

**Professional Course (Odd) Examination, 2024**

( CBCS )

( 5th Semester )

**BACHELOR OF COMPUTER APPLICATIONS**

**( Programming with VB.NET Lab )**

*Full Marks : 75*

*Time : 3 hours*

*The figures in the margin indicate full marks for the questions*

**SECTION—A**

( Marks : 30 )

Answer any *two* from the following questions :

15×2=30

1. Write Windows application with three input boxes—two for inputting numbers and one for displaying result. Perform four basic mathematical operations such as plus, minus, multiply and divide using their respective buttons.
2. Write a birthday program that allows the user to enter their name, select their birthday from the calendar. Display the users name, age and the day when his/her birthday will come this year when the control is clicked.
3. Design a form that demonstrates checkbox and radio button.

SECTION—B

( Marks : 20 )

Answer any one from the following questions : .

20

4. Write VB.Net application for students database with the fields (id, sname, rollno, year, department, father'sname, phoneno, address, passport size). Create add, delete, edit, previous and next button to navigate the record.
5. Create an application for the demonstration of different types of dialog controls such as SaveDialog, OpenFileDialog, FontDialog, ColorDialog, FolderBrowserDialog and PrintDialog.

SECTION—C

( Marks : 25 )

6. Viva voce.

15

7. Practical Record.

10

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**BACHELOR OF COMPUTER APPLICATIONS****( Cloud Computing )**

Full Marks : 75

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( Marks : 25 )

## SECTION—I

( Marks : 15 )

**A. Tick (✓) the correct answer in the brackets provided :**

1×10=10

1. What is cloud computing?

- (a) On-premise computing ( )
- (b) Virtualized computing ( )
- (c) Distributed computing ( )
- (d) Centralized computing ( )

2. What was the first cloud computing platform?

- (a) Amazon Web Services (AWS) ( )
- (b) Microsoft Azure ( )
- (c) Google Cloud Platform (GCP) ( )
- (d) Salesforce ( )

3. Which role involves managing cloud resources?

- (a) Cloud Administrator ( ) (b) Cloud Architect ( )
- (c) Cloud Engineer ( ) (d) Cloud Consumer ( )



4. What is the term for delivering cloud services over the internet?
  - (a) Public cloud ( )
  - (b) Private cloud ( )
  - (c) Hybrid cloud ( )
  - (d) Community cloud ( )
5. Internet architecture refers to the fundamental design and structure of the global computer network known as
  - (a) server ( )
  - (b) internet ( )
  - (c) WWW ( )
  - (d) ARPANET ( )
6. \_\_\_\_\_ is commonly used in various software and cloud-based services, enabling multiple users or organizations to share the same application or infrastructure.
  - (a) VPN technology ( )
  - (b) Thin client technology ( )
  - (c) Proxy server technology ( )
  - (d) Multitenant technology ( )
7. \_\_\_\_\_ involves the core principles and practices necessary to protect data, applications and infrastructure in a cloud computing environment.
  - (a) Cloud service provider ( )
  - (b) Cloud security ( )
  - (c) Information security ( )
  - (d) Data security ( )
8. Which of the following occurs when unauthorized individuals gain access to sensitive or confidential data stored in the cloud?
  - (a) Data breach ( )
  - (b) Data corrupt ( )
  - (c) Data multiplication ( )
  - (d) Data redundancy ( )
9. Which cloud infrastructure mechanism provides a virtualized environment for computing resources?
  - (a) Server virtualization ( )
  - (b) Storage virtualization ( )
  - (c) Network virtualization ( )
  - (d) Desktop virtualization ( )
10. Which cloud infrastructure mechanism enables the automatic scaling of computing resources?
  - (a) Load balancing ( )
  - (b) Auto-scaling ( )
  - (c) Resource pooling ( )
  - (d) Elasticity ( )

**B.** State whether the following statements are *True (T)* or *False (F)* by putting a Tick (✓) mark in the brackets provided : 1×5=5

1. An e-commerce site can quickly scale up their cloud resources during peak sales periods.  
( T / F )
2. Infrastructure as a Service (IaaS) provides virtualized computing resources (servers, storage, networking).  
( T / F )
3. Amazon Web Services (AWS) auto scaling does not allow you to automatically add or remove EC2 instances based on workload demands.  
( T / F )
4. The virtualized resources are often referred to as Virtual Machines (VMs).  
( T / F )
5. MFA significantly increases the risk of unauthorized access due to compromised passwords.  
( T / F )

**SECTION—II**

( Marks : 10 )

**C.** Answer the following short answer-type questions : 2×5=10

1. Describe cloud computing.
2. Write two major advantages of public cloud.
3. What is multitenant technology?
4. Define data encryption.
5. Define logical network perimeter.

**( PART : B—DESCRIPTIVE )**

( Marks : 50 )

**D.** Answer the following questions : 10×5=50

1. (a) Write short notes on the following :
  - (i) Origin and influences of cloud computing
  - (ii) Major risks and challenges in cloud computing

**OR**

- (b) Explain the following cloud deployment models with their advantages and disadvantages :
- (i) Public cloud
  - (ii) Private cloud
2. (a) Explain five essential characteristics of cloud computing.

**OR**

- (b) Explain SaaS and PaaS cloud delivery methods with suitable example.
3. (a) Explain about data center and broadband networks. What are the major benefits for cloud service providers?

**OR**

- (b) Explain in short on virtualization technology and web technology. What are their main applications for enabling cloud computing?
4. (a) Explain with suitable example about the following cloud fundamental security :
- (i) Identity and Access Management (IAM)
  - (ii) Phishing and Social Engineering

**OR**

- (b) Explain with suitable example about the following cloud security threats :
- (i) Insider threats
  - (ii) Account compromises
5. (a) Explain ready-made environment and cloud storage devices. Give two suitable examples of each.

**OR**

- (b) Write short notes on the following cloud infrastructure mechanisms :
- (i) Cloud usage monitor
  - (ii) Resource replication

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