layer.

3. Write short notes on TCP and UDP.

4. Define the following terms: i) Router ii) Bridge iii) Gateway.

5. Explain the i)1-bit sliding window protocol (ii) Go-back N protocol.

6. Define ISDN. Brief on broadband ISDN.

7. Brief on communication satellites.

PART – B   (5 x 10 = 50 Marks)

Answer any FIVE questions

8. What is OSI? Explain OSI Reference model with a neat diagram.

9. Define CSMA. Briefly explain IEEE standard 802.3.

10. Define routing. Explain distance vector routing and link state routing.

11. Define Bridge. Explain the types of bridges.

12. Explain the different types of networks in detail.

13. Explain ALOHA protocols in detail.

14. Write short notes on i) Modem ii) Email

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

SECOND YEAR

INTRODUCTION TO SOFTWARE ENGINEERING

Time : 3 Hours   Maximum Marks : 75

PART – A   **(5 x 5 = 25 Marks)**

Answer any FIVE questions

1. Explain about RAD model techniques.

2. What is requirement engineering? State its process and explain requirements elicitation problem.

3. Write short notes on Risk Management.

4. What is the role and responsibility of Project leader?

5. List out the qualities of software product.

6. What is the necessity of unit testing? Write down all unit test considerations.

7. What is error tracking? Discuss.

PART – B   **(5 x 10 = 50 Marks)**

Answer any FIVE questions

8. With neat sketch explain the Software development Life cycle.

9. What are the different activities in project planning?

10. Explain in detail the COCOMO model.

11. Discuss about the various types of Cohesion and Coupling.

12. Explain the Scheduling plan for software project.

13. Discuss the basic design principles of class based components.

14. What are all the formulas for cyclomatic complexity? Calculate cyclomatic complexity for greatest of three numbers.

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

SECOND YEAR

COMPUTER ORIENTED NUMERICAL METHODS

Time : 3 Hours   **Maximum Marks : 75**

<div align="center">

PART – A   **(5 x 5 = 25 Marks)**

</div>

Answer any FIVE questions

1. Using Newton-Raphson method, establish the formula $x_{n+1} = \frac{1}{2}\left(x_n + \frac{N}{x_n}\right)$ to calculate the square root of N. Hence find the square root of 5 correct to four places of decimals.

2. Derive the Trapezoidal rule.

3. Solve the following system by Gaussian elimination method

$$x_1 - x_2 + x_3 = 1$$

$$-3x1 - 2x_2 - 3x_3 = -6$$

$$2x_1 - 5x_2 + 4x_3 = 5$$

4. Find the missing yx values from the first differences provided.

yx	0	-	-	-	-	-
Δyx	0	1	2	4	7	11

5. Evaluate $\int_0^{\frac{\pi}{2}} e^{sinx}\ dx$ taking $h = \frac{\pi}{12}$ by Simpson's $\frac{1}{3}$ rule and $\frac{3}{8}\ rule$.

6. Derive the Lagrange's interpolation formula.

7. Use the method of least squares to fit a straight line to the following data :

         x: 0   5   10   15   20

         y: 7   11   16   20   26

     Estimate the value of y when $x = 25$.

PART – B   **(5 x 10 = 50 Marks)**

Answer any FIVE questions

8. Solve $x^3 - x^2 - 2 = 0$ by Regula Falsi method correct to 3 decimal places.

9. Using Gauss-|Jordan method, solve the following equations.

$$2x_1 + x_2 + 4x_3 = 4$$

$$x_1 - 3x_2 - x_3 = -5$$

$$3x_1 - 2x_2 + 2x_3 = -1$$

10. Given the table

x	0	0.1	0.2	0.3	0.4
e^x	1	1.1052	1.2214	1.3449	1.4918

Find the value of $y = e^x$ when x= 0.38

11. Solve $\frac{dy}{dx} = \frac{2y}{x} + x^3$ to obtain y(1.2) and y(1.4) given y 0.5 when x= 1 by modified Euler's method.

12. Derive the Newton's forward difference formula.

13. Using bisection method find the negative root of

$$x^3 - 4x + 9 = 0$$

14. Solve by Gauss-Elimination method :

$$5x_1 - x_2 = 9$$

$$-x_1 + 5x_2 - x_3 = 4$$

$$-x_2 + 5x_3 = -6$$

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

THIRD YEAR

TCP/IP PROGRAMMING

Time : 3 Hours   Maximum Marks : 75

PART – A   **(5 x 5 = 25 Marks)**

Answer any FIVE questions

1. Explain about DNS message format.

2. Give the notes on IP Header.

3. Give the notes on Structure of TCP with neat diagram.

4. Explain characteristics of UDP.

5. Explain the TCP/IP stack.

6. Write a short note on Ethernet.

7. Explain the network Topology.

PART – B   **(5 x 10 = 50 Marks)**

Answer any FIVE questions

8. What is Internet Addressing and brief about TCP/IP?

9. Write in detail about IP subnet addressing.

10. Explain the concept of TCP header and their features.

11. Explain the merits and demerits of UDP and TCP.

12. Discuss the facilities offered by Internet multicasting.

13. Discuss in detail about TCP/IP over ATM.

14. Write in detail about Client Server model of interaction.

U.G. DEGREE EXAMINATION – JUNE 2021
COMPUTER APPLICATION
THIRD YEAR
C++ AND OBJECT ORIENTED PROGRAMMING

Time: 3 Hours   **Maximum Marks: 75**

PART – A   **(5 x 5 = 25 Marks)**

Answer any FIVE questions

1. Write a note on Constants and Variables.

2. Write a C++ program to find factorial of N numbers.

3. Write short notes on Virtual functions.

4. Explain features of object oriented programming.

5. What are the rules for overloading the operator?

6. Write a C++ program to initialize base class members through a derived class constructor.

7. Write a C++ program to read a set of numbers and find out the sum of all elements using array.

PART – B   **(5 x 10 = 50 Marks)**

Answer any FIVE questions

8. Describe storage classes in detail.

9. Describe the control structures of C++ with example.

10. What is array? Also explain their types.

11. Explain binary operator overloading with an example C++ program.

12. Explain the classes that define the file handling methods in C++.

13. Explain with example, how Function Templates are implemented?

14. Explain the concept of overriding. How it differs from overloading?

U.G. DEGREE EXAMINATION – JUNE 2021
COMPUTER APPLICATIONS
THIRD YEAR
THEORY OF COMPUTER SCIENCE

Time : 3 Hours   **Maximum Marks : 75**

PART – A   (5 x 5 = 25 Marks)

Answer any FIVE questions

1. Define disjoint sets and mutually disjoint sets with examples.

2. Show that $(\neg P \wedge (\neg Q \wedge R)) \vee (Q \wedge R) \vee (P \wedge R) \Leftrightarrow R$

3. Explain context free grammar.

4. Define binary tree with examples.

5. Give a deterministic finite automation accepting the set of all strings over { 0, 1 } with three consecutive 0's.

6. Construct an FA accepting all strings over { a, b } containing the substring aabb.

7. Draw a graph for a forest can be represented by a binary tree.

PART – B   (5 x 10 = 50 Marks)

Answer any FIVE questions.

8. Discuss briefly on various operations of set with suitable examples.

9. Indicate which one are tautologies or contradictions :

   (a) $((P \rightarrow (\neg P)) \rightarrow \neg P)$

   (b) $(P \rightarrow (Q \rightarrow P))$

   (c) $(P \rightarrow (P \vee Q))$

   (d) $((\neg Q \wedge P) \wedge Q)$

10. What is Turing machine? Discuss briefly on its construction and uses.

11. Prove that a tree with n vertices has n - 1 edges.

12. Formulate an algorithm for the in order traversal of a binary tree.

13. Show that R ∨ S follows logically from the premises

$$C \vee D, \ (C \vee D) \rightarrow \neg H, \ \neg H \rightarrow (A \wedge \neg B) \ \text{and} \ (A \wedge \neg B) \rightarrow (R \vee S)$$

14. Prove That $A - (B \cup C) = (A - B) \cap (A - C)$

U.G. DEGREE EXAMINATION – JUNE 2021

COMPUTER APPLICATION

THIRD YEAR

INTRANET ADMINISTRATION

Time : 3 Hours   Maximum Marks : 75

PART – A   **(5 x 5 = 25 Marks)**

Answer any FIVE questions

1. Describe the types of intranet.

2. Difference between intranet and internet.

3. Explain ODBC in detail.

4. Discuss on virtual private network in detail.

5. What are the steps involved in configuring network settings?

6. Write short notes on web servers.

7. Discuss SMTP in detail.

PART – B   **(5 x 10 = 50 Marks)**

Answer any FIVE questions

8. Discuss about encryption and decryption methods.

9. Describe SOCKS in detail.

10. Explain Groupware and its benefits in detail.

11. Discuss in detail about web based tools.

12. Describe in detail about service protocol.

13. Explain about the software and hardware requirements for intranet in detail.

14. Discuss in detail about the database connectivity using JDBC and ODBC.

15. Explain in detail about network installation and administration.

U.G. DEGREE EXAMINATION – JUNE 2021
COMPUTER APPLICATION
THIRD YEAR
MANAGEMENT PRINCIPLES AND TECHNIQUE

Time : 3 Hours   **Maximum Marks : 75**

PART – A   (5 x 5 = 25 Marks)

Answer any FIVE questions

1. Explain Management and list the functions of Management.

2. Explain the properties of LP model.

3. Explain the dual of an LPP.

4. Describe the terms (a) Total float (b) Free float (c) Independent float.

5. Distinguish between PERT and CPM network techniques.

6. Write short notes on Group replacement policy.

7. Explain three types of replacement policies.

PART – B   (5 x 10 = 50 Marks)

Answer any FIVE questions

8. Explain the functions of management in detail.

9. Explain Motivation in detail.

10. Solve the following problem using simple method:

    Maximise $Z = 21x_1 + 15x_2$

    Subject to the constraints $-x_1 - 2x_2 >= -6$

11. Five machines are available to do five different jobs. From past records the time in hrs that each machine takes to do each job is known and given in the following table:

Job Machine		I	II	III	IV	V
	A	2	9	2	7	1
	B	6	8	7	6	1
	C	4	6	5	3	1
	D	4	2	7	3	1
	E	5	3	9	5	1

Find the Assignment of machines to jobs that will minimize the total time taken.

12. Explain about the Group replacement and Individual policy.

13. A truck owner finds from his past records that the maintenance costs per year of a truck, whose purchase price is Rs.8000 are as given below.

Year	1	2	3	4	5	6	7	8
Maintenance cost (Rs)	1000	1300	1700	2200	2900	3800	4800	6000
Resale value (Rs)	4000	2000	1200	600	500	400	400	400

14. What is Replacement? What are the types of failure that are considered in replacement theory?