Part A

Q1: Define the different network topologies?

Q2: Write about different networking devices?

Q3: Describe E-mail?

Q4: write about SMTP? Also describe about its different phases.

Q5: Write about IMAP/POP? Also give its advantages and disadvantages.

Part B

Q1: Explain in detail about the different layers of OSI model?

Q2: Explain the TCP/IP protocol and FTP?

Object Oriented Programming Using C++

Part A

Q1: Explain the different OOP's Characteristics?

Q2: Applications of Object Oriented programming language?

Q3: What is operator overloading?

Q4: Difference between class and structure?

Q5: What do you mean by pointers?

Part B

Q1: Write a program on Factorial using C++?

Q2: Write a program on leap year using C++?

Computational Techniques

PART-A

- **1.**If $f(x)=x^2 + 2$. Find the roots of f(x) by using Newton Raphson method.
- **2.**Solve 2x + 3y + 5z = 2,x+2y+3z=5,3x+4y+z=1 by using Gauss Elimination Method.
- **3.** Find the solution to the following system of equations using the Gauss-Seidel method. 12x+3y-5z=1,x+5y+3z=28,3x+7y+13z=76. Use x=1,y=0,z=1 as the initial guess and conduct two iterations.
- **4.**Find $\int_0^1 (1+x^2) dx$ using Simpson's 1/3 method.
- **5.**Find $\int_0^1 (\sin x + \cos x) dx$ using simpson's 3/8 rule.

PART-B

1. If f(x) is known at the following data points

$$\mathbf{x_i} \quad 0 \quad 1 \quad 2 \quad 3 \quad 4 \\
 \mathbf{f_i} \quad 1 \quad 7 \quad 23 \quad 55 \quad 109$$

then find f(0.5) and f(1.5) using Newton's forward difference formula.

2.Use Euler's Modified Method to find y(0.2) if h=0.1

$$\frac{dy}{dx} = \frac{50x^2 - 10y}{3}$$

y(0)=0.

PRINCIPLE OF MANAGEMENT

Part A

- 1. Describe the process of management?
- 2. What is planning? Explain the process of planning?
- 3. Explain the concept of management?
- 4. What is decision making and state the types of decision making?
- 5. Explain systems approach and contingency approach?

Part B

- 1. Describe the 14 principle of Fayol?
- 2. Hierarchy of management?
- 3. Describe the concept and nature of management?
- 4. What is Motivation and describe its theories also?
- 5. Describe the barriers of effective planning?