

Seat No.

MAR_APR 2025 SUMMER EXAMINATION
11949 Bachelor of Computer Application(BCA) NEP 2.0
Sub. Name: Data Warehousing and Data Mining
Sub. Code: 66423/109324/108795/96643

Day and Date: APRIL ,22-04-2025**Total Marks: 80****Time: 10:30 AM To 01:30 PM**

Instructions: 1. Draw neat labelled diagrams wherever necessary
2. Figures to the right indicate full marks

Special Inst.: Que. 1 and Que. 8 are compulsory and attempt any three Questions from Que. No. 2 to Que. No. 7.

Q1) Multiple Choice Questions (12 questions for 1 mark each)

[12]

- i. In data mining, the technique used to find hidden patterns in the data is
 - A. Data extraction
 - B. Data analytics
 - C. Pattern recognition
 - D. Data redundancy
- ii. Which of the following best describes a data warehouse?
 - A. A collection of integrated and subject-oriented databases
 - B. A real-time data processing system
 - C. A decentralized storage system for large datasets
 - D. An online transaction processing system (OLTP)
- iii. Association rule mining helps to:
 - A. Find hidden patterns
 - B. Predict continuous values
 - C. Find associations between different variables
 - D. Reduce data dimensionality
- iv. The K-Medoids algorithm differs from K-Means in that:
 - A. It uses centroids
 - B. It minimizes a squared error
 - C. It uses actual data points as cluster centers
 - D. It clusters categorical data
- v. Which algorithm is used for finding frequent itemsets?
 - A. K-Means
 - B. Apriori algorithm
 - C. Decision tree
 - D. Naïve Bayes

- vi.** The key function of OLAP is to _____
A. Support real-time transaction processing
B. Perform multi-dimensional data analysis
C. Store historical data
D. Retrieve unstructured data
- vii.** In a 3-tier data warehouse architecture, the middle tier is responsible for _____
A. Data transformation
B. Data retrieval and analysis
C. Data storage
D. Data entry
- viii.** The process of summarizing data in a data warehouse is called:
A. Aggregation
B. Data cleansing
C. De-normalization
D. Data transformation
- ix.** The technique that aims to group similar objects into clusters is known as:
A. Classification
B. Clustering
C. Prediction
D. Association rule mining
- x.** Data Mart can be best described as _____
A. A small subset of a data warehouse
B. A volatile data store
C. An unorganized data source
D. A single large database
- xi.** In a star schema, which component connects to the fact table?
A. Dimension table
B. Factless table
C. OLTP table
D. Metadata table
- xii.** Which of the following is a classification algorithm?
A. K-Means
B. Decision Tree
C. Apriori
D. Association rule mining

Q2) [16]

- a.** What are the key components of a data warehouse, and how do they interact **[8]**

with each other?

- b. Define Data Mining. Discuss different application areas of data mining. [8]

Q3) Why is Data pre-processing essential in Data mining? Describe the key steps involved in Data pre-processing. [16]

Q4) [16]

- a. What is the significance of ETL (Extract, Transform, Load) processes in a Data Warehouse? [8]
- b. Describe the Knowledge Discovery in Databases (KDD) process and its stages in detail. [8]

Q5) [16]

- a. Describe the Bayesian classification method. What are its strengths and limitations? [8]
- b. What is Online analytical processing (OLAP)? How does OLAP function within a data warehousing environment? [8]

Q6) [16]

- a. What are the main tasks in Data mining? Explain each briefly. [8]
- b. What are Partitioning Methods? Differentiate between K-Means and K-Medoids. [8]

Q7) [16]

- a. What are the primary issues associated with classification and prediction in data mining? [8]
- b. What are the key differences between tree mining and sequence mining, and how do these techniques contribute to data analysis? [8]

Q8) Write short note (Any Four) [20]

- a. Database system Vs Data Warehouse [5]
- b. Snowflake Schema [5]
- c. Decision Tree [5]
- d. Characteristics of Data Warehouse [5]

- e. Apriori Algorithm [5]
- f. Graph sampling [5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (7810) B.C.A. (CBCS) (108795) Data Warehousing and Data Mining Part 3 SEM 5
- 2] (7824) Bachelor of Computer Application (96643) Data Warehousing and Data Mining Part 3 SEM 5
(CBCS)NEP
- 3] (717) Bachelor of Computer Application (66423) Data Mining and Data Warehousing Part 3 SEM 6
- 4] (717) Bachelor of Computer Application (109324) Data Warehousing and Data Mining Part 3 SEM 5

Seat No.

MAR_APR 2025 SUMMER EXAMINATION
11949 Bachelor of Computer Application(BCA) NEP 2.0
Sub. Name: Dot NET Technology
Sub. Code: 109325/108796/96644

Day and Date: APRIL ,25-04-2025**Total Marks: 80****Time: 10:30 AM To 01:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: 1) Que.1 and Que. 8 are compulsory.****2) Attempt any three Questions from Que. No.2 to Que. No. 7.****Q1) Multiple Choice questions (1 mark each)****[12]**

- i. What is the .NET Framework primarily used for?
 - A. Operating system development
 - B. Game engine development
 - C. Application development on Windows
 - D. Hardware design
- ii. What is "Managed Code"?
 - A. Code executed outside the .NET runtime
 - B. Code written in assembly language
 - C. Code executed by the CLR
 - D. Code written in unmanaged languages
- iii. What is the purpose of Metadata in .NET?
 - A. To compile the program
 - B. To store user data
 - C. To describe the structure and meaning of the code
 - D. To connect to the database
- iv. 4. Which component of .NET compiles IL to native code at runtime?
 - A. CTS
 - B. CLS
 - C. JIT
 - D. FCL
- v. Which of the following is a valid signature of the Main method?
 - A. public void Main()
 - B. static void Main(string args[])
 - C. public static int Main()
 - D. All of the above
- vi. Which statement is used to skip the current iteration in a loop?

- A. skip
 - B. break
 - C. stop
 - D. continue
- vii.** Which of the following is a value type in C#?
- A. String
 - B. Object
 - C. Int
 - D. Array
- viii.** Which server control is used to accept user input?
- A. Label
 - B. TextBox
 - C. Literal
 - D. Panel
- ix.** 9. Which event is the first to be triggered in the page lifecycle?
- A. Page_Load
 - B. Page_Init
 - C. Page_PreRender
 - D. Page_Unload
- x.** 10. Which control ensures that a field is not left empty before form submission?
- A. RangeValidator
 - B. RegularExpressionValidator
 - C. RequiredFieldValidator
 - D. CompareValidator
- xi.** 1. Which class is used to execute SQL queries or stored procedures in ADO.NET?
- A. SqlConnection
 - B. SqlCommand
 - C. SqlDataAdapter
 - D. SqlDataReader
- xii.** 12. Which ADO.NET object is used to retrieve data in a forward-only, read-only manner?
- A. SqlConnection
 - B. SqlDataAdapter
 - C. SqlDataReader
 - D. SqlCommand

Q2) Draw and explain the architecture of the .NET Framework.

[16]

- Q3)** What are the different data types in C#? Explain type casting, boxing, and unboxing [16]
with examples.
- Q4)** Explain the ASP.NET Web Form Lifecycle in detail. [16]
- Q5)** Discuss the differences between connected and disconnected data access models [16]
in ADO.NET. Provide examples of when each model should be used.
- Q6)** Explain the ADO.NET architecture in detail. Discuss the key components involved [16]
in ADO.NET for managing database interactions.
- Q7)** Explain the various control structures in C# with examples. [16]
- Q8)** Write short note (any Four) [20]
- a. process of generating reports in ADO.NET. [5]
 - b. Visual studio .NET IDE [5]
 - c. Parameter Passing mechanism [5]
 - d. Cross page posting [5]
 - e. Features of .NET [5]
 - f. Navigation controls [5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

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- 1] (717) Bachelor of Computer Application (109325) DOT NET Technology Part 3 SEM 5
- 2] (7824) Bachelor of Computer Application (CBCS)NEP (96644) Dot NET Technology Part 3 SEM 5
- 3] (7810) B.C.A. (CBCS) (108796) DOT NET Technology Part 3 SEM 5

Seat No.

MAR-APR 2025 SUMMER EXAMINATION
11949 Bachelor of Computer Application(BCA) NEP 2.0
Sub. Name: E-Commerce
Sub. Code: 108803/96650

Day and Date: APRIL ,24-04-2025**Total Marks: 80****Time: 10:30 AM To 01:30 PM****Instructions:**

Special Inst.: 1) Question No.1 and Question No. 8 are compulsory
2) Solve any three Questions from Question No.2 to Question No. 7.
3) Figures to the right indicate marks.

Q1) Solve following MCQ. (ALL QUESTIONS ARE COMPULSARY) **[12]**

- i. Which of the following describes e-commerce?
 - A. Doing business electronically
 - B. Doing business
 - C. Sale of goods
 - D. All of the above
- ii. Which is a function of E-commerce?
 - A. marketing
 - B. advertising
 - C. warehousing
 - D. all of the above
- iii. Which of the following is a useful security mechanism when considering business strategy and IT?
 - A. encryption
 - B. decryption
 - C. firewall
 - D. all the above
- iv. Which of the following is not related to security mechanism?
 - A. encryption
 - B. decryption
 - C. e-cash
 - D. all the above
- v. Secure Sockets Layers does which of the following?
 - A. creates a secure, private connection to a web server
 - B. encrypts information
 - C. sends information over the internet
 - D. all of the above

- vi.** Which will not harm computer resources?
- A. firewall
 - B. Virus
 - C. Trojan horse
 - D. None of the above
- vii.** Who protects system from external threats?
- A. firewall
 - B. EDI
 - C. ERP
 - D. Script kiddies
- viii.** What is a type of virus that spreads itself, not just from file to file, but from computer to computer via e-mail and other Internet traffic?
- A. Computer virus
 - B. Worm
 - C. Denial-of-service attack
 - D. None of the above
- ix.** Which of the following is not a common approach to phishing?
- A. Send an official-looking e-mail asking for confidential information
 - B. Ask people to fill out and return a fake letter using postal mail
 - C. Ask people to click a link in an e-mail to open a submission form on a web page
 - D. All of the above are uncommon approaches to phishing
- x.** What is an electronic representation of cash?
- A. Digital cash
 - B. Electronic cash
 - C. E-cash
 - D. All of the above
- xi.** A technique used to gain personal information for the purpose of identity theft, often by e-mail, is called?
- A. Phishing
 - B. Carding
 - C. Brand spoofing
 - D. All of the above
- xii.** The E-payment mechanism widely used in B2B is?
- A. Credit card
 - B. Debit card
 - C. Master card
 - D. E-Cheque

- Q2)** Define E- Commerce? Explain its goals and components of E- Commerce [16]
- Q3)** Discuss in detail Models of E- Commerce with examples. [16]
- Q4)** What is Payment System? Difference between traditional and electronics payment system. [16]
- Q5)** Explain in detail Payment Modes of electronic payments with an e.g. [16]
- Q6)** define e- Security? Explain in detail different security threats [16]
- Q7)** What do mean by EDI? Explain advantages and Disadvantages of EDI [16]
- Q8)** Short Notes (Write any FOUR out of SIX) [20]
- a.** Encryption and Decryption [5]
 - b.** Proxy Server [5]
 - c.** E-Banking [5]
 - d.** Digital Certificates [5]
 - e.** SSL [5]
 - f.** E-Commerce in India [5]

End Of Question Paper

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1] (7824) Bachelor of Computer Application (CBCS)NEP (96650) E-Commerce Part 3 SEM 5

2] (7810) B.C.A. (CBCS) (108803) E-Commerce Part 3 SEM 5

Seat No.

MAR_APR 2025 SUMMER EXAMINATION
11949 Bachelor of Computer Application(BCA Sci) NEP 2.0

Sub. Name: Java Programming

Sub. Code: 66425/109323/108794/96642

Day and Date: APRIL ,21-04-2025

Total Marks: 80

Time: 10:30 AM To 01:30 PM

Instructions: 1. Draw neat labelled diagrams wherever necessary
2. Figures to the right indicate full marks

Special Inst.: Que.1 and Que. 8 are compulsory and attempt any three Questions from Que. No.2 to Que. No. 7.

Q1) Solve following MCQ.

[12]

- i. What does JDK stand for?
A. Java Deployment Kit
B. Java Development Kit
C. Java Design Kit
D. Java Debugging Kit
- ii. Which part of memory is used for the execution of a Java program?
A. Stack
B. Heap
C. Both Stack and Heap
D. Register
- iii. What is the output of the following code?

```
for (int i = 0; i < 5; i++) {  
    if (i == 3) break;  
    System.out.print(i + " ");  
}
```


A. 0 1 2
B. 0 1 2 3
C. 1 2 3
D. 0 1 2 3 4
- iv. What does the "Is-A" relationship in Java signify?
A. Inheritance
B. Encapsulation
C. Polymorphism
D. Abstraction
- v. Which concept allows method overloading and method overriding in Java?
A. Inheritance

- B. Encapsulation
 - C. Polymorphism
 - D. Abstraction
- vi.** What is the primary use of the super keyword in Java?
- A. To call the constructor of the parent class
 - B. To access private members of the parent class
 - C. To call the main() method of the parent class
 - D. To access the child class constructor
- vii.** What is the purpose of using packages in Java?
- A. To improve code readability
 - B. To avoid class name conflicts
 - C. To reduce execution time
 - D. To allow multiple inheritance
- viii.** Which Java class is used to create a thread by extending it?
- A. Thread
 - B. Runnable
 - C. Executor
 - D. Process
- ix.** Which of the following is the parent class of all exceptions in Java?
- A. Throwable
 - B. Exception
 - C. Runtime Exception
 - D. Error
- x.** What does AWT stand for in Java?
- A. Advanced Window Toolkit
 - B. Abstract Window Toolkit
 - C. Application Window Toolkit
 - D. Automated Window Toolkit
- xi.** Which method is used to set the background color of an AWT component?
- A. setColor()
 - B. setBackground()
 - C. setBackColor()
 - D. setBgColor()
- xii.** Which package contains Java Swing classes?
- A. java.awt
 - B. java.swing
 - C. javax.swing
 - D. java.gui

- Q2)** Attempt the following questions. [16]
- a. Distinguish between C++ and Java? [8]
 - b. Explain Java environment in details. [8]
- Q3)** What is inheritance? Explain single and multilevel inheritances with example. [16]
- Q4)** What is Multithreading? How to create thread? Explain thread life cycle. [16]
- Q5)** Attempt the following questions. [16]
- a. Write a program to calculate area of rectangle. [8]
 - b. Write a program to find given number is odd or even. [8]
- Q6)** Attempt the following questions. [16]
- a. What is the difference between AWT and SWING? [8]
 - b. What is method overriding? Explain it with suitable example. [8]
- Q7)** Attempt the following questions. [16]
- a. Explain Data types in details. [8]
 - b. Explain final keyword with example. [8]
- Q8)** Write short notes on (Any Four out of Six) [20]
- a. Encapsulation in Java [5]
 - b. super keyword [5]
 - c. try-catch block [5]
 - d. this keyword [5]
 - e. if...else [5]
 - f. Wait() notify() notify all() methods [5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

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- 1] (717) Bachelor of Computer Application (109323) Java Programming Part 3 SEM 5
- 2] (7810) B.C.A. (CBCS) (108794) Java Programming Part 3 SEM 5
- 3] (717) Bachelor of Computer Application (66425) Java Programming Part 3 SEM 6
- 4] (7824) Bachelor of Computer Application (CBCS)NEP (96642) Java Programming Part 3 SEM 5

829172

Seat No.

MAR_APR 2025 SUMMER EXAMINATION
11949 Bachelor of Computer Application(BCA) NEP 2.0

Sub. Name: Linux

Sub. Code: 66424/109327/108800/96647

Day and Date: APRIL ,23-04-2025

Total Marks: 80

Time: 10:30 AM To 01:30 PM

Instructions: 1. Figures to the right indicate full marks

Special Inst.: Que.1 and Que. 8 are compulsory and attempt any three Questions from Que. No.2 to Que. No. 7.

Q1) Solve following MCQ.

[12]

- i. Which of the following is NOT a function of an operating system?
 - A. Memory Management
 - B. Process Management
 - C. Network Configuration
 - D. Hardware Manufacturing
- ii. The kernel in an operating system is responsible for:
 - A. Managing system resources
 - B. Sending emails
 - C. Running user applications
 - D. Opening a web browser
- iii. Which component of Linux acts as an interface between the user and the kernel?
 - A. Compiler
 - B. Shell
 - C. File System
 - D. Boot Loader
- iv. Which command is used to create a new directory?
 - A. dir
 - B. rmdir
 - C. cd
 - D. mkdir
- v. What does the chmod command do?
 - A. Moves a file
 - B. Changes file owner
 - C. Changes file permissions
 - D. Deletes a file

- vi.** Which command is used to search for a specific pattern in a file?
- A. paste
 - B. sort
 - C. cut
 - D. grep
- vii.** What are the three modes of the VI editor?
- A. Normal mode, Input mode, Command-line mode
 - B. Read mode, Write mode, Edit mode
 - C. View mode, Insert mode, Edit mode
 - D. Insert mode, Delete mode, Command mode
- viii.** Which command is used to save a file in VI editor?
- A. :s
 - B. :q!
 - C. :x
 - D. :w
- ix.** How do you delete a single character in VI?
- A. dd
 - B. x
 - C. d\$
 - D. dw
- x.** What is a shell script?
- A. A compiled program
 - B. A text file containing a sequence of shell commands
 - C. A GUI-based script
 - D. A programming language
- xi.** Which command is used to print text in a shell script?
- A. display
 - B. print
 - C. echo
 - D. show
- xii.** Which command is used for conditional execution in a shell script?
- A. check
 - B. if
 - C. loop
 - D. goto

Q2) What is Operating system? Explain types of operating systems . **[16]**

Q3) What is Vi Editor? Explain different modes in VI editor. **[16]**

Q4) What is Shell Script . Explain Kernel-shell relationship.

Q5) Explain directory handling commands- cd , mkdir, rmdir,pwd .

[16]

Q6) Explain statements in shell programming - read , echo, if, case.

[16]

Q7) What is file? Explain file system tree in detail.

[16]

Q8) Write short note(Any Four)

[20]

- a. Features of Linux
- b. grep command.
- c. Features of Vi editor.
- d. Functions of operating system.
- e. General purpose utility commands.
- f. Loops in Shell script.

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (717) Bachelor of Computer Application (66424) Linux Operating System Part 3 SEM 6
- 2] (7824) Bachelor of Computer Application (CBCS)NEP (96647) Linux Part 3 SEM 5
- 3] (717) Bachelor of Computer Application (109327) Linux Part 3 SEM 5
- 4] (7810) B.C.A. (CBCS) (108800) Linux Part 3 SEM 5

Seat No.

Total No. of Pages : 1

March-April 2025 Examination
BCA III (Semester V) Practical Examination
Subject- Lab course X based on DSC 503 & 504.3
(Dot Net and Linux)
Subject Code : 95699/ 96647

Day and Date : Thursday, 08-05-2025**Total Marks : 50****Time : 02:00 pm to 05:00 pm**

Instructions:

- 1) Write any two programs from following.
 - 2) Each question carries 15 marks, 10 marks for journal and 10 marks oral Examination
-

Q1. Write a C# programs to demonstrate the concepts of Partial classes and Extension methods.

OR

Q1. Develop a Employee Registration Form with required controls with Validation.

Q2. Write a Shell script to find factorial of a given integer.

OR

Q2. Write a shell script to find a number is palindrome or not.

◆◆◆

Seat No.

MAR_APR 2025 SUMMER EXAMINATION
11949 Bachelor of Computer Application(BCA) NEP 2.0
Sub. Name: Cloud Computing
Sub. Code: 111003/96660/110751

Day and Date: APRIL ,28-04-2025**Total Marks: 80****Time: 02:30 PM To 05:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: Que.1 and Que. 8 are compulsory and attempt any three Questions from Que. No.2 to Que. No. 7.****Q1) Solve following MCQ.****[12]**

- i. What is Cloud Computing?
 - A. A technology that provides computing services over the internet
 - B. A local network storage system
 - C. A physical data center
 - D. A type of computer hardware
- ii. Which of the following is NOT a type of cloud computing?
 - A. Private Cloud
 - B. Public Cloud
 - C. Hybrid Cloud
 - D. Physical Cloud
- iii. Which of the following cloud types is dedicated to a single organization?
 - A. Public Cloud
 - B. Private Cloud
 - C. Hybrid Cloud
 - D. Community Cloud
- iv. What is virtualization?
 - A. The process of creating a virtual version of hardware, OS, or network resources
 - B. A method of increasing physical storage space
 - C. A technique to reduce CPU performance
 - D. The process of removing cloud computing resources
- v. Which type of virtualization allows multiple operating systems to run on a single physical machine?
 - A. Network Virtualization
 - B. Storage Virtualization
 - C. Server Virtualization
 - D. Data Virtualization

- vi.** What is the main purpose of virtual clusters?
- A. To create multiple independent networks
 - B. To allocate computing resources efficiently
 - C. To eliminate the need for data centers
 - D. To increase the weight of the infrastructure
- vii.** Which cloud service model provides software applications over the internet?
- A. IaaS
 - B. PaaS
 - C. SaaS
 - D. DaaS
- viii.** Which cloud computing service provides a platform to develop, run, and manage applications without managing the infrastructure?
- A. IaaS
 - B. PaaS
 - C. SaaS
 - D. DaaS
- ix.** Which cloud computing model is best suited for businesses needing on-demand computing resources like virtual machines and storage?
- A. SaaS
 - B. IaaS
 - C. PaaS
 - D. DaaS
- x.** Which of the following is a cloud-based business application used for email marketing?
- A. Google Drive
 - B. MailChimp
 - C. Netflix
 - D. Google Classroom
- xi.** Which cloud-based payment service allows businesses to send and receive money online securely?
- A. MailChimp
 - B. Chatter
 - C. PayPal
 - D. Amazon Web Services
- xii.** Which cloud application is widely used for professional networking and job searching?
- A. Facebook
 - B. Twitter
 - C. LinkedIn

D. Instagram

- Q2)** What is cloud? Describe the various types of cloud computing models: Public, Private, Hybrid . **[16]**
- Q3)** Describe the architecture of cloud computing. What are its main components? **[16]**
- Q4)** What is virtualization? Explain the concept of virtualization at the OS model. **[16]**
- Q5)** What is Software as a Service (SaaS)? How does it differ from IaaS and PaaS? **[16]**
- Q6)** Explain cloud computing applications: MailChimp, Salesforce, Google Apps for Education, Chromebooks for Education. **[16]**
- Q7)** Explain virtualization of memory and IO devices. **[16]**
- Q8)** Write short note on (Any four) **[20]**
- a.** History of cloud computing **[5]**
 - b.** Challenges in the cloud. **[5]**
 - c.** Benefits of virtualization. **[5]**
 - d.** Virtual Clusters. **[5]**
 - e.** Application of cloud computing in social applications. **[5]**
 - f.** Video Conferencing Apps . **[5]**

End Of Question Paper**Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -**

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (7824) Bachelor of Computer Application (CBCS) NEP (96660) Cloud Computing Part 3 SEM 6
- 2] (717) Bachelor of Computer Application (111003) Cloud Computing Part 3 SEM 6
- 3] (7810) B.C.A. (CBCS) (110751) Cloud Computing Part 3 SEM 6

Seat No.

MAR-APR 2025 SUMMER EXAMINATION
11949 Bachelor of Computer Application(BCA) NEP 2.0
Sub. Name: Cloud Computing
Sub. Code: 88669/90543/88293

Day and Date: APRIL ,28-04-2025**Total Marks: 70****Time: 02:30 PM To 05:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: 2. Q1, Q2 and Q7 are compulsory****3. Solve any THREE questions from Q3 to Q6****Q1) A) Solve following MCQ.****[10]**

- i. Which of the following is the correct statement about cloud computing?
- A. Cloud computing abstracts systems by pooling and sharing resources
 - B. Cloud computing is nothing more than the Internet
 - C. The use of the word "cloud" makes reference to the two essential concepts
 - D. All of the mentioned
- ii. Which of the following is social application of the cloud computing?
- A. Amazon Web Services (AWS)
 - B. Dropbox
 - C. Facebook
 - D. All of the above
- iii. _____ cloud deployment model is operated solely for one organization
- A. Public cloud
 - B. Private cloud
 - C. Hybrid cloud
 - D. Community cloud
- iv. Scalability mean _____ in cloud computing
- A. Ability to expand software features
 - B. Ability to handle growing amount of work
 - C. Ability to scale documents
 - D. Ability to reduce cloud costs

- v. _____ is a characteristic of cloud computing?
- A. High maintenance
 - B. Limited storage
 - C. On-demand self-service
 - D. Manual configuration
- vi. _____ software is used for virtualization
- A. Google Chrome
 - B. VMware
 - C. Microsoft Word
 - D. Adobe Photoshop
- vii. In virtualization, the physical machine called _____
- A. Virtual host
 - B. Host machine
 - C. Guest machine
 - D. Hypervisor
- viii. _____ services typically provided by IaaS providers
- A. Email applications
 - B. Runtime environments
 - C. Virtual machines and storage
 - D. CRM systems
- ix. SaaS best describes as _____
- A. End users develop applications
 - B. End users rent virtual servers
 - C. End users access software via the internet
 - D. End users deploy operating systems
- x. Cloud computing benefit the education sector _____
- A. By reducing internet usage
 - B. By providing online learning platforms and virtual labs
 - C. By replacing teachers with robots
 - D. By increasing textbook prices

- Q2)** B) Give Reasons or Short answer question (Any two out of three) **[10]**
a) Explain types of cloud.
b) Write virtualization of CPU in detail
c) Discuss Database as a service in detail.
- Q3)** Write architecture of cloud computing **[10]**
- Q4)** What is Virtualization? Explain Virtualization at the OS Model **[10]**
- Q5)** Explain in detail- Infrastructure as a service and Software as a service **[10]**

- Q6)** Explain business applications of cloud computing **[10]**
- Q7)** Write short note **[20]**
- a.** Write notes on (Any Four out of Six)
- a. Challenges in the cloud
 - b. Benefits of virtualization
 - c. Guidelines for selecting PaaS Provider
 - d. Entertainment Applications of cloud computing
 - e. Virtualization Hosted Structure
 - f. Social Applications of cloud computing

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (7810) B.C.A. (CBCS) (88293) Cloud Computing Part 3 SEM 6
- 2] (717) Bachelor of Computer Application (88669) Cloud Computing Part 3 SEM 6
- 3] (717) Bachelor of Computer Application (90543) Cloud Computing Part 3 SEM 6

Seat No.

MAR-APR 2025 SUMMER EXAMINATION
11949 Bachelor of Computer Application(BCA) NEP 2.0
Sub. Name: Python
Sub. Code: 110994/96654/110738

Day and Date: APRIL ,21-04-2025**Total Marks: 80****Time: 02:30 PM To 05:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: 1) Que. No.1 and Que.No. 8 are compulsory****2) Attempt any three Questions from Que. No.2 to Que. No. 7.****Q1) Solve following MCQ.****[12]**

- i. Which widget is used to get the data from the user?
 - A. Entry
 - B. Label
 - C. Button
 - D. None of the above
- ii. What is the output of the expression round(4.576)?
 - A. 4.5
 - B. 5
 - C. 4
 - D. 4.6
- iii. Which of these about a set is not true?
 - A. Mutable data type
 - B. Does not allow duplicate values
 - C. Data type with unordered values
 - D. Immutable data type
- iv. How we import a tkinter in Python program?
 - A. import tkinter
 - B. import tkinter as t
 - C. from tkinter import *
 - D. All of the above
- v. Which of the following statements create a dictionary?
 - A. d = {}
 - B. d = {"john":40, "peter":45}
 - C. d = {40:"john", 45:"peter"}
 - D. All of the mentioned
- vi. What will be the output of the following code?

T=(1, 2, 3, 4, 5)

T.pop()

print(T)

- A. (1, 2, 3, 4)
- B. (2, 3, 4, 5)
- C. (1, 2, 3, 4, 5)
- D. Error

vii. What will be the output of the following Python code?

x = ['ab', 'cd']

for i in x:

i.upper()

print(x)

- A. ['ab', 'cd']
- B. ['AB', 'CD']
- C. [None, None]
- D. none of the mentioned

viii. Which of the following is the correct way to declare a variable in Python?

- A. int x = 10
- B. x := 10
- C. x = 10
- D. var = 10

ix. What is the output of print(type("Hello"))?

- A. <class 'int'>
- B. <class 'str'>
- C. <class 'float'>
- D. <class 'list'>

x. What will be the output of the following Python code?

t1 = (1, 2, 4, 3)

t2 = (1, 2, 3, 4)

t1 < t2

- A. True
- B. False
- C. Error
- D. None

xi. GUI stands for----- .

- A. Global user interaction
- B. Graph user interaction
- C. Graphical user interaction
- D. Graphical user interface

xii. Suppose listExample is ['h','e','l','l','o'], what is len(listExample)?

- A. 5
- B. 4
- C. None
- D. Error

- Q2) A.** Explain the import statement in Python. [8]
B. What is a Dictionary? Explain Accessing Values in Dictionary. [8]
- Q3) A.** What are Python features? [8]
B. What is function? Explain function with arguments with example. [8]
- Q4) A.** Write a Python program to calculate the factorial of a given number. [8]
B. What is set? Explain different operations on set with examples. [8]
- Q5)** Write a program to demonstrate file input and output in Python. [16]
- Q6) A.** What is the list? Explain list slicing with examples. [8]
B. Describe applications of Python. [8]
- Q7)** Illustrate different looping statements used in Python. [16]
- Q8)** Write short note on any four. [20]
- a. Escape Characters
 - b. GUI In Python
 - c. Tuples Operations
 - d. Lambda Function
 - e. Math Module
 - f. Break and Continue

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (717) Bachelor of Computer Application (110994) Python Part 3 SEM 6

2] (7810) B.C.A. (CBCS) (110738) Python Part 3 SEM 6

3] (7824) Bachelor of Computer Application (CBCS)NEP (96654) Python Part 3 SEM 6

Seat No.

MAR_APR 2025 SUMMER EXAMINATION
11949 Bachelor of Computer Application(BCA) NEP 2.0
Sub. Name: IT Security
Sub. Code: 110995/110739/96655

Day and Date: APRIL ,26-04-2025**Total Marks: 80****Time: 02:30 PM To 05:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: 1) Que.1 and Que. 8 are compulsory.****2) Attempt any three Questions from Que. No.2 to Que. No. 7.****Q1) Multiple Choice Questions (12 questions for 1 mark each)****[12]**

- i. What does IT Security primarily aim to protect?
 - A. Only hardware
 - B. Only software
 - C. Information and assets
 - D. Only networks
- ii. Which of the following is a logical asset in IT security?
 - A. Server
 - B. Switch
 - C. Software
 - D. Printer
- iii. What is the main purpose of ensuring confidentiality in IT Security?
 - A. Ensure systems work continuously
 - B. Ensure only authorized users access data
 - C. Ensure data is accurate
 - D. Ensure backups exist
- iv. Why is IT security becoming more significant today?
 - A. Decrease in the number of users
 - B. Increase in paper records
 - C. Rise in cyber threats and digital dependency
 - D. Reduction in hardware cost
- v. Which of the following is an example of a passive attack?
 - A. Phishing
 - B. Sniffing
 - C. Eavesdropping
 - D. Denial of Service

- vi.** What type of attack involves sending fraudulent emails to trick users into revealing sensitive information?
- A. Spoofing
 - B. Phishing
 - C. Sniffing
 - D. Spamming
- vii.** Which of the following is NOT a source of security threats?
- A. Hackers
 - B. Software updates
 - C. User errors
 - D. Environmental hazards
- viii.** A worm differs from a virus in that it:
- A. Needs a host program
 - B. Cannot replicate
 - C. Spreads without user intervention
 - D. Is always harmless
- ix.** Which security control detects and blocks suspicious network activity in real-time?
- A. Firewall
 - B. Intrusion Detection System (IDS)
 - C. Intrusion Prevention System (IPS)
 - D. Antivirus
- x.** What does a firewall primarily protect against?
- A. Physical damage
 - B. Unauthorized network access
 - C. Biometric failure
 - D. Data formatting errors
- xi.** Cyber security standards help organizations to:
- A. Replace all software
 - B. Improve internet speed
 - C. Protect systems and data from cyber threats
 - D. Design websites
- xii.** Which of the following is a challenge in enforcing IT laws?
- A. Rapidly evolving technologies
 - B. Physical infrastructure cost
 - C. Employee punctuality
 - D. Software development process

Q2) Explain in detail the basic concepts of Information System Security. Discuss its [16] need, significance, and current challenges faced by organizations.

- Q3)** Classify IT assets into Physical and Logical categories. Explain each with at least [16]
three examples.
- Q4)** Explain different types of security threats with suitable examples. Categorize them [16]
into cyber threats and physical threats.
- Q5)** Discuss the techniques used in phishing, spoofing, and denial-of-service attacks. [16]
What preventive measures should be taken?
- Q6)** Describe various access control mechanisms used in IT security. [16]
- Q7)** Discuss in detail the features of the Information Technology Act 2000, the need for [16]
its amendments, and its relevance in today's digital environment.
- Q8)** Write notes on (Any Four out of Six) [20]
- a. Information security dimensions [5]
 - b. Malicious Code [5]
 - c. Types of Cryptography [5]
 - d. Digital signature and certificate [5]
 - e. IS Audit [5]
 - f. Types of cyber crimes [5]

End Of Question Paper

Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

This Question Paper may be distributed for following Subjects as common code.

सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

1] (717) Bachelor of Computer Application (110995) IT Security Part 3 SEM 6

2] (7810) B.C.A. (CBCS) (110739) IT Security Part 3 SEM 6

3] (7824) Bachelor of Computer Application (CBCS)NEP (96655) IT Security Part 3 SEM 6

Seat No.

Total No. of Pages : 1

March-April 2025 Examination
BCA-III (Semester-VI) Practical Examination
Subject:- CCL 607 Lab Course XII Based on
DSE 603 3. R Programming
Subject Code : 96658 / 96613

Day and Date : Thursday, 08-05-2025**Total Marks : 50****Time : 02:00 pm to 05:00 pm**

Instructions:

- 1) Attempt any Two questions.
 - 2) Each question carries 15 marks 10 marks for journal and 10 marks are for Oral Examination.
-

- Q.1 Write a Program using R to print the Fibonacci Sequence upto nth number entered by user.
- Q.2 Write a Program using R to find H.C.F. of two numbers entered by user.
- Q.3 Create a pie chart showing the proportion of cars from the mtcars data set that have different cylinder (cyl) values.

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Seat No.	
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SO-249

Total No. of Pages : 1

BCA-III (Semester-VI) Practical Examination

Subject: Lab Course XI Based on CC 601

(PYTHON)

Subject Code : 96662-96654

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Day and Date : Wednesday, 07-05-2025

Total Marks : 50

Time : 10.00 a.m. to 1.00 p.m.
.....

Instructions :

- 1) Attempt any TWO questions.
 - 2) Each question carries 15 marks 10 marks for journal and 10 marks are for Oral Examination.
-

Q.1 Write a Python program using functions to display Pascal's triangle.

Q.2 Write a program that generates a list of 20 random numbers between 1 and 100.

- i) Print the list.
- ii) Print the average of the elements in the list.
- iii) Print the largest and smallest values in the list.
- iv) Print the second largest and second smallest entries in the list
- v) Print how many even numbers are in the list.

Q.3 Write a Python program to count frequency of characters in a given file.

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Seat No.

Total No. of Pages : 1

March-April 2025 Examination**BCA-III (Semester-V) Practical Examination****Subject: Lab Course-IX Based on CC501 Paper No- CCL507****(Java Programming)****Subject Code : 96652/ 96642**

Day and Date : Thursday, 08-05-2025**Total Marks : 50****Time : 02:00 pm to 05:00 pm**

Instructions:

- 1) Attempt any two questions
 - 2) Each question carries 15 marks 10 marks for journal and 10 marks are for Oral Examination.
-

Q.1 Write a program that executes two threads. One thread will print the even numbers and the another thread will print odd numbers from 1 to 500.

Q.2 Write a JAVA program to print the following patterns using Loops.

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

.....

Q.3 Write an small application in Java to develop Banking Application in which user deposits the amount Rs 1000.00 and then start withdrawing of Rs 400.00, Rs 300.00 and it throws exception "Not Sufficient Fund" when user withdraws Rs. 500 thereafter.

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Seat No.

Total No. of Pages : 1

March-April 2025 Examination**BCA-III (Semester-VI) Practical Examination****Subject:- Lab Course XI Based on CC 601 (PYTHON)****Subject Code : 96662/ 96654**

Day and Date : Thursday, 08-05-2025**Total Marks : 50****Time : 10:00 am to 01:00 pm**

Instructions:

- 1) Attempt any TWO questions.
 - 2) Each question carries 15 marks 10 marks for journal and 10 marks are for Oral Examination.
-

- Q1. Write a PYTHON program to check the input value is Armstrong number or not.
- Q2. Write a PYTHON program to Calculate of Simple Interest and Compound Interest by accepting required information from user.
- Q3. Write a program to compute the number of characters, words and lines in a file.

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