



(c) SOAP is protocol-independent, while RESTful is HTTP-based.

(d) SOAP is synchronous, while RESTful is asynchronous.

- 1-d. Give an example of a domain-specific ERP module for healthcare. (CO2) 1
- (a) Patient Management
  - (b) Finance
  - (c) Human Resources
  - (d) Materials Management
- 1-e. The process of inviting bids from potential suppliers to fulfill a business requirement is..... (CO3) 1
- (a) Quoting
  - (b) Procurement
  - (c) Tendering
  - (d) Sourcing
- 1-f. The primary advantage of Commercial Off-The-Shelf (COTS) software compared to bespoke implementations is..... (CO3) 1
- (a) Tailored to specific business requirements
  - (b) Lower initial cost
  - (c) Higher customization options
  - (d) Longer development time
- 1-g. Select the technology that provides a way to ensure the integrity and authenticity of digital documents or messages. (CO4) 1
- (a) Digital certificates
  - (b) Digital signatures
  - (c) Public key infrastructure
  - (d) Secure sockets layer (SSL)
- 1-h. Give the name of security mechanism that verifies whether a user has the necessary permissions to access a resource..... (CO4) 1
- (a) Authentication
  - (b) Authorization
  - (c) Validation
  - (d) Encryption
- 1-i. .... disaster recovery site requires minimal hardware and can be operational quickly. (CO5) 1

- (a) Cold Site
- (b) Warm Site
- (c) Hot Site
- (d) Mobile Site

- 1-j. The function of a network switch is ..... (CO5) 1
- (a) Filters and forwards data packets
  - (b) Connects different networks
  - (c) Provides wireless access
  - (d) Converts analog signals to digital signals

**2. Attempt all parts:-**

- 2.a. Briefly explain the role of a primary key in a database table. (CO1) 2
- 2.b. Define Interoperability in the context of SOA. (CO2) 2
- 2.c. Define Customer Relationship Management (CRM) and Supplier Relationship Management (SRM). (CO3) 2
- 2.d. Describe encryption and its role in security. (CO4) 2
- 2.e. Define RAID. (CO5) 2

**SECTION B**

**30**

**3. Answer any five of the following:-**

- 3-a. Explain the role of middleware in a three-tier environment in detail.(CO1) 6
- 3-b. Discuss the purpose of Java Server Pages (JSP) in web development in detail with suitable example. (CO1) 6
- 3-c. Describe the architecture of an ERP system. (CO2) 6
- 3-d. Differentiate between SAP and Oracle ERP systems.(CO2) 6
- 3.e. Compare and contrast the features and benefits of Customer Relationship Management (CRM) and Supplier Relationship Management (SRM) systems in optimizing business relationships. (CO3) 6
- 3.f. Describe the key differences between authentication and authorization in the realm of security.(CO4) 6
- 3.g. Describe the concept of load balancing in detail. (CO5) 6

**SECTION C**

**50**

**4. Answer any one of the following:-**

- 4-a. Describe the components of a Database Management System (DBMS) and their respective roles in managing data. (CO1) 10

4-b. Compare and contrast SQL and NoSQL databases, including their strengths and weaknesses.(CO1) 10

**5. Answer any one of the following:-**

5-a. Discuss about techniques used to achieve loose coupling between software components. (CO2) 10

5-b. Explain the core principles of SOA and how they differ from traditional monolithic architectures. (CO2) 10

**6. Answer any one of the following:-**

6-a. Explain the primary functions of a Customer Relationship Management (CRM) system and how they benefit businesses. (CO3) 10

6-b. Explain the main steps involved in the software acquisition process, and why is each step important? (CO3) 10

**7. Answer any one of the following:-**

7-a. Explain the role of access control in safeguarding sensitive information and resources within an organization. (CO4) 10

7-b. Provide an overview of firewall, and how does it enhance network security? (CO4) 10

**8. Answer any one of the following:-**

8-a. Discuss the main considerations when designing and implementing a backup strategy for enterprise data. (CO5) 10

8-b. Describe the architecture of a Storage Area Network (SAN) and how it differs from Network Attached Storage (NAS). (CO5) 10