



**B.C.A. – II<sup>nd</sup> Year**

**SEM – III & IV**

**Previous Year**

**Question Papers**

**Academic Year**

**(2024-25)**





**B.C.A. – II<sup>nd</sup> Year**

**SEM – III**

**Previous Year**

**Question Papers**

**Academic Year**

**(2024-25)**



Seat No.

**QP-1648**

Total No. of Pages : 3

**OCT\_NOV\_2024 WINTER EXAMINATION**

**Bachelor of Computer Application(BCA) NEP 2.0**

**Sub. Name: RDBMS *BCA-II Sem III***

**Sub. Code: 109536/94730/91170**



**Day and Date: DECEMBER ,03-12-2024**

**Total Marks: 80**

**Time: 10:30 AM To 01:30 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. A tuple is a ?
  - A. column of a table
  - B. two-dimensional table
  - C. row of a table
  - D. key of a table
  
- ii. Which statement(s) are mandatory in a simple SQL SELECT statement?
  - A. Select, From
  - B. Select, OrderBy
  - C. Select, Where
  - D. Select, GroupBy
  
- iii. The AND operator displays a record if \_\_\_\_\_
  - A. Any of the conditions separated by AND is true
  - B. All the conditions separated by AND is true
  - C. Any of the conditions separated by AND is not true
  - D. All the conditions separated by AND is not true
  
- iv. The SQL LIKE operator is used in which of the following clause?
  - A. Having
  - B. Select
  - C. Where
  - D. Group by
  
- v. To which of the following the term "DBA" referred?
  - A. Data Bank Administrator
  - B. Database Administrator
  - C. Data Administrator
  - D. None of the above
  
- vi. Which SQL statement is used to return only different values?



- A. Select Different
- B. Select Unique
- C. Select Distinct
- D. Select

vii. IN operator can be used as shorthand for which of the following operators?

- A. Multiple OR
- B. Multiple Like
- C. Multiple NOT
- D. Multiple Between

viii. What is a database?

- A. A collection of files
- B. A collection of tables
- C. A collection of software
- D. A collection of web pages

ix. BETWEEN operator can be used as a shorthand for which of the following operations?

- A.  $\geq$  AND  $\leq$
- B.  $>$  AND  $<$
- C.  $\geq$  OR  $\leq$
- D.  $>$  OR  $<$

x. Which clause is used to fetch data from two or more tables, based on conditions between tables?

- A. Combine
- B. Join
- C. Merge
- D. Add

xi. How many types of cursors are present in PL/SQL?

- A. 2
- B. 3
- C. 4
- D. 5

xii. Which of the following is the full form of RDBMS?

- A. Relational Data Management System
- B. Relational Database Management System
- C. Relative Database Management System
- D. Regional Data Management System

Q2) What is RDBMS? Explain Codd's rules.

[16]

Q3) What is view? Explain creating, altering, dropping and renaming views with

[16]



example.

- Q4)** What is PL/SQL? Describe stored procedure in detail with example. **[16]**
- Q5)** a) Create following tables with appropriate constraints. **[16]**  
1) Table employee(empid ,empname , department,contactno, emaild, empheadid )  
2) Table empdept(deptid,deptname, depthead)  
b) Insert 5 records in each table.  
c) Select the detail of the employee whose name start with P.  
d) Select the details of the employee who work in HR department.  
e) Select the name of the employee who is working under Abhishek.
- Q6)** Explain any eight string functions with example. **[16]**
- Q7)** What is integrity constraint? Illustrate integrity constraints used in RDBMS with **[16]** appropriate examples.
- Q8)** Write short note (any four) **[20]**
- a. RDBMS Terminologies
  - b. Trigger
  - c. Cross Join
  - d. Between and IN operator
  - e. Ceil and floor functions
  - f. Sequence

\* \* \*



Seat No. 

BCA-II sem III

**MAR\_APR 2025 SUMMER EXAMINATION**  
**11949 Bachelor of Computer Application(BCA) NEP 2.0**

Sub. Name: RDBMS

Sub. Code: 109536/94730/91170

Day and Date: APRIL ,29-04-2025

Total Marks: 80

Time: 10:30 AM To 01:30 PM

Instructions: 1. Figures to the right indicate full marks

Special Inst.: 1) Que.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. Rows of a relation are known as the \_\_\_\_\_.
- Degree
  - Tuples
  - Entity
  - All of the above
- ii. What is the syntax for SELECT statement?
- SELECT table\_name FROM database\_name;
  - SELECT column\_list FROM table\_name;
  - SELECT row\_list FROM table\_name;
  - SELECT record\_list FROM table\_name;
- iii. The OR operator displays a record if \_\_\_\_\_
- Any of the conditions separated by OR is true
  - All the conditions separated by OR is true
  - Any of the conditions separated by OR is not true
  - All the conditions separated by OR is not true
- iv. IN operator is used with which of the following clause(s)?
- Select
  - Where
  - Update
  - Insert
- v. What is a database?
- A collection of files
  - A collection of tables
  - A collection of software
  - A collection of web pages
- vi. Which of the following type of join returns a list of rows for which there is a



match in both of the specified tables?

- A. Outer join
- B. Full join
- C. Self join
- D. Inner join

vii. Which of the following is the correct syntax for creating an explicit cursor?

- A. cursor\_name IS column\_name;
- B. CURSOR cursor\_name IS SELECT\_statement;
- C. cursor\_name CURSOR IS SELECT\_statement;
- D. CURSOR cursor\_name IS column\_name;

viii. In how many parts does a PL/SQL sub-program is divided into?

- A. 2
- B. 3
- C. 4
- D. 5

ix. Which of the following statement is used to come out of the loop when encountered and pass the program control to the statement following the loop?

- A. BREAK
- B. CONTINUE
- C. EXIT
- D. GOTO

x. Which SQL keyword is used to sort the data returned by a SELECT statement?

- A. Group
- B. Order
- C. Group By
- D. Order By

xi. Which of the following command is used to create a database in SQL?

- A. MAKE
- B. CREATE
- C. INSERT
- D. DEVELOP

xii. What is a relation in RDBMS?

- A. Key
- B. Table
- C. Row
- D. Data Types

Q2) What is RDBMS? Write difference between DBMS and RDBMS.

[16]



- Q3)** Explain data definition language command in SQL. [16]
- Q4)** What is join? Explain different types of joins use in RDBMS. [16]
- Q5)** Illustrate different iterative control statements used in PL/SQL. [16]
- Q6)** Describe date and time Functions in SQL. [16]
- Q7)** Create table demo with fields (num, answer). Insert 10 records in demo tables with integer value for num only. Write explicit cursor to calculate square of num, if num is even and cube of num otherwise. Store the same in answer. [16]
- Q8)** Write short note (any four). [20]
- SQL data types
  - Relational Algebra
  - Aggregate functions
  - Sub queries
  - Branching statements in PL/SQL
  - Features of RDBMS

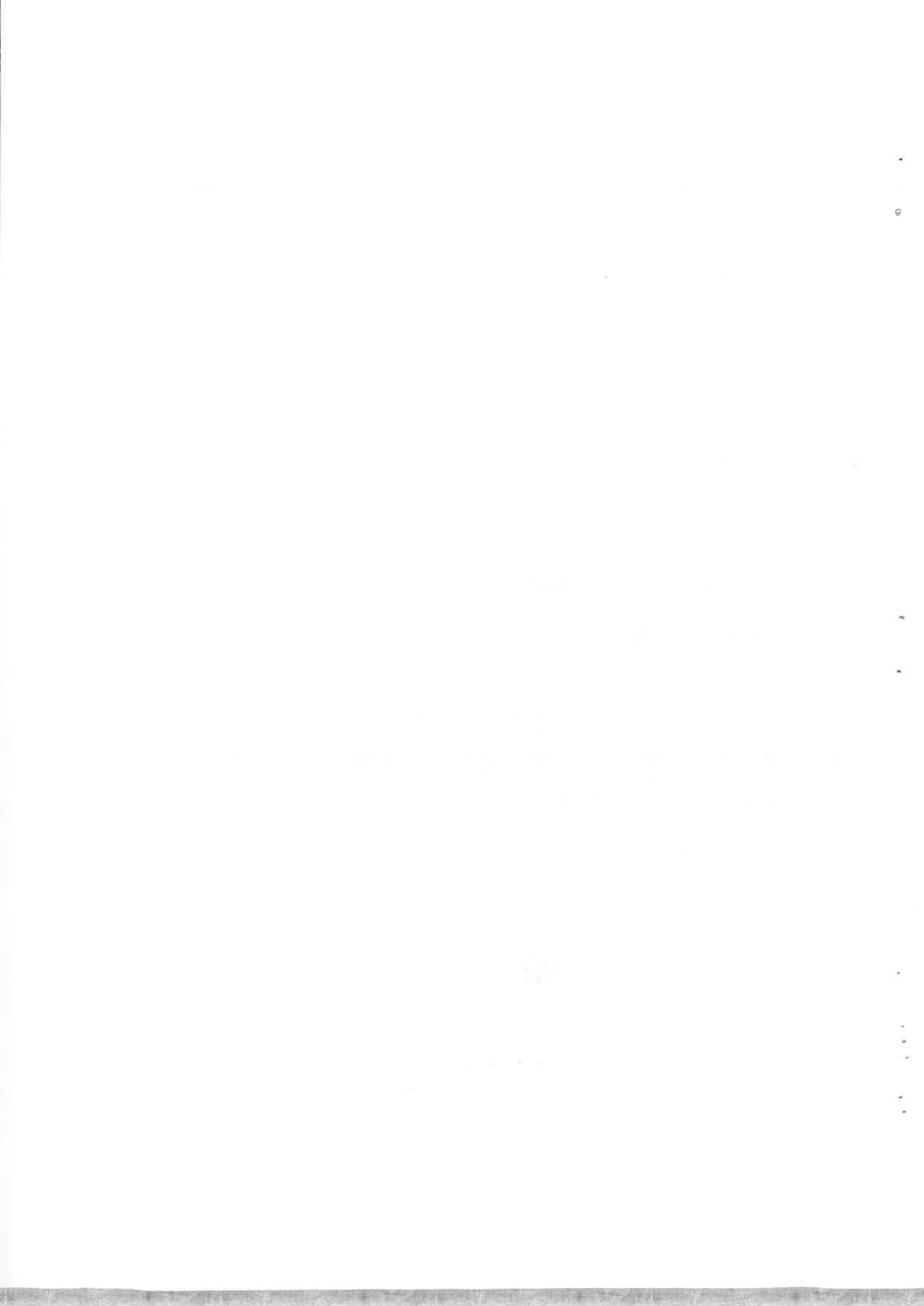
## End Of Question Paper

**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 (91170) RDBMS Part 2 SEM 3
- 2] (717) Bachelor of Computer Application (109536) RDBMS Part 2 SEM 3
- 3] (7810) B.C.A. (CBCS) (94730) RDBMS Part 2 SEM 3



Seat No. **OCT\_NOV\_2024 WINTER EXAMINATION****Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Computer Network and Internet** *BCA-II Sem III***Sub. Code: 109537/84099/83375/94731/91171****Day and Date: DECEMBER ,04-12-2024****Time: 10:30 AM To 01:30 PM****Instructions:**

- Special Inst.:** 1) Que.1 and Que. 8 are compulsory.  
2) Attempt any three Questions from Que. No.2 to Que. No. 7.  
3) Figures to the right indicate full marks.

**Total Marks: 80****Q1) Solve following MCQ.****[12]**

- i. What is internet?  
A. A network of interconnected local area networks  
B. A collection of unrelated computers  
C. Interconnection of wide area networks  
D. A single network
- ii. What is the full form of OSI?  
A. Optical service implementation  
B. Open service Internet  
C. Open system interconnection  
D. Operating system interface
- iii. Which one of the following is not a function of network layer?  
A. Congestion control  
B. Error control  
C. Routing  
D. Inter-networking
- iv. Which of the following devices forwards packets between networks by processing the routing information included in the packet?  
A. Firewall  
B. Bridge  
C. Hub  
D. Router
- v. Which topology requires a multipoint connection?  
A. Ring  
B. Bus  
C. Star  
D. Mesh

- vi. The physical layer is concerned with \_\_\_\_\_
- A. bit-by-bit delivery
  - B. process to process delivery
  - C. application to application delivery
  - D. port to port delivery
- vii. Retransmission of packets must not be done when \_\_\_\_\_
- A. Packet is lost b)
  - B. Packet is corrupted
  - C. Packet is needed
  - D. Packet is error-free
- viii. What does TCP/IP stand for?
- A. Telephone control protocol / Internet Protocol
  - B. Transmission control protocol/Internet protocol
  - C. Transmission control protocol/International protocol
  - D. None of these
- ix. Which of the following is not the layer of TCP/IP protocol?
- A. Application Layer
  - B. Session Layer
  - C. Transport Layer
  - D. Internetwork layer
- x. The term FTP stands for?
- A. File transfer program
  - B. File transmission protocol
  - C. File transfer protocol
  - D. File transfer protection
- xi. What is a HUB?
- A. Software
  - B. Computing device
  - C. Network device
  - D. Calculating device
- xii. Which layer provides the services to user?
- A. Physical layer
  - B. Presentation layer
  - C. Session layer
  - D. Application layer



Q2) What is Transmission Media? Explain guided media and unguided media.

[16]

Q3)

[2]

P.T.O.

- a. What is a Web browser? Describe features of web browser. [8]
- b. Differentiate between Internet, Intranet & Extranet. [8]

**Q4)** What is computer Network? Explain types of network with neat diagram. [16]

**Q5)**

- a. Explain networking devices in detail. [8]
- b. What are the advantages of Web 3.0? [8]



**Q6)**

- a. What is topology? Explain different types of topology. [8]
- b. What is switching? Explain Packet & Message Switching Techniques. [8]

**Q7)**

- a. Explain ISO-OSI Model in brief. [8]
- b. Differentiate between Connection oriented and connectionless services. [8]

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

- a. Components of Computer Networks.
- b. Evolution of Internet.
- c. Sliding window protocol.
- d. Serial and Parallel transmission.
- e. Internet security threats and security solutions.
- f. Routing algorithms.

\* \* \*



Seat No. 

BCA II sem III

**MAR-APR 2025 SUMMER EXAMINATION****11949 Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Computer Network and Internet****Sub. Code: 109537/84099/83375/94731/91171****Day and Date: APRIL ,30-04-2025****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. SMTP stands for  
A. Simple mail transfer protocol  
B. Sample mail transfer protocol  
C. Simple mail transmission protocol  
D. All of these
- ii. CRC stands for  
A. Cycle Redundancy Check  
B. Cyclic Redundancy Correction  
C. Cyclic Repeater Check  
D. Cyclic Redundancy Check
- iii. Data communication system within a building or campus is  
A. MAN  
B. LAN  
C. WAN  
D. PAN
- iv. The number of layers in OSI model is  
A. 4  
B. 5  
C. 6  
D. 7
- v. A normal Flooding technique is an example of  
A. Semi casting  
B. Unicasting  
C. Telecasting  
D. Broadcasting
- vi. The network layer is concerned with \_\_\_\_\_ of data

- A. Bits
- B. Frames
- C. Packets
- D. Bytes



- vii. Which network topology requires a central controller or hub?
- A. Ring
  - B. Bus
  - C. Star
  - D. Mesh
- viii. Which layer provides the services to user?
- A. Application layer
  - B. Session layer
  - C. Presentation Layer
  - D. All of these
- ix. The kind of "read-only" web where you can only read the Internet pages is
- A. Web 2.0
  - B. Web 1.0
  - C. Web 3.0
  - D. None of these
- x. Serial transmission can be
- A. Parallel
  - B. Synchronous
  - C. Asynchronous
  - D. B or C
- xi. The encryption process where same keys are used for encrypting and decrypting the information is known as \_\_\_\_\_ Encryption
- A. Asymmetric Key
  - B. Encryption Key
  - C. Sample Key
  - D. Symmetric Key
- xii. Stop and wait is a \_\_\_\_\_ technique
- A. Line discipline
  - B. Flow control
  - C. Error control
  - D. Session management

Q2) Define computer network? Explain components of computer network? [16]

Q3) Explain simplex, half-duplex, and full-duplex transmission modes. Provide [16] examples?

- Q4)** What is OSI model? Explain different layers in OSI model? [16]
- Q5)** Describe various network topologies with its advantages and limitations. [16]
- Q6)** Define and distinguish between the LAN, MAN and WAN. Explain how it works? [16]
- Q7)** Explain common types of threats in computer networks? [16]
- Q8)** Write short note on any four [20]
- Analog and digital signals
  - Fiber optic cable
  - Types of errors
  - Web 3.0
  - Search engines
  - DNS

## End Of Question Paper

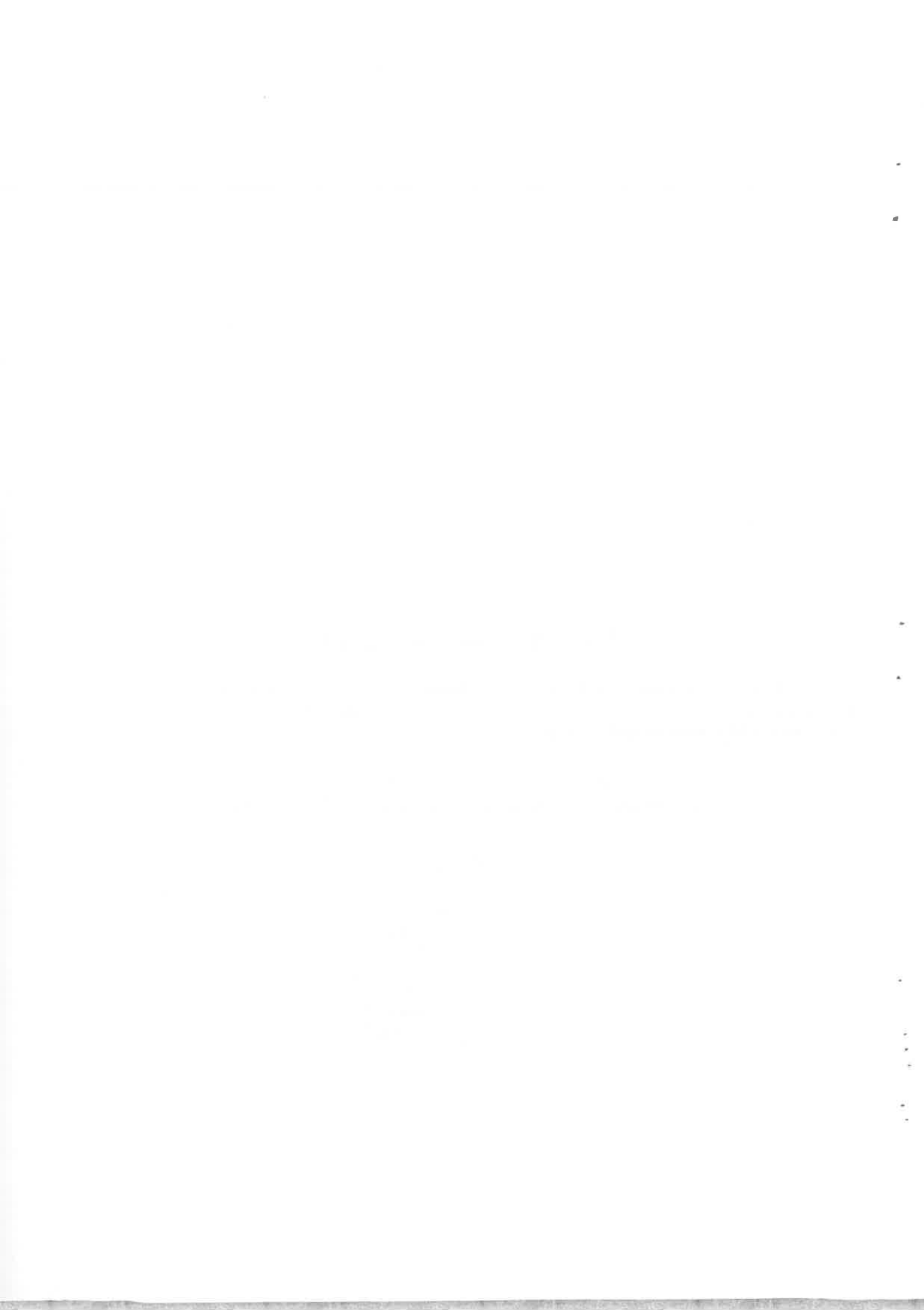
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- 1] (7810) B.C.A. (CBCS) (83375) Computer Network and Internet Part 2 SEM 3
- 2] (717) Bachelor of Computer Application (84099) Computer Network and Internet Part 2 SEM 3
- 3] (7810) B.C.A. (CBCS) (94731) Computer Network and Internet Part 2 SEM 3
- 4] (717) Bachelor of Computer Application (109537) Computer Network and Internet Part 2 SEM 3
- 5] (7824) Bachelor of Computer Application (CBCS)NEP (91171) Computer Network and Internet Part 2 SEM 3





Seat No. **OCT\_NOV\_2024 WINTER EXAMINATION****Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Data Structure using C** *BCA II sem. III***Sub. Code: 109538/84100/94732/83376/91172****Day and Date: DECEMBER ,05-12-2024****Total Marks: 80****Time: 10:30 AM To 01:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: 2) Que.No.1 and Que. No.8 are compulsory.****3) Attempt ANY THREE Questions from Que. No.2 to Que. No. 7.****[12]****Q1) Solve following MCQ.**

- i. In a stack, if a user tries to remove an element from an empty stack it is called \_\_\_\_\_
- A. Underflow
  - B. Empty collection
  - C. Overflow
  - D. Garbage Collection
- ii. A linear list of elements in which deletion can be done from one end (front) and insertion can take place only at the other end (rear) is known as \_\_\_\_\_
- A. Queue
  - B. Stack
  - C. Tree
  - D. Linked list
- iii. How many passes does an insertion sort algorithm consist of?
- A. N
  - B. N-1
  - C. N+1
  - D. N\*N
- iv. Which data structure is used for implementing recursion?
- A. Queue
  - B. Stack
  - C. Array
  - D. List
- v. Which of the following step is taken after finding an element having value greater than the element being searched?
- A. binary search takes place in the forward direction
  - B. binary search takes place in a backward direction

- C. linear search takes place in the forward direction
- D. linear search takes place in the backward direction

vi. A variant of a linked list in which the last node of the list points to the first node of the list is?

- A. Singly linked list
- B. Doubly linked list
- C. Circular linked list
- D. Multiply linked list



vii. Here is an infix expression:  $4 + 3*(6*3-12)$ . Suppose that we are using the usual stack algorithm to convert the expression from infix to postfix notation. The maximum number of symbols that will appear on the stack AT ONE TIME during the conversion of this expression?

- A. 1
- B. 2
- C. 3
- D. 4

viii. A circular queue is implemented using an array of size 10. The array index starts with 0, front is 6, and rear is 9. The insertion of next element takes place at the array index.

- A. 0
- B. 7
- C. 9
- D. 10

ix. Which of the following is the infix expression?

- A.  $A+B*C$
- B.  $+A*BC$
- C.  $ABC+*$
- D. None of the above

x. If the size of the stack is 10 and we try to add the 11th element in the stack then the condition is known as \_\_\_\_.

- A. Underflow
- B. Garbage collection
- C. Overflow
- D. None of the above

xi. In doubly linked lists, traversal can be performed?

- A. Only in forward direction
- B. Only in reverse direction
- C. In both directions
- D. None

- xii. The postfix form of the expression  $(A + B) * (C * D - E) * F / G$  is?
- $AB + CD * E - FG / **$
  - $AB + CD * E - F ** G /$
  - $AB + CD * E - * F * G /$
  - $AB + CDE * - * F * G /$



- Q2) Write a program to accept ten integers and sort in descending order using selection sort. [16]
- Q3) What is a stack? Explain different operations on a stack with an algorithm. [16]
- Q4) What is a linear search? Write a program to demonstrate linear search with appropriate data. [16]
- Q5) Describe insertion and deletion operations on a doubly linked list. [16]
- Q6) Write a program to demonstrate a singly lined list. [16]
- Q7) What is a queue? Describe different operations on the circular queue. [16]
- Q8) Write notes on (Any Four). [20]
- Abstract Data Type [5]
  - Hashing [5]
  - Evaluation of postfix expression [5]
  - Merge sort [5]
  - Data and Information [5]
  - Prefix expressions [5]

\* \* \*



Seat No. 

BCA-II Sem. III

**MAR-APR 2025 SUMMER EXAMINATION****11949 Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Data Structure using C****Sub. Code: 109538/84100/94732/83376/91172**

Day and Date: MAY ,02-05-2025

Total Marks: 80

Time: 10:30 AM To 01:30 PM

Instructions: 1. Figures to the right indicate full marks

Special Inst.: 2. Que.1 and Que. 8 are compulsory.

3. Attempt any three Questions from Que. No. 2 to Que. No. 7.

Q1) Solve following MCQ.

[12]

- i. Which of the following is not the application of stack?
  - A. Data Transfer between two asynchronous process
  - B. Compiler Syntax Analyzer
  - C. Tracking of local variables at run time
  - D. A parentheses balancing program
  
- ii. How can we initialize an array in C language?
  - A. `int arr[2]=(10, 20)`
  - B. `int arr(2)={10, 20}`
  - C. `int arr[2] = {10, 20}`
  - D. `int arr(2) = (10, 20)`
  
- iii. Which data structure is required to convert the infix to prefix notation?
  - A. Stack
  - B. Linked list
  - C. Binary tree
  - D. Queue
  
- iv. Which one of the following is not the type of the Queue?
  - A. Linear Queue
  - B. Circular Queue
  - C. Double ended Queue
  - D. Single ended Queue
  
- v. What is the advantage of selection sort over other sorting techniques?
  - A. It is faster than any other sorting technique
  - B. It is scalable
  - C. It works best for inputs which are already sorted
  - D. It requires no additional storage space
  
- vi. What is the advantage of bubble sort over other sorting techniques?



- A. Detects whether the input is already sorted
- B. Requires less memory space
- C. Time Consuming
- D. It is Faster

vii. \_\_\_\_\_ is a collection of similar elements where each element points to next element.

- A. Queue
- B. Linked list
- C. Stack
- D. Tree

viii. Which of the following is not Primitive data type?

- A. Arrays
- B. Integer
- C. Pointer
- D. String

ix. In which stage data or instructions are put into the computer system.

- A. Output
- B. Information
- C. Input
- D. Process

x. What is the advantage of bubble sort over other sorting techniques?

- A. Detects whether the input is already sorted
- B. Requires less memory space
- C. Time Consuming
- D. It is Faster

xi. At which position we have to insert element?

- A. At beginning of linked list
- B. At the end of linked list
- C. At the specified position in linked list
- D. All of above

xii. In which linked list node has no beginning and no end.

- A. Circular Linked list
- B. Singly Linked list
- C. Doubly Linked list
- D. Doubly Circular Linked list

Q2) A. Differentiate between linear and non linear data structure.

[8]

B. Illustrate Bubblesort with example.

[8]

Q3) A. Explain Array Implementation of Stack using C.

[8]

- B. What is Queue? Describe types of Queue with example. [8]
- Q4) What is linked list? Explain types of linked list with example. [16]
- Q5) A. Explain concept of ADT in detail. [8]  
B. Illustrate linear search with example. [8]
- Q6) A. Describe data structure operations in detail. [8]  
B. How to convert infix to prefix expression? [8]
- Q7) A. Explain Linear Search and Binary Search methods with example. [8]  
B. What is Circular queue? Explain in detail. [8]
- Q8) Write short note on Any FOUR of the following [20]
- a. Application of stack [5]  
b. Hashing [5]  
c. Data and Information [5]  
d. Indexed sequential search [5]  
e. Merge sort [5]  
f. Operations on Queue [5]



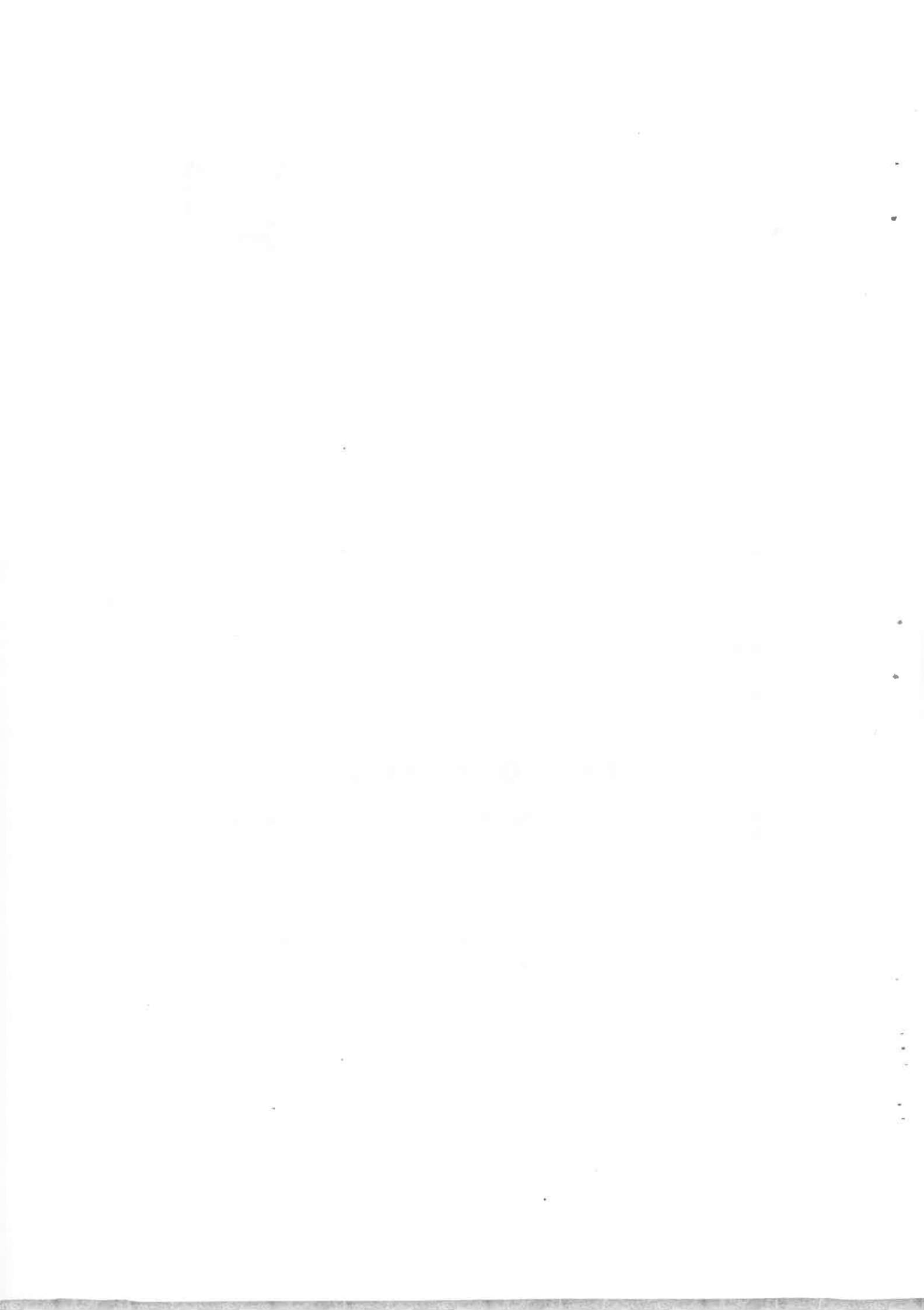
## End Of Question Paper

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

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सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (7824) Bachelor of Computer Application (CBCS)NEP (91172) Data Structure using C Part 2 SEM 3
- 2] (717) Bachelor of Computer Application (109538) Data Structure Using C Part 2 SEM 3
- 3] (7810) B.C.A. (CBCS) (94732) Data Structure using C Part 2 SEM 3
- 4] (717) Bachelor of Computer Application (84100) Data Structure using C Part 2 SEM 3
- 5] (7810) B.C.A. (CBCS) (83376) Data Structure using C Part 2 SEM 3



Seat No.
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Total No. of Pages : 5

Oct.-Nov. 2024 Examination

B.C.A. (Part - II) (Semester -III) (NEP-2020)

Elements of Statistics

Sub. Code : 91173



Day and Date : Friday, 06-12-2024

Total Marks : 80

Time : 10:30 am to 01:30 pm

**Instruction :**

- 1) Question No. 1 and Question No. 8 is compulsory and attempt any three Questions from Question No. 2 to Question No. 7.
- 2) Figures to the right indicate full marks.
- 3) Use of Non-programmable calculator is allowed.

**Q.1 Select the correct alternative and rewrite the statement: [12]**

1) The following frequency distribution

Classes	Less than 10	Less than 20	Less than 30	Less than 40	Less than 50
frequency	2	6	16	19	20

is classified as .....

- a) Less than cumulative frequency distribution
  - b) Continuous frequency distribution
  - c) More than cumulative frequency distribution
  - d) Discrete frequency distribution
- 2) ..... is the positional average.
- a) Mode
  - b) Mean
  - c) Median
  - d) All (a), (b) & (c)



8) Which of the following represents the multiplication theorem of probability?

- a)  $P(A \cap B) = P(B) \cdot P(B/A)$       b)  $P(A \cap B) = P(A) \cdot P(B/A)$   
c)  $P(A \cap B) = P(A) \cdot P(B/B)$       d)  $P(A \cap B) = P(A) \cdot P(A/A)$



9) Length of interval is calculated as

- a) the difference between upper limit and lower limit  
b) the sum of upper limit and lower limit  
c) half of the difference between upper limit and lower limit  
d) half of the sum of upper limit and lower limit

10) The relation between Mean, Median and Mode is given by .....

- a)  $\text{Mean} - 2\text{Mode} = 3(\text{Mean} - \text{Median})$   
b)  $\text{Mean} - \text{Mode} = 2\text{Mean} - 3\text{Median}$   
c)  $\text{Mean} - \text{Mode} = 3(\text{Mean} + \text{Median})$   
d)  $\text{Mean} - \text{Mode} = 3(\text{Mean} - \text{Median})$

11) If the figure +1 signifies perfect positive correlation and the figure -1 signifies a perfect negative correlation, then the figure 0 signifies .....

- a) a perfect correlation  
b) weak correlation  
c) no correlation  
d) none of these

12) What is the probability of a sure event?

- a) 0      b) 1  
c)  $1/2$       d)  $1/4$

Q.2 (a) Define Independent Events. If A and B are two events defined on sample space such that  $P(A) = 0.3$ ,  $P(B) = 0.5$ , then find  $P(A \cup B)$  when A and B are independent events. [8]

(b) What is Histogram? Represent the following data by Histogram and hence locate mode on it. [8]

Class	0-6	6-12	12-18	18-24	24-30	30-36
Frequency	4	8	15	20	12	6

Q.3 (a) State merits and demerits of mean.

The mean of 100 items is found to be 30. If at the time of calculations two items are wrongly taken as 32 and 12 instead of 23 and 11. Find the correct mean. [8]

(b) State equations of two regression lines. For given  $\bar{X} = 40$ ,  $\bar{Y} = 50$ ,  $\sigma_X = 2.5$ ,  $\sigma_Y = 3.5$  and  $r = 0.8$ , obtain the equations of two regression lines. Also obtain the best estimate of X when Y = 40 and that of Y when X = 45. [8]

Q. 4 (a) Define Karl Pearson's correlation coefficient. Calculate the coefficient of correlation between the age of husband and age of wife from the following data.

Age of husband(X)	30	34	35	36	37	38	40	42	43	45
Age of Wife(Y)	25	29	30	31	32	33	35	36	37	42

Comment on your result. [8]

(b) Define: (i) Event, (ii) Equally - Likely Events.. If two coins are tossed at a time, then find the probability of getting (i) exactly two heads, (ii) two tails. [8]

Q.5 (a) Define: Range, Q.D. and state their coefficients. Find Range and their coefficient from the following data. [8]

Weights in lbs.	85 - 95	95 - 105	105 - 115	115 - 125	125 - 135
No. of Persons	4	6	12	14	7



SG-386

(b) Define Pie diagram. Explain its construction and state its use. [8]

**Q.6** (a) Define: Standard Deviation (S.D.) and Coefficient of Variation (C.V.).

If  $N = 10$ ,  $\Sigma X = 120$ ,  $\Sigma X^2 = 1530$ , then with usual notation find the coefficient of variation. [8]

(b) Define Spearman's Rank Correlation coefficient. Calculate Spearman's Rank Correlation coefficient for the following data. [8]

Price X	53	98	95	81	75	61	59	55
Demand Y	47	25	32	37	30	40	39	45

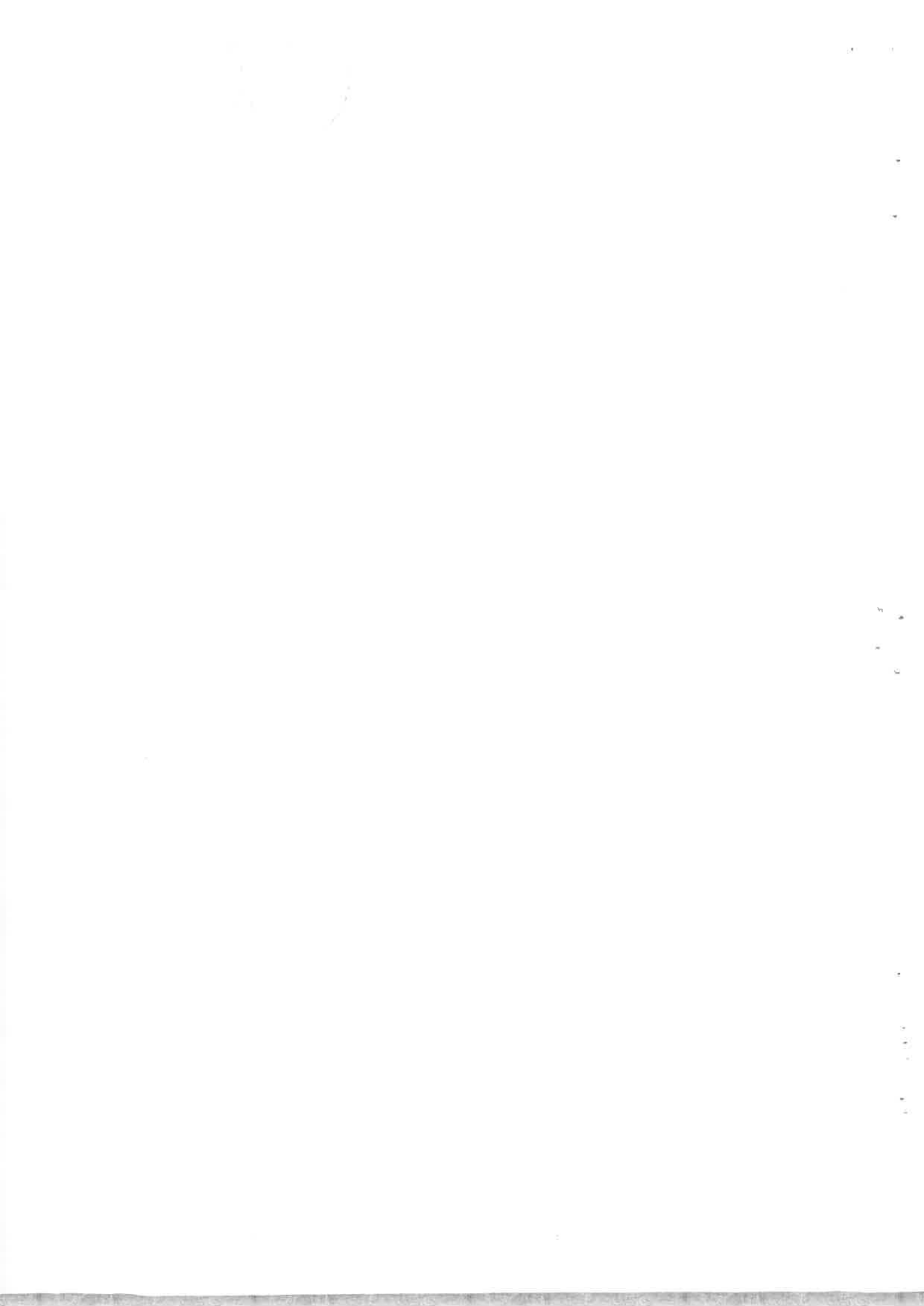
**Q.7** (a) In box I there are 3 white and 7 black balls, in box II there are 4 white and 6 black balls. A box is selected at random and a ball is drawn. Find the probability that the ball will be white. [8]

(b) The average weight of 150 students in a certain class is 60 kgs. The mean weight of the boys is 70 kgs, and that of the girls is 55 kgs. Find the number of boys and Girls. [8]

**Q.8** Write note on any four of the following: [20]

- 1) Discrete and Continuous variables.
- 2) Absolute and Relative measures of dispersion.
- 3) Lines of regression.
- 4) Multiplication Law of probability.
- 5) Representation of Statistical data by Bar diagram
- 6) Scatter diagram

◆◆◆



**B.C.A.(Part - II) (Semester -III) (NEP-2020)**  
**Examination, 2025**  
**Elements of Statistics**  
**Sub. Code: 91173**



Day and Date : Saturday, 03-05-2025

Total Marks : 80

Time : 10.30 a.m. to 1.30 p.m.

**Instructions:**

- 1) Question No. 1 and Question No. 8 is compulsory and attempt any three Questions from Question No. 2 to Question No. 7.
- 2) Figures to the right indicate full marks.
- 3) Use of Non- programmable calculator is allowed.

**Q.1 Select the correct alternative and rewrite the statement:**

[12]

- 1) Cumulative frequency polygon can be used for the calculation of -----.  
 a) Mean                      b) Median                      c) Mode                      d) Geometric mean
- 2) If all the points of a scatter diagram lie on a straight line falling from left bottom corner to the right upper corner, then the correlation is called ----- .  
 a) zero correlation                      b) high degree of positive correlation  
 c) perfect positive correlation                      d) perfect negative correlation
- 3) Given that E and F are events such that  $P(E) = 0.5$ ,  $P(F) = 0.4$  and  $P(E \cap F) = 0.3$ , then what will be the value of  $P(F|E) =$  -----.  
 a)  $2/5$                       b)  $3/5$                       c)  $3/4$                       d)  $2/4$
- 4) If the regression line is X on Y, then the variable X is known as----- .  
 a) dependent variable                      b) independent variable  
 c) dependent as well as independent variable                      d) none of these
- 5) Which of the following represents the multiplication theorem of probability?  
 a)  $P(A \cap B) = P(B) \cdot P(B/A)$                       b)  $P(A \cap B) = P(A) \cdot P(B/A)$   
 c)  $P(A \cap B) = P(A) \cdot P(B/B)$                       d)  $P(A \cap B) = P(A) \cdot P(A/A)$
- 6) The average of lower and upper class limits is called ----- .  
 a) class boundary                      b) class frequency                      c) class mark                      d) class limit
- 7) ----- is not a measure of central tendency..  
 a) Mode                      b) Mean                      c) Range                      d) Median



8) The following frequency distribution

Classes	Less than 10	Less than 20	Less than 30	Less than 40	Less than 50
frequency	2	6	16	19	20

is classified as ----- .

- a) Less than cumulative frequency distribution
- b) Continuous frequency distribution
- c) More than cumulative frequency distribution
- d) Discrete frequency distribution

9) If the values of two variables move in the same direction, then correlation is said to be ----- .

- a) linear
- b) non-linear
- c) positive
- d) negative

10) Any subset of sample space is known as ----- .

- a) an event
- b) probability of an event
- c) a sample space
- d) none of these

11) Primary data are collected by the method of ----- .

- a) government publications
- b) reports of committees
- c) investigation through questionnaire
- d) all (a), (b) & (c)

12) ----- is the positional average.

- a) Mode
- b) Mean
- c) Median
- d) All (a), (b) & (c)

Q.2 a) Define Sample Space and probability of an event. If a coin and die are tossed together, then write a sample space and find the probability of getting (i) head on coin and even number on die, (ii) tail on coin and perfect square number on die. [8]

b) What is an Ogive curve ? Draw a less than Ogive curve form following data and hence obtain median from it.

Marks	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60
No. of Students	3	9	15	30	18	5

[8]

Q.3 a) Define Median. Find median and mode for given data

Class	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60
Frequency	7	9	15	11	8

[8]

b) Define correlation. Calculate the coefficient of correlation between the variables price and demand.

Price	2	3	4	7	6
Demand	10	7	3	1	2

[8]

Q.4 a) State equations of two regression lines. From 7 observations the following results were obtained.

$$\sum X = 21, \sum Y = 20, \sum X^2 = 91, \sum XY = 74$$

Find the regression equation of Y on X. Also estimate Y when X = 4.

[8]



Q.4 b) Define Q.D. and coefficient of Q.D. Find QD and its coefficient for following data.

Age in years (X)	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 50	50 - 55
No. of Persons (f)	8	16	20	36	25	15	5

[8]

Q.5 a) State addition law of probability. If  $P(A) = 0.2$ ,  $P(B) = 0.6$ . A and B are independent events. Find the probability that at least one of A and B will happen. [8]

b) Explain primary and secondary data. [8]

Q.6 a) Following data gives number of catches taken by Dhoni and Kartik behind the wickets. Find who is consistent in the matter of wicket taking.

Catches taken by	Dhoni	1	0	4	4	1
	Kartik	4	5	1	4	2

[8]

b) Define Spearman's Rank correlation coefficient. Calculate Spearman's rank correlation coefficient for the following data.

X	20	11	72	65	43	29	50
Y	60	63	26	35	43	51	35

[8]

Q. 7 a) An urn contains 3 white and 7 red balls and another urn contains 10 white and 6 red balls. One ball is drawn from each urn. What is the probability that (i) the balls will be of different colours, (ii) of the same colour. [8]

b) Define combined mean. The average income of the factory workers was Rs. 270. The mean income of 70 male workers was Rs. 300. Find the mean income of 30 female workers. [8]

Q. 8 Write note on any four of the following: [12]

a) Meaning of Statistics.

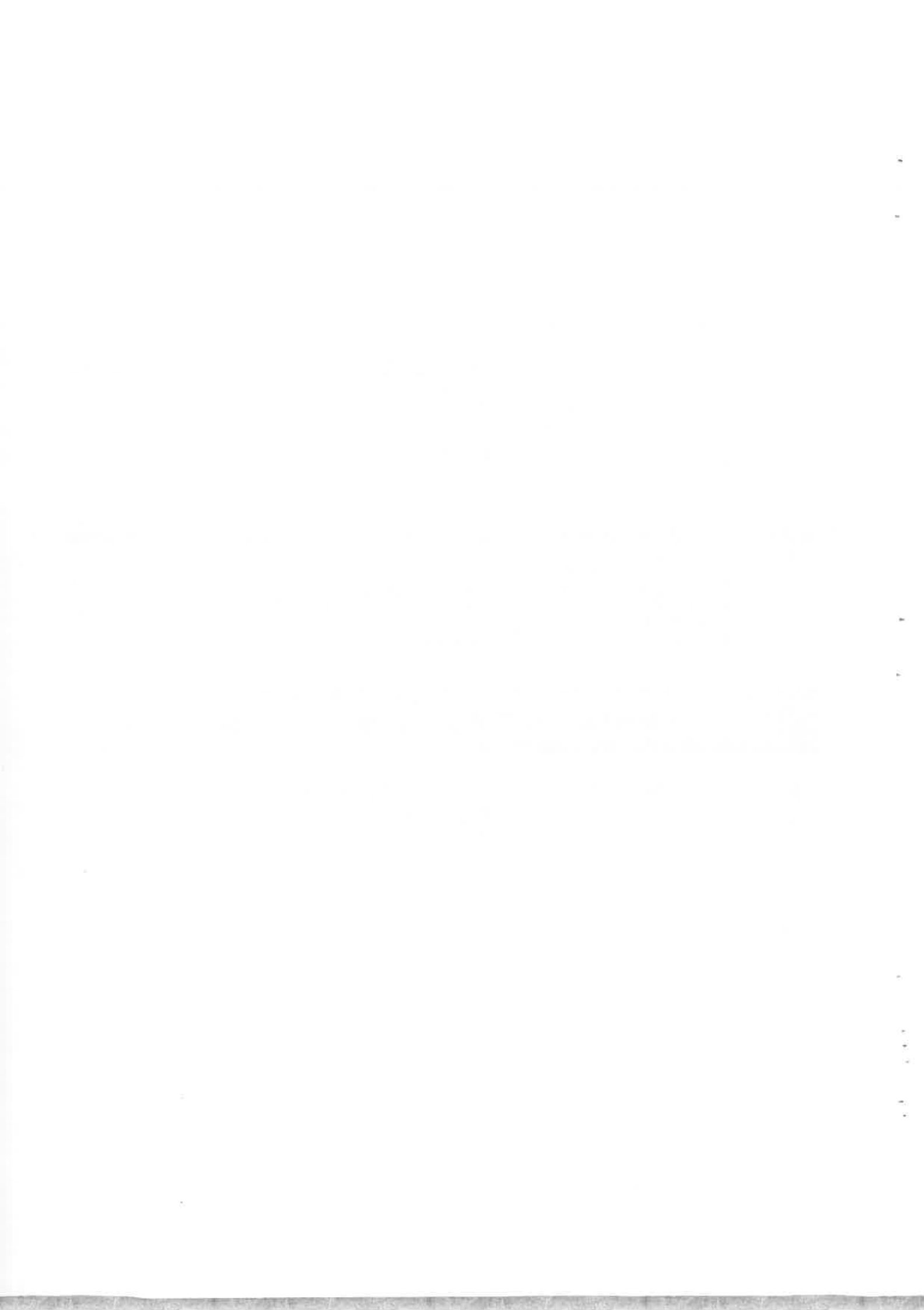
b) Scatter diagram

c) Requirements of good measures of central tendency

d) Construction of Pie diagram.

e) Types of correlation.

f) Bayes' theorem.



Seat No. **OCT\_NOV\_2024 WINTER EXAMINATION****11949 Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Human Resource Management and Materials Management****Sub. Code: 109540/84102/83378/94734/91174** *BCA-II Sem-III*

Day and Date: DECEMBER ,07-12-2024

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.



[12]

Q1) Solve following MCQ.

i. **The scope of HRM includes which of the following activities**

- A. Recruitment and Selection
- B. Training and Development
- C. Performance Appraisal
- D. All of the above

ii. **What is the first step in the HRP process**

- A. Forecasting future HR needs
- B. Evaluating supply and demand of labor
- C. Recruitment and selection
- D. Job analysis

iii. **The selection procedure typically begins with**

- A. Conducting interviews
- B. Reviewing job applications and resumes
- C. Offering jobs to applicants
- D. Testing candidates' skills and knowledge

iv. **Which of the following is NOT a source of recruitment**

- A. Employee referrals
- B. Job postings on social media
- C. External recruitment agencies
- D. Employee terminations

v. **What is the first step in the performance appraisal process**

- A. Conducting performance reviews
- B. Setting performance standards
- C. Filling out appraisal forms
- D. Evaluating training needs

vi. **Which of the following is a method of training**

[1]

P.T.O.



- A. Ranking method
- B. Simulation training
- C. Profit sharing
- D. Performance appraisal

**vii. Profit sharing refers to**

- A. The distribution of a portion of company profits to employees
- B. Paying employees based on the number of hours worked
- C. Deducting wages for non-performance
- D. Giving employees shares in the company stock

**viii. An integrated approach to Material Management means**

- A. Managing materials independently in different departments
- B. Coordinating the various functions of Material Management, such as purchasing, inventory control, and distribution
- C. Hiring separate managers for each material
- D. Outsourcing the entire Material Management function

**ix. Purchasing as a profit center means**

- A. Generating profits by purchasing more expensive materials
- B. Increasing company profits by reducing material costs and optimizing procurement processes
- C. Focusing only on inventory control
- D. Using purchasing for personal gain

**x. Inventory Management is defined as**

- A. The process of selling finished goods to customers
- B. The process of managing the materials and goods that a company has in stock
- C. The process of hiring employees
- D. The process of making financial investments

**xi. The Economic Order Quantity (EOQ) model is used to**

- A. Minimize total inventory costs by determining the optimal order size
- B. Maximize inventory levels to avoid stock shortages
- C. Determine the minimum level of stock required for operations
- D. Calculate employee salaries

**xii. Selective Inventory Control techniques include**

- A. ABC analysis, VED analysis, and FSN analysis
- B. EOQ model, SWOT analysis, and PEST analysis
- C. HR management, financial planning, and marketing strategies
- D. Customer satisfaction, product development, and promotions

Q2)

a. Define Human Resource Management (HRM) and explain its objectives, [8]  
scope.

b. Explain Concept of Selection and explain the selection procedure in detail. [8]

**Q3)**

a. 1. Define Human Resources Planning (HRP). Explain the objectives of HRP [8]  
in detail.

b. Define the concept of Performance Appraisal. Discuss the process of [8]  
Performance Appraisal in detail.

**Q4)**

a. Discuss the objectives of Training and Development. Explain the importance of [8]  
training in enhancing employee performance and organizational growth.

b. Explain the various methods of wage payments used in organizations. Discuss [8]  
the key factors that determine the level of employee remuneration.

**Q5)**

a. Define Material Management and discuss its importance in organizations. [8]

b. Discuss the future of material management in India and explain Role of [8]  
Computer in Material Management.

**Q6)**

a. Define purchasing and discuss its objectives within an organization. [8]

b. Define inventory management and explain its importance in organizational [8]  
operations

**Q7)**

a. Discuss various methods used for selective inventory control. [8]

b. What are the key stages in the purchasing cycle. [8]

**Q8)** Write notes on (Any Four out of Six) [20]

a. Sources of Recruitment

b. Objectives of performance Appraisal





QP-1968

- c. Fringe Benefits
- d. Functions of Material Management
- e. 5 R in Purchasing
- f. Inventory costs

\*\*\*

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Seat No. 

BCA-II Sem. III

**MAR\_APR 2025 SUMMER EXAMINATION****11949 Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Human Resource Management and Materials Management****Sub. Code: 109540/84102/83378/94734/91174**

Day and Date: MAY ,05-05-2025

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 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.

What is the primary objective of Human Resource Management (HRM)?

- A. To maximize profits by increasing the number of employees
- B. To ensure the optimal utilization of human resources
- C. To reduce employee wages and benefits
- D. To limit employee turnover at all costs

ii.

Which of the following is a scope of Human Resource Management?

- A. Only handling recruitment
- B. Managing employee relations and welfare
- C. Designing marketing strategies
- D. Conducting market research

iii.

Which of the following is NOT a part of the selection procedure?

- A. Screening resumes
- B. Conducting interviews
- C. Offering job benefits
- D. Checking references and background

iv. What is the primary objective of performance appraisal?

- A. To increase employee turnover
- B. To punish underperformers
- C. To assess employee performance and provide feedback
- D. To delay promotions

v. Which of the following best defines training?



- A. A punishment for low performance
  - B. A process to hire skilled labor
  - C. A process to improve employees' job-related skills
  - D. A method to reduce salaries
- vi. Which of the following is a time-based method of wage payment?
- A. Piece rate system
  - B. Halsey plan
  - C. Time rate system
  - D. Profit sharing
- vii. What is the main objective of Material Management?
- A. Increase advertising expenses
  - B. Ensure smooth flow of materials at minimum cost
  - C. Delay production processes
  - D. Maximize employee turnover
- viii. Why is Material Management important in manufacturing?
- A. It increases production downtime
  - B. It helps maintain uninterrupted production
  - C. It delays procurement
  - D. It focuses only on marketing
- ix. Which is NOT typically a future trend in Material Management in India?
- A. Digital transformation
  - B. AI-driven forecasting
  - C. Manual record-keeping
  - D. Sustainable sourcing
- x. What is the main objective of purchasing in material management?
- A. To delay procurement
  - B. To procure materials of right quality at the right time and cost
  - C. To increase overhead costs
  - D. To eliminate storage needs
- xi. Which of the following is NOT a type of inventory?
- A. Raw materials
  - B. Work-in-progress
  - C. Finished goods
  - D. Capital investment
- xii. The EOQ (Economic Order Quantity) model helps in



- A. Determining the price of finished goods
- B. Finding the optimal order quantity to minimize total inventory costs
- C. Increasing warehouse space
- D. Reducing employee numbers

Q2)

- a. Explain Concept of Selection and explain the selection procedure in detail. [8]
- b. Define Human Resources Planning (HRP). Explain the objectives of HRP in detail. [8]

Q3)

- a. Define Human Resource Management (HRM) and explain its objectives, scope [8]
- b. Define the concept of Performance Appraisal. Discuss the Performance Appraisal methods [8]

Q4)

- a. Discuss the Need of Training and Development. Explain the training methods. [8]
- b. Explain the various methods of wage payments used in organizations. Discuss the key factors that determine the level of employee remuneration [8]

Q5)

- a. Define Material Management and discuss Functions of Material Management. [8]
- b. Discuss Importance of Material Management .Analyze the key challenges faced in Material Management today. [8]

Q6)

- a. Explain the concept of purchasing and Discuss how purchasing can be considered a profit centre. [8]
- b. Define inventory management and explain its importance in organizational operations [8]

Q7)

- a. Explain the various types of inventory commonly maintained by organizations. Discuss the different types of inventory costs. [8]



**QP-5274**

**[8]**

**[20]**

- b. What are the key stages in the purchasing cycle.

**Q8)** Write notes on (Any Four out of Six)

- a. Fringe Benefits  
b. Importance of Training  
c. Future of Material Management in India  
d. 5R in purchasing  
e. Vendor Managed Inventory  
f. HRP process

## **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	(84102) Human Resource Management and Materials Management	Part 2 SEM 3
2] (717) Bachelor of Computer Application	(109540) Human Resource Management and Materials	Part 2 SEM 3
3] (7810) B.C.A. (CBCS) (83378)	Human Resource Management and Materials Management	Part 2 SEM 3
4] (7810) B.C.A. (CBCS) (94734)	Human Resource Management and Materials Management	Part 2 SEM 3
5] (7824) Bachelor of Computer Application (CBCS)NEP	(91174) Human Resource Management and Materials Management	Part 2 SEM 3



**B.C.A. – II<sup>nd</sup> Year**

**SEM – IV**

**Previous Year**

**Question Papers**

**Academic Year**

**(2024-25)**



Seat No. 

BCA-II SEM IV

**MAR\_APR 2025 SUMMER EXAMINATION**  
**11949 Bachelor of Computer Application(BCA) NEP 2.0**  
**Sub. Name: Object Oriented Programming Using C++**  
**Sub. Code: 110984/94738/91178**



Day and Date: APRIL ,29-04-2025

Total Marks: 80

Time: 02:30 PM To 05:30 PM

Instructions: 1. All questions are compulsory  
 2. Figures to the right indicate full marks

Special Inst.: 3. Q.1 and Q.8 are compulsory. Solve any three Questions from Q.2 to Q.7

Q1) Solve following MCQ.

[12]

- i. Which of these is an advantage of OOP over POP?
  - A. Less memory usage
  - B. Faster compilation
  - C. Code reusability through inheritance
  - D. Uses less number of keywords
- ii. What does data encapsulation ensure?
  - A. Reduces execution time
  - B. Hides data from outside interference
  - C. Increases memory
  - D. None of the above
- iii. Which function is automatically invoked when an object is created?
  - A. Member function
  - B. Destructor
  - C. Constructor
  - D. Inline function
- iv. Which keyword is used to define a friend function?
  - A. buddy
  - B. associate
  - C. friend
  - D. allow
- v. What is the correct way to define a function outside the class?
  - A. void className::functionName()
  - B. void functionName::className()
  - C. functionName::className()
  - D. className->functionName()



- vi. What type of inheritance involves one base class and multiple derived classes?
- A. Multilevel
  - B. Hybrid
  - C. Hierarchical
  - D. Multiple
- vii. Which operator is used for dynamic memory deallocation in C++?
- A. free
  - B. remove
  - C. delete
  - D. clear
- viii. In which inheritance does a derived class inherit from more than one base class?
- A. Single
  - B. Multiple
  - C. Multilevel
  - D. Hierarchical
- ix. What is the output determined at runtime using polymorphism called?
- A. Static Binding
  - B. Dynamic Binding
  - C. Early Binding
  - D. Pre-binding
- x. What does this pointer point to?
- A. Current function
  - B. Current class
  - C. Current object
  - D. Current file
- xi. Pointers to derived classes are useful for:
- A. Dynamic binding
  - B. Static polymorphism
  - C. Inline function calling
  - D. None of the above
- xii. Which of the following is a correct C++ data type?
- A. num
  - B. real
  - C. float
  - D. decimal

Q2) A. Compare Procedure-Oriented Programming and Object-Oriented [8]

Programming. Explain any four features of OOP.

- B.** Define a class Book with attributes like title, author, and price. Write [8]  
member functions to input and display book details. Use constructors.
- Q3)** What is the role of constructors in inheritance? How can base class constructors [16]  
be called in a derived class? Explain with example.
- Q4) A.** Define pure virtual function. Explain abstract class with an example. [8]  
**B.** Explain the use of this pointer in C++ with a program [8]
- Q5)** Differentiate between compile-time and run-time polymorphism. Give an [16]  
example of each.
- Q6) A.** Explain the concept of operator overloading in C++. [8]  
**B.** What are access specifiers in C++? Compare private, public, and protected [8]  
with an example.
- Q7)** What is data hiding in C++? Explain with an example. [16]
- Q8)** Write short notes on (any four) [20]
- Inline functions
  - Scope resolution operator
  - Default arguments
  - Constructor Types
  - Pointers to Objects
  - Friend Function

## End Of Question Paper

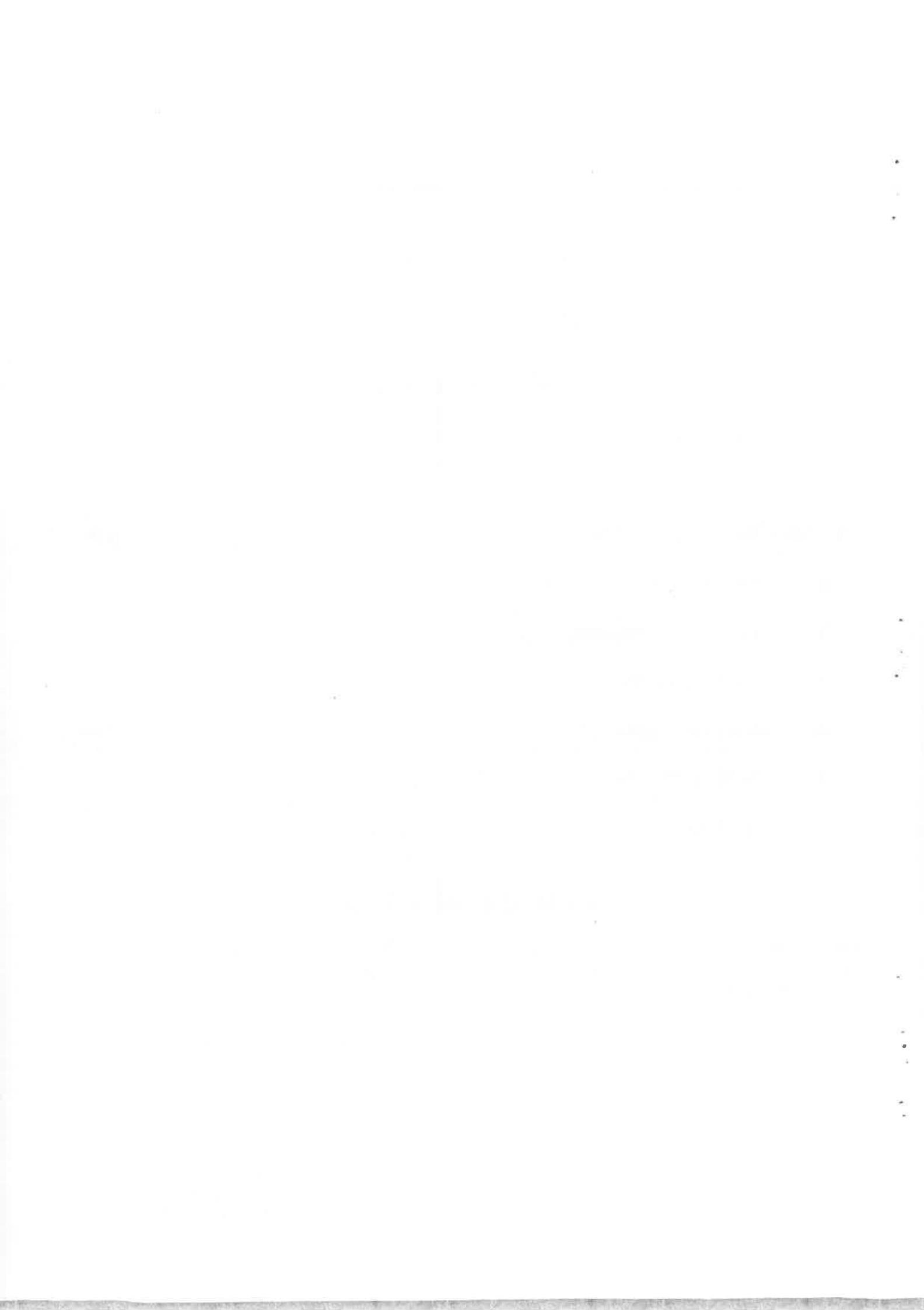
**Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -**

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 (91178) Object Oriented Programming Using Part 2 SEM 4  
(CBCS)NEP C++
- 2] (7810) B.C.A. (CBCS) (94738) Object Oriented Programming Using C Part 2 SEM 4
- 3] (717) Bachelor of Computer Application (110984) Object Oriented Programming using C Part 2 SEM 4





Seat No. **OCT\_NOV\_2024 WINTER EXAMINATION****Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Object Oriented Programming Using C++****Sub. Code: 91178/94738** *BCA-II sem IV***Day and Date: DECEMBER ,05-12-2024****Total Marks: 80****Time: 02:30 PM To 05:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: 2)Q. 1 and Q.8 are compulsory  
3) Solve any three from Q.2 to Q.7****Q1) Select correct alternative for the following.****[12]**

- i. Which concept do we use for the implementation of late binding?
  - A. Static Functions
  - B. Constant Functions
  - C. Operator Functions
  - D. Virtual Functions
- ii. C++ language is a \_\_\_\_\_.
  - A. Object Oriented Language
  - B. Procedural Oriented Language
  - C. Structural Oriented Language
  - D. None of the above
- iii. Which of the following is not a valid keyword in C++ language?
  - A. while
  - B. for
  - C. switch
  - D. do-while
- iv. Which of the following language translator is used in C++?
  - A. Assembler
  - B. Interpreter
  - C. Compiler
  - D. Both Interpreter and Compiler
- v. Which of the following is the correct extension of the C++ source code file?
  - A. cpp
  - B. c++
  - C. Both
  - D. None
- vi. The cin, cout are \_\_\_\_.



- A. Library functions
- B. structures
- C. Pointers
- D. Objects

vii. The operator '%' is known as?

- A. Division Operator
- B. Modulus Operator
- C. Percentage Operator
- D. None of the above

viii. Which of the following loop is faster in C++?

- A. Do While loop
- B. For loop
- C. While loop
- D. All loops work at the same speed

ix. In OOP, what does encapsulation refer to?

- A. storing data in arrays
- B. The process of inheritance
- C. combing data and methods
- D. A type of loop

x. What data type is best to store persons age?

- A. int
- B. Double
- C. Bool
- D. char

xi. Identify the error in this C++ code:

```
int main() {  
    int 123number;  
    return 0;  
}
```

- A. Variable name start with a digit
- B. Incorrect data type
- C. Syntax error in return statement
- D. No error

xii. Which is more effective while calling the C++ functions?

- A. call by object
- B. call by pointer
- C. call by value
- D. call by reference

Q2) A. What is the purpose of exception handling ? Explain how exception is handled [8]



QP-1779

in C++, with the help of an example.

B. What is operator overloading? Explain it with example. [8]

Q3) A. Write a program in C++ to define a class "Teacher" with a virtual function "Salary". Derive the class "Assistant Professor" from the class "Teacher" and implement the salary function. Make necessary assumptions. [8]

B. Differentiate between procedural programming and object oriented programming. [8]

Q4) What is object oriented programming ? Give advantages,disadvantages and [16] features of object oriented programming.

Q5) What is a constructors and destructors explain ? Explain how constructor is [16] overloaded in C++, with the help of an example.

Q6) What are the different forms of inheritance supported by C++? Explain with [16] examples.

Q7) A. Define the following function and states their use: [8]  
(i) Calloc ( ) (ii) Malloc ( )

B. What do you mean by 'Friend' function? Illustrate its use with an example [8]

Q8) Write short notes on (any four) [20]

a. Dynamic Memory Allocation

b. Message Passing

c. New and Delete operator

d. Pure Virtual function

e. Scope Resolution operator

f. call by value and call by reference

\* \* \*



Seat No. 

BCA-II Sem. IV

**MAR\_APR 2025 SUMMER EXAMINATION**  
**11949 Bachelor of Computer Application(BCA) NEP 2.0**  
**Sub. Name: Software Engineering**  
**Sub. Code: 110986/94739/91179**



Day and Date: APRIL ,30-04-2025

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. Attributes of good software is \_\_\_\_\_
- Development
  - Maintainability & functionality
  - Functionality
  - Maintainability
- ii. In which step of SDLC actual programming of software code is done?
- Development and Documentation
  - Maintenance and Evaluation
  - Design
  - Analysis
- iii. Why do bugs and failures occur in software?
- Lack of training on required skills
  - Because of Technology
  - Both A and B
  - None of the above
- iv. Which of the following is not a part of Software evolution?
- Re-engineering activities
  - Maintenance activities
  - Development activities
  - Negotiating with client
- v. \_\_\_\_\_ specification is also known as SRS document.
- white-box
  - grey-box
  - black-box
  - None of the above
- vi. Quality Management is known as \_\_\_\_\_



- A. SQI
- B. SQA
- C. SQM
- D. SQA and SQM

- vii. \_\_\_\_\_ is a software development life cycle model that is chosen if the development team has less experience on similar projects.
- A. Iterative Enhancement Model
  - B. RAD
  - C. Spiral
  - D. Waterfall
- viii. Who proposed the spiral model?
- A. Barry Boehm
  - B. Pressman
  - C. Royce
  - D. IBM
- ix. \_\_\_\_\_ is a software development activity that is not a part of software processes.
- A. Validation
  - B. Specification
  - C. Development
  - D. Dependence
- x. \_\_\_\_\_ is defined as the process of generating analysis and designing documents?
- A. Re-engineering
  - B. Software engineering
  - C. Reverse engineering
  - D. Science and engineering
- xi. What does SDLC stand for in software engineering?
- A. Software Debugging Life Cycle
  - B. Software Development Life Cycle
  - C. System Design Life Cycle
  - D. Software Delivery Life Cycle
- xii. Which process model is built around phases and is linear in nature?
- A. Waterfall model
  - B. Scrum
  - C. RAD (Rapid Application Development)
  - D. Kanban

Q2) Explain in detail Spiral Model and Waterfall Model?

[16]

- Q3)** Explain "Library Management System" Case Study? [16]
- Q4)** Explain Input and Output Design concept like - I/O design considerations, Structured Chart, HIPO chart with proper examples? [16]
- Q5)** What is Software Testing? Explain Types of Software Testing? [16]
- Q6)** Explain DFD and ERD with Suitable example? [16]
- Q7)** What is Requirement Engineering? Explain types of Requirements and Requirement Elicitation Techniques? [16]
- Q8)** Write short note on (Any Four) [20]
- Characteristics of good SRS
  - Data Dictionary.
  - Quality Assurance
  - System and its Characteristics
  - Verification and Validation Process
  - Cost of Quality

## End Of Question Paper

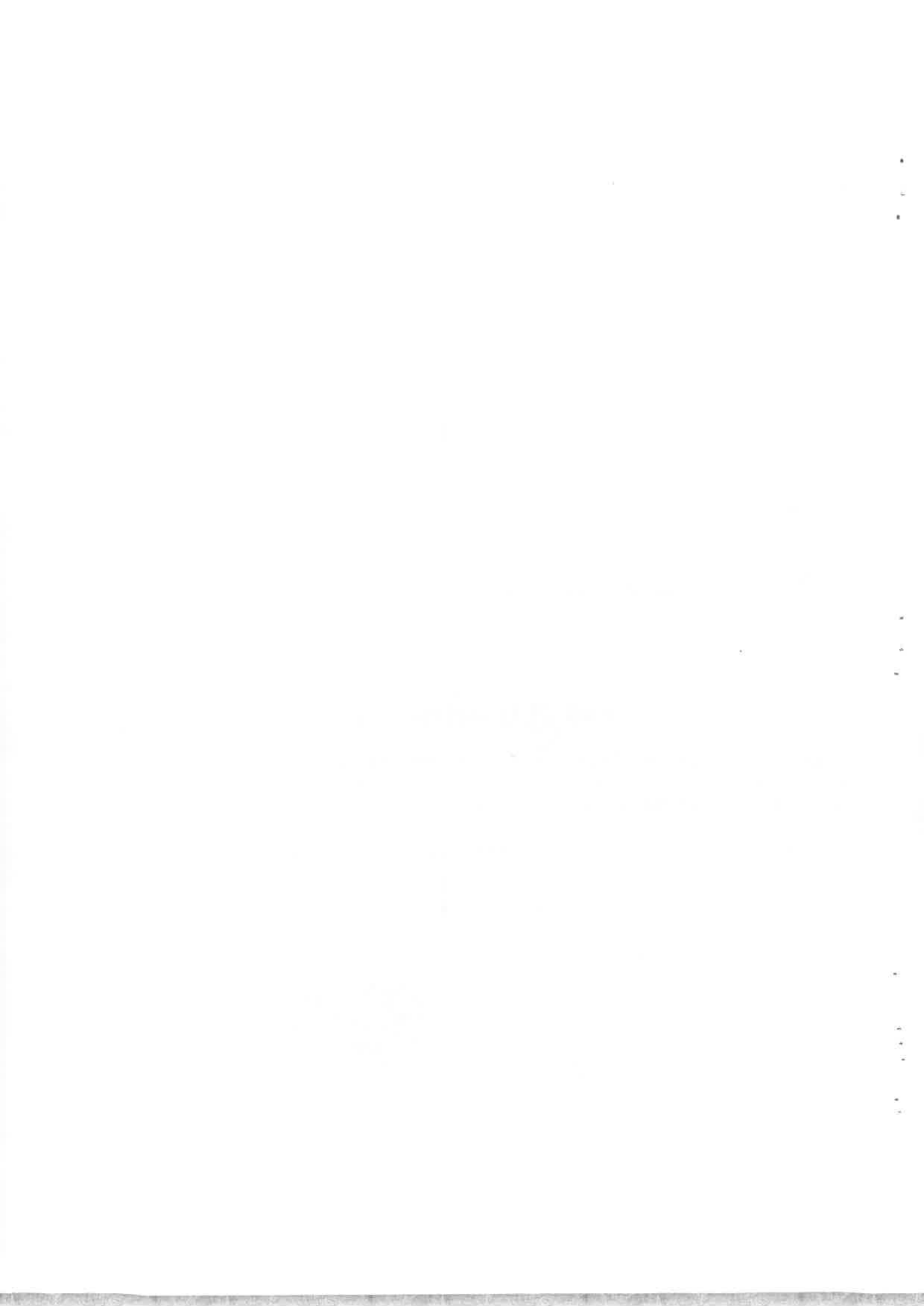
### Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

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 (110986) Software Engineering Part 2 SEM 4
- 2] (7824) Bachelor of Computer Application (CBCS)NEP (91179) Software Engineering Part 2 SEM 4
- 3] (7810) B.C.A. (CBCS) (94739) Software Engineering Part 2 SEM 4





Seat No. **OCT\_NOV\_2024 WINTER EXAMINATION****Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Software Engineering****Sub. Code: 91179/94739 *BCA-II Sem IV*****Day and Date: DECEMBER ,06-12-2024****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 does a small circle of a flowchart represent?
  - A. Terminal
  - B. Process
  - C. Connector
  - D. Decision
- ii. Which of the following used to represent data structures and relationship in a system?
  - A. Data dictionary
  - B. DFD
  - C. HIPO chart
  - D. Decision tree
- iii. Level-0 DFD is also called as
  - A. Sequence diagram
  - B. Context diagram
  - C. Use case diagram
  - D. Prototype diagram
- iv. Acceptance testing is also known as
  - A. Grey box testing
  - B. White box testing
  - C. Alpha Testing
  - D. Beta testing
- v. The user system requirements are the parts of which document ?
  - A. SDD
  - B. SRS
  - C. DDD
  - D. SRD



- vi. Unit testing is done by
- A. Users
  - B. Developers
  - C. Customers
  - D. None of above
- vii. What is the last phase of waterfall model?
- A. Testing
  - B. Requirement
  - C. Coding
  - D. Maintenance
- viii. Spiral model provides support for \_\_\_\_.
- A. Risk handling
  - B. Issues diagnosis
  - C. Problem Identification
  - D. None of above
- ix. Attributes of good software is \_\_\_\_\_
- A. Development
  - B. Maintainability & functionality
  - C. Functionality
  - D. Maintainability
- x. What does SDLC stand for in software engineering?
- A. Software Debugging Life Cycle
  - B. Software Development Life Cycle
  - C. System Design Life Cycle
  - D. Software Delivery Life Cycle
- xi. What is the primary focus of software maintenance?
- A. Adding new features
  - B. Debugging
  - C. To modify and update software application after delivery to correct faults and to improve performance
  - D. All of the above
- xii. What is a software "bug"?
- A. An unwanted and unintended property
  - B. Documentation of software
  - C. Part of the software design process
  - D. All of the above

Q2) [16]

- a. What is System and explain its Types?

[8]

b. What is Requirement Engineering and explain its Types? [8]

**Q3) [16]**

a. What is software engineering? Explain importance of it. [8]

b. Discuss characteristics of good SRS. [8]

**Q4) Explain in detail Spiral Model and Waterfall Model? [16]**

**Q5) What is testing? Discuss different characteristics and types of testing in detail. [16]**

**Q6) Explain Input and Output Design concept like - I/O design considerations, Structured Chart, HIPO chart with proper examples? [16]**

**Q7) Explain "Library Management System" Case Study? [16]**

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

a. Formal Technical Review (FTR) [5]

b. Decision Tree and Decision Table [5]

c. Quality and its attributes [5]

d. DFD [5]

e. Characteristics of system [5]

f. SQA [5]

\* \* \*



Seat No. 

B.C.A.-II Sem. IV

**MAR-APR 2025 SUMMER EXAMINATION****11949 Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Entrepreneurship Development****Sub. Code: 110988/94741/91181****Day and Date: MAY ,02-05-2025****Total Marks: 80****Time: 02:30 PM To 05:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: Q.1 and Q.8 are compulsory****Attempt any three from Q.2 to Q.7.****Q1) Solve following MCQ.****[12]**

- i. Identify odd man out
  - A. Risk bearer
  - B. Innovator
  - C. Risk adverse
  - D. Need for achievement
  
- ii. Environmental analysis does not include ..... analysis
  - A. Economic
  - B. Social
  - C. Organizational structure
  - D. Legal
  
- iii. Feasibility report is prepared.....
  - A. Before starting a project
  - B. At the time of raising funds for the project
  - C. Before maturity stage of the project
  - D. As per the convenience of the promoter
  
- iv. Project analysis includes
  - A. Financial analysis
  - B. Operational analysis
  - C. marketing analysis
  - D. All the above
  
- v. Start-up India and Stand-up India are the initiatives to promote.....
  - A. Finance Department
  - B. Self Empowerment
  - C. Self Employment
  - D. Project planning
  
- vi. Founder of Wipro.....



QP-5015

- A. Azim Premji
- B. Narayan Murthy
- C. Sunder Pichai
- D. Shiv Nadar

- vii. NSIC is ..... Institution
- A. Government of India
  - B. NGO
  - C. Autonomous
  - D. Private
- viii. Prime Minister Rojgar Yojana is implemented through.....
- A. NABARD
  - B. RBI
  - C. SIDBI
  - D. DIC
- ix. Idea generation, idea screening, concept testing are stages of .....
- A. Project Planning
  - B. Project evaluation
  - C. Raising finance
  - D. Venture funding
- x. Innovative projects with high risk usually go for.....
- A. Loan from commercial bank
  - B. Venture Funding
  - C. Debentures
  - D. Public Deposits
- xi. .... differentiated between person bearing risks and person supplying capital
- A. Jean Baptiste Say
  - B. Karl Vesper
  - C. Robert Hisrich
  - D. Richard Cantillon
- xii. .... Is the type of equity funding
- A. Loan
  - B. Debentures
  - C. Venture Capital
  - D. All the above

Q2) Define the term 'Entrepreneur. Explain in detail evolution of the concept [16]  
'entrepreneur'.

Q3) Describe the major qualities of successful entrepreneur

[16]



**QP-5015**

- Q4)** Give a detailed outline of content of a feasibility report. [16]
- Q5)** Explain different types of debt and equity finance. [16]
- Q6)** Write a detailed note on women entrepreneurs in India, also mention major problems of women entrepreneurs [16]
- Q7)** Explain in detail role and function of SIDBI and DIC. [16]
- Q8)** Write short note Any 4 [20]
- a. Role of entrepreneur in economic development [5]
  - b. Entrepreneurial opportunities in India [5]
  - c. MUDRA [5]
  - d. Sources of business idea [5]
  - e. Importance of digital marketing [5]
  - f. Steve Jobs [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 (91181) Entrepreneurship Development Part 2 SEM 4
- 2] (717) Bachelor of Computer Application (110988) Entrepreneurship Development Part 2 SEM 4
- 3] (7810) B.C.A. (CBCS) (94741) Entrepreneurship Development Part 2 SEM 4



Seat No. 

**OCT\_NOV\_2024 WINTER EXAMINATION**  
**11949 Bachelor of Computer Application(BCA) NEP 2.0**  
**Sub. Name: Entrepreneurship Development**  
**Sub. Code: 91181/94741** *BCA-II sem IV*



Day and Date: DECEMBER ,07-12-2024

Total Marks: 80

Time: 02:30 PM To 05:30 PM

Instructions: 1. Figures to the right indicate full marks

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

Q1) Solve following MCQ.

[12]

- i. Which of the following is a key characteristic of a successful entrepreneur?
- A. Risk-taking
  - B. Inflexibility
  - C. Avoiding innovation
  - D. Following trends
- ii. Which of the following government programs is specifically aimed at fostering entrepreneurship in India?
- A. Startup USA
  - B. Make-in-India
  - C. MUDRA UK
  - D. Innovation Canada
- iii. What is the first step in identifying a business opportunity?
- A. Developing a business plan
  - B. Environmental analysis
  - C. Securing funding
  - D. Assessing risk
- iv. Which of the following is a challenge faced by women entrepreneurs in India?
- A. Access to an established business network
  - B. Surplus funding options
  - C. Gender-based societal constraints
  - D. Lack of innovation
- v. What is the significance of a business plan for entrepreneurs?
- A. Reduces decision-making
  - B. Increases risk of failure
  - C. Provides a roadmap for business strategy
  - D. Removes the need for financial planning



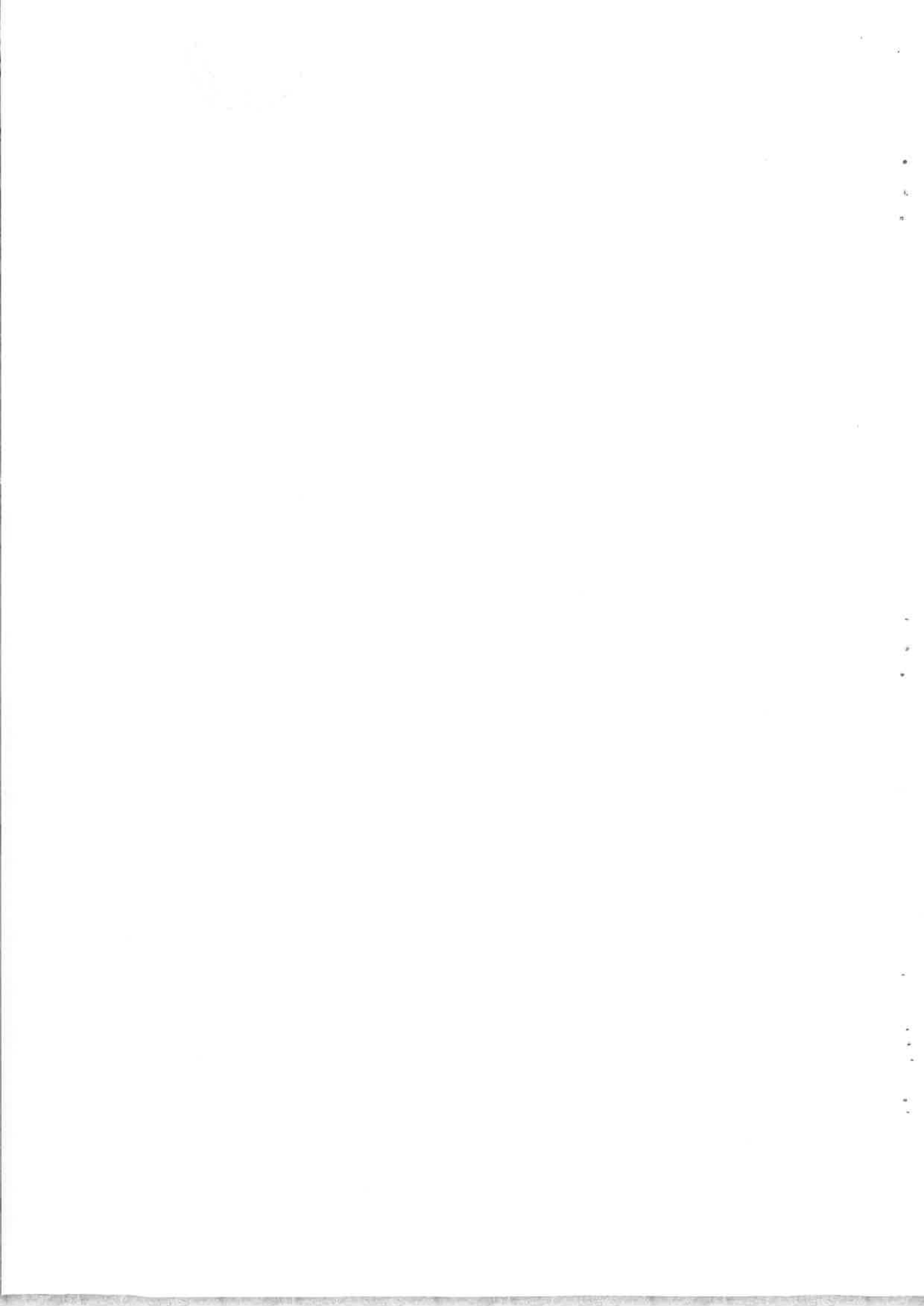
- vi. What is the primary focus of venture capital?
- A. Lending to large corporations
  - B. Supporting small businesses and start-ups
  - C. Financing public companies
  - D. Focusing on non-profit organizations
- vii. Digital entrepreneurship refers to .....
- A. Starting a traditional retail business
  - B. Creating businesses that operate primarily online
  - C. Running an offline-only business
  - D. Manufacturing only physical products
- viii. What is one of the major advantages of digital entrepreneurship?
- A. Higher costs of entry
  - B. Easier access to global markets
  - C. Lack of customer reach
  - D. Physical infrastructure requirement
- ix. Which of the following agencies offers support to small and medium enterprises in India?
- A. NSIC
  - B. DIC
  - C. SIDBI
  - D. All of the above
- x. What is one key function of environmental analysis in business?
- A. Developing internal HR policies
  - B. Understanding external factors like competition and market trends
  - C. Increasing business risk
  - D. Ignoring market opportunities
- xi. Which of the following is a quality that successful digital entrepreneurs should possess?
- A. Reluctance to adapt
  - B. High resilience
  - C. Dependence on a single market
  - D. Lack of creativity
- xii. What does MUDRA stand for?
- A. Micro Units Development and Refinancing Agency
  - B. Macro Units Development and Research Agency
  - C. Market Units Development and Reformation Agency
  - D. Minor Units Directing and Reform Agency



QP-1961

- Q2)** Analyze the key challenges and opportunities faced by digital entrepreneurs in [16]  
India.
- Q3)** Explain the concept of project finance and discuss the different types of finance [16]  
available for businesses, including equity finance, debt finance, and venture  
capital.
- Q4)** What is environmental analysis, and why is it crucial for entrepreneurs when [16]  
identifying business opportunities?
- Q5)** Critically examine the barriers faced by women entrepreneurs in India and the [16]  
strategies to overcome them.
- Q6)** Discuss the different qualities of entrepreneurs in detail. [16]
- Q7)** Discuss the process of business opportunity identification and selection, and [16]  
explain the factors an entrepreneur should consider when choosing a business  
idea.
- Q8)** **Write short notes (any 4)** [20]
1. Make-in-India Initiative
  2. Digital Business Models
  3. Venture Capital
  4. Role of Innovation in Entrepreneurship
  5. MUDRA Scheme
  6. Women Entrepreneurship in India

\* \* \*



Seat No. 

BCA-II sem:IV

**MAR\_APR 2025 SUMMER EXAMINATION**  
**11949 Bachelor of Computer Application(BCA) NEP 2.0**  
**Sub. Name: DOT NET Technology**  
**Sub. Code: 83383/84647**



Day and Date: MAY ,05-05-2025

Total Marks: 70

Time: 02:30 PM To 05:30 PM

Instructions: 1. Figures to the right indicate full marks

Special Inst.: 1) Q. 1 and Q. 6 are compulsory  
 2) Attempt any three from Q. 2 to Q. 5

- Q1) A.** Select the correct alternative **[10]**
- i. Which is the base class of all classes in .NET Framework
    - A. System.Object
    - B. System
    - C. System.Net
    - D. System.Drawing
  - ii. Which of the following statements is correct about Managed Code?
    - A. Managed code is the code that is compiled by the JIT compilers.
    - B. Managed code is the code where resources are Garbage Collected.
    - C. Managed code is the code that runs on top of Windows.
    - D. Managed code is the code that is written to target the services of the CLR.
  - iii. Which component of the .NET Framework is responsible for executing managed code?
    - A. CTS
    - B. CLR
    - C. CLS
    - D. MSIL
  - iv. What is the FCL in .NET?
    - A. First Compiled Language
    - B. Framework Class Library
    - C. Functional Code Layer
    - D. File Code Loader
  - v. Which of the following is not an ASP.NET server control?
    - A. <asp:Button>
    - B. <asp:TextBox>
    - C. <asp:HyperLink>
    - D. <input type="text">



- vi. What is the correct order of Web Form Lifecycle events?
- Init → Load → Render → PreRender → Unload
  - Load → Init → PreRender → Render → Unload
  - Init → Load → PreRender → Render → Unload
  - Init → PreRender → Load → Render → Unload
- vii Which of the following supports cross-page posting in ASP.NET?
- PostBackUrl property of a button
  - Response.Redirect()
  - Server.Transfer()
  - HyperLink control
- viii Which of the following ADO.NET objects is used for establishing a connection to a data source?
- SqlCommand
  - SqlDataAdapter
  - SqlConnection
  - DataSet
- ix. The SqlDataReader class is used in which type of architecture?
- Disconnected architecture
  - Connected architecture
  - Both A and B
  - None of the above
- x. What is the process of converting a value type to a reference type called?
- Parsing
  - Boxing
  - Casting
  - Unboxing

**B. Write a short answer of the following (Any 2) [10]**

- Explain the importance and features of Visual Studio .NET IDE in the development of .NET applications.
  - Explain different types of Just-In-Time compilers in the .NET Framework
  - What is a partial class in C#? How does it help in code organization?
- Q2)** Explain the architecture of the .NET Framework. Discuss the roles of CLR, CTS, [10] CLS, MSIL, and FCL in detail.
- Q3)** Discuss the different data types available in C#. How are value types and reference [10] types handled differently?
- Q4)** Discuss various ASP.NET Validation Controls. How do they help in maintaining [10] data integrity on web forms?

- Q5)** Explain the architecture of ADO.NET. Compare connected and disconnected [10]  
architectures with suitable examples.
- Q6)** Write a short note on (Any FOUR) [20]
- a. Key features of the .NET Framework [5]
  - b. Managed and unmanaged code [5]
  - c. Parameter passing mechanisms in C# [5]
  - d. for and do-while loops in C# [5]
  - e. State Management in ASP.NET [5]
  - f. Process of generating a simple report in ASP.NET using ADO.NET [5]

## End Of Question Paper

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

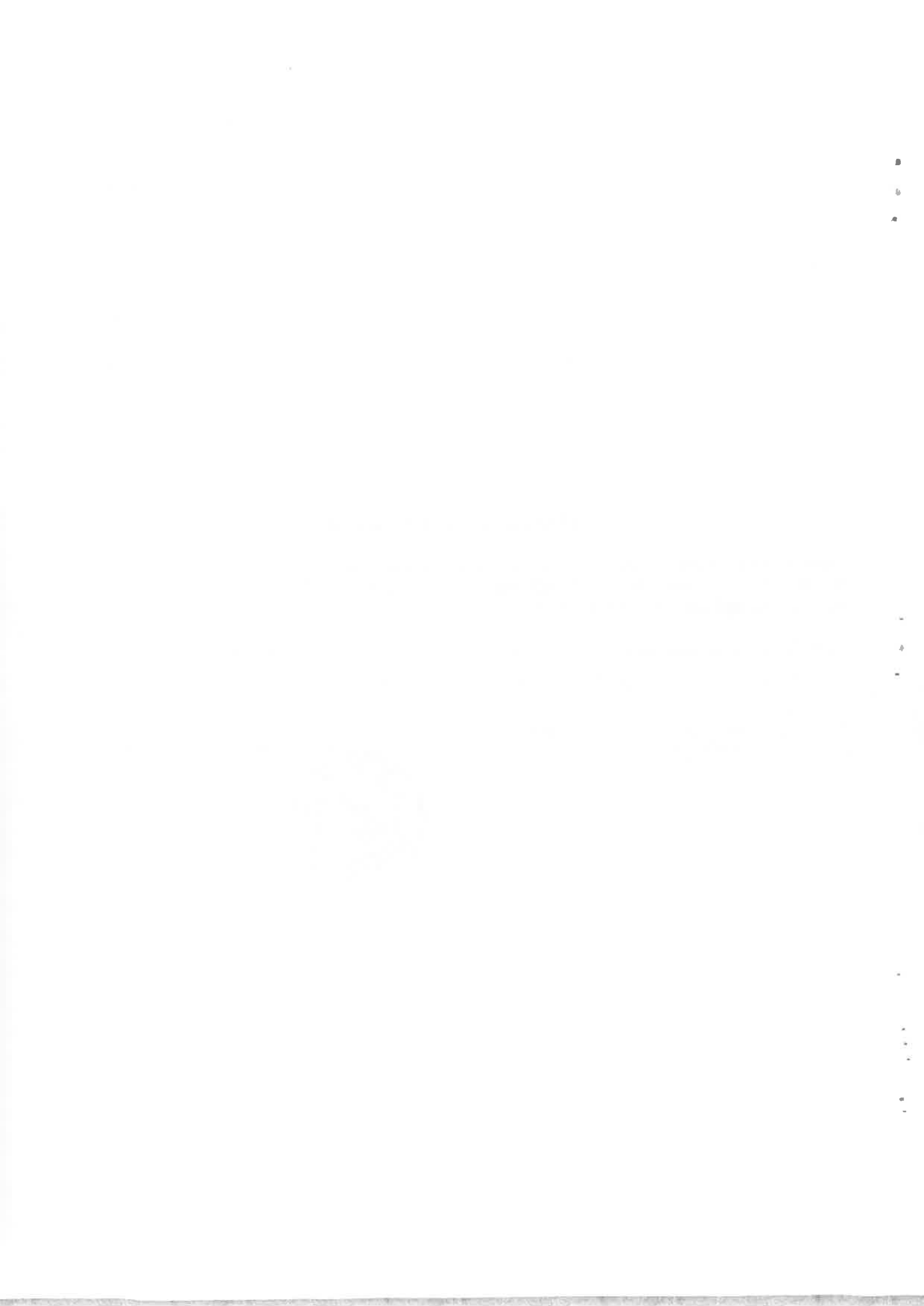
This Question Paper may be distributed for following Subjects as common code.

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1] (717) Bachelor of Computer Application (84647) DOT NET Technology Part 2 SEM 4

2] (7810) B.C.A. (CBCS) (83383) DOT NET Technology Part 2 SEM 4





Seat No. 

**OCT\_NOV\_2024 WINTER EXAMINATION**  
**11949 Bachelor of Computer Application(BCA) NEP 2.0**  
**Sub. Name: DOT NET Technology**  
**Sub. Code: 83383/84647 B<A-II Sem.IV**



Day and Date: DECEMBER ,07-12-2024

Total Marks: 70

Time: 02:30 PM To 05:30 PM

Instructions: 1. Figures to the right indicate full marks

Special Inst.: Que.1 and Que. 6 are compulsory and attempt any three Questions from Que. No.2 to Que. No. 5.

- Q1) A.** Multiple Choice Questions (10 questions for 1 mark each) **[10]**
- i. Which is the mandatory property for all validation controls?
    - A. ControlToValidate
    - B. Message
    - C. EnableClientScript
    - D. EnableServerScript
  - ii. CLR is the .NET equivalent of \_\_\_\_\_.
    - A. Java Virtual Machine
    - B. Common Language Runtime
    - C. Common Type System
    - D. Common Language Specification
  - iii. Code that runs under CLR is known as \_\_\_\_\_.
    - A. Unmanaged
    - B. Distributed
    - C. Managed
    - D. Native
  - iv. Fill Method of Data adapter is used to fill \_\_\_\_\_.
    - A. DataReader
    - B. DataSet
    - C. DataAdapter
    - D. None
  - v. ExecuteReader method is used in which Architecture.
    - A. Disconnected
    - B. Connected
    - C. Both
    - D. None of above
  - vi. The Windows Forms \_\_\_\_\_ is a component that raises an event at

regular intervals.

- A. Spitter
- B. Timer
- C. Delegate
- D. None of above



vii The RangeValidator control supports the following data types

- A. Integer only
- B. only string
- C. Date and Integer
- D. Date, Integer and String

vii ADO Stands for \_\_\_\_\_

- i. A. ActiveX Database Object
- B. Activated Data Object
- C. Active Data Object
- D. ActiveX Data Object

ix. Which method of Command class is used to retrieve data from source to DataReader object ?

- A. ExecuteNonQuery
- B. ExecuteReader
- C. ExecuteScalar
- D. None

x. The \_\_\_\_\_ control displays a multi level navigation menu.

- A. <asp:TreeView>
- B. <asp:Menu>
- C. <asp:SiteMapPath>
- D. <asp:SiteMapDataSource>

B. Give Reasons or Short answer question (Any two out of three)

[10]

1. What is CLR? Explain CIL and JIT?
2. What is the need for state management techniques?
3. Explain site navigation controls in ASP.NET

Q2) With the diagram of .NET Framework. Explain each of its components. How CLR [10] different from CLS.

Q3) Discuss various data types in C#. [10]

Q4) Discuss various validation controls for ASP.NET with example. [10]

Q5) Explain ADO.NET Architecture with suitable diagram? Explain different component [10] classes used in ADO.NET?



**QP-2024**

**Q6) Write notes on (Any Four out of Six)**

**[20]**

**a.** Visual studio .NET IDE

**[5]**

**b.** Boxing & Unboxing

**[5]**

**c.** Looping statements

**[5]**

**d.** Cross page posting

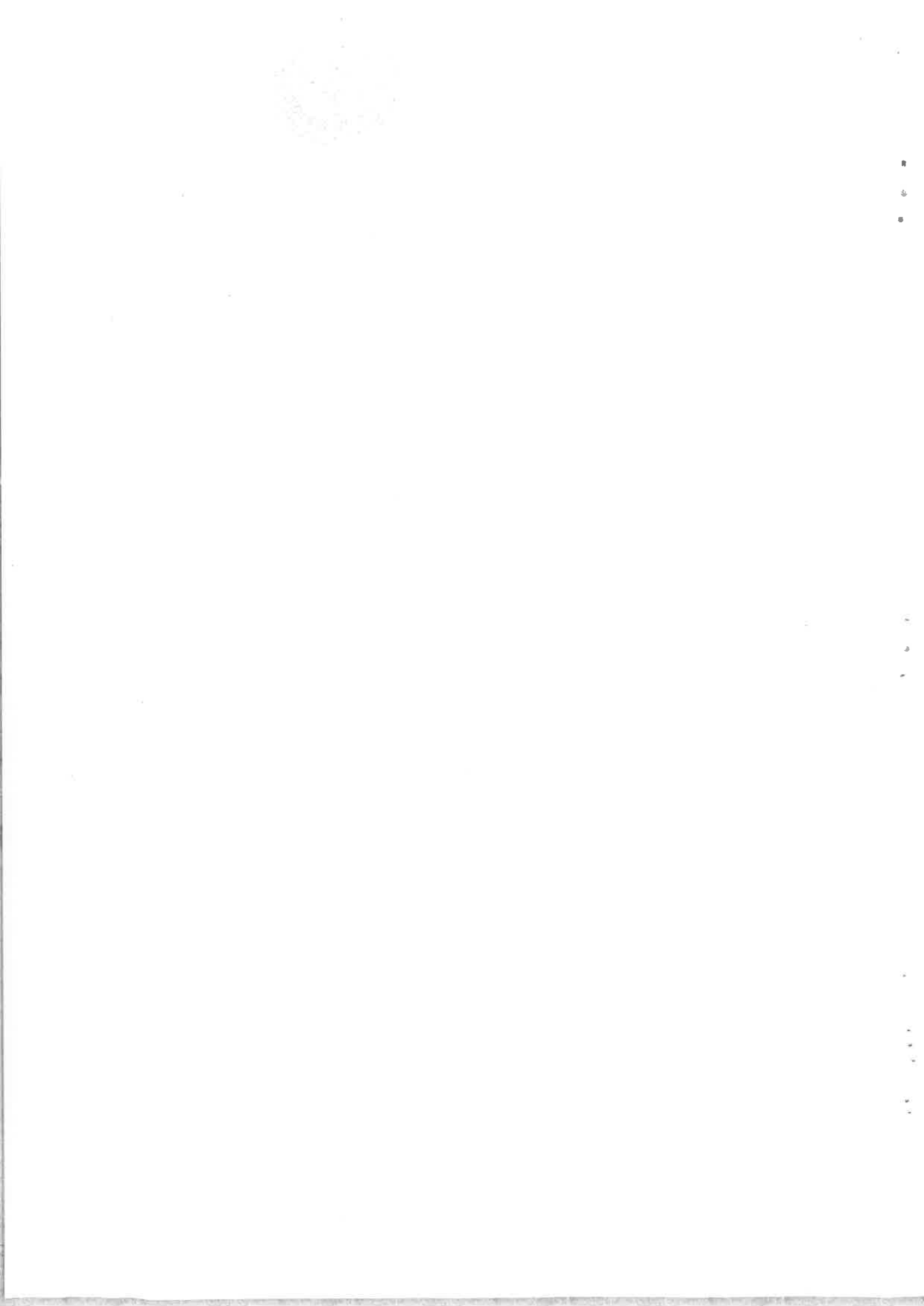
**[5]**

**e.** simple and parameterized reports

**[5]**

**f.** Features of .NET

**\* \* \***







**QP-5013**

- vi. 'M' in Mudra stands for  
A. Money  
B. Micro  
C. Macro  
D. Machine
- vii. .... is the founder of HCL  
A. Azim Premji  
B. Narayan Murthy  
C. Shiv Nadar  
D. Sunder Pichai
- viii. Which of the following institutions functions at district level for development of industrial sector?  
A. DIC  
B. SIDBI  
C. SISI  
D. NSIC
- ix. Which of the following is not the challenge faced by women entrepreneurs?  
A. Male dominated society  
B. Low Mobility  
C. Low Intelligence  
D. Lack of family support
- x. Prime Minister Rojgar Yojana is implemented through.....  
A. NABARD  
B. RBI  
C. SIDBI  
D. DIC

- Q2) Answer in Short (any 2) [10]**
- a. Characteristics of successful entrepreneur [5]
- b. Sources of business idea [5]
- c. MUDRA [5]
- Q3) Explain in detail the concept and evolution of the term Entrepreneur [10]**
- Q4) Explain in detail role of entrepreneur in economic development of the region [10]**
- Q5) What are the broader content of business plan or project report? [10]**
- Q6) Explain the role and function of any two major institutions in entrepreneurship development in India. [10]**



**QP-5013**

**Q7)** What are different types of finance essential for business venture? Also explain [10]  
major sources of finance

**Q8)** Write short note Any 4 [20]

- a. Narayan Murthy [5]
- b. Venture capital [5]
- c. Digital business model [5]
- d. Environmental analysis [5]
- e. Women entrepreneurs in India [5]
- f. Azim Premji [5]

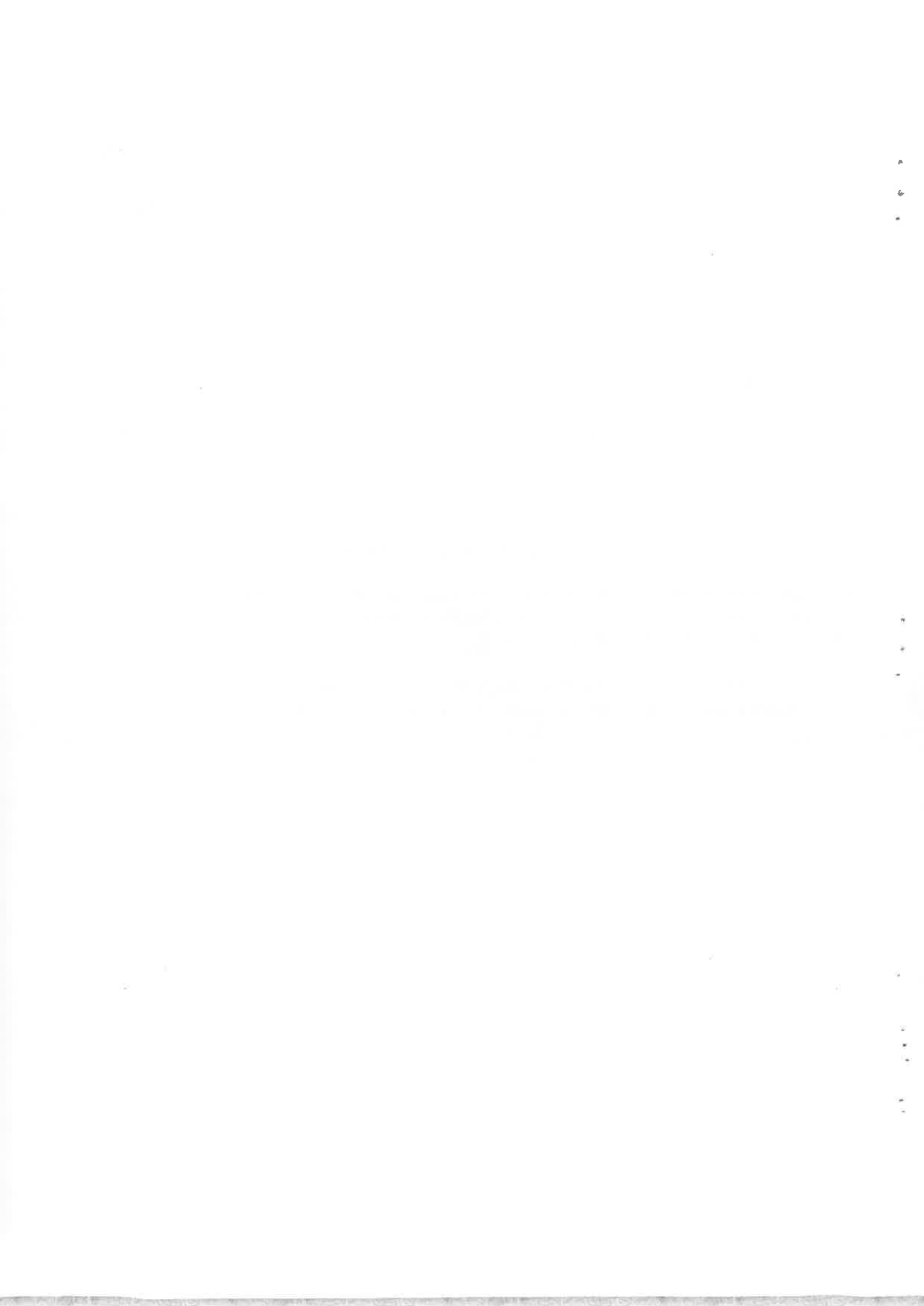
## **End Of Question Paper**

**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 (84648) Entrepreneurship Development Part 2 SEM 4
- 2] (7810) B.C.A. (CBCS) (83384) Entrepreneurship Development Part 2 SEM 4



Seat No. **OCT\_NOV\_2024 WINTER EXAMINATION****11949 Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: Entrepreneurship Development****Sub. Code: 83384/84648** *BCA II sem IV***Day and Date: DECEMBER ,09-12-2024****Total Marks: 70****Time: 02:30 PM To 05:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: Q. No. 1,2 and 7 are compulsory  
Attempt any three from Q. No 3 to Q.No. 6****[10]****Q1) Solve following MCQ.**

- i. Which of the following is NOT a characteristic of an entrepreneur?
  - A. Risk-taking
  - B. Innovative thinking
  - C. collective decision- making
  - D. Visionary
- ii. An entrepreneur is rightly defined as .....
  - A. An individual who manages a business
  - B. An individual who undertakes risk to create a business
  - C. An individual who works for someone else
  - D. An individual who manages family business
- iii. What is the first step in identifying a business opportunity?
  - A. Market assessment
  - B. Environmental analysis
  - C. Searching for business ideas
  - D. Creating a business plan
- iv. What is environmental analysis?
  - A. Study of weather patterns
  - B. Assessment of market size and competition
  - C. Study of external factors affecting business
  - D. Study of ecosystem,
- v. Which scheme is focused on supporting micro and small enterprises in India?
  - A. DIC
  - B. MUDRA
  - C. NSIC
  - D. SIDCO
- vi. Which of the following is a government initiative to promote entrepreneurship in

India?

- A. Pradhan Mantri Awas Yojana
- B. Make in India
- C. Digital India
- D. Atal Pension Yojana



- vii. Which of the following best describes digital entrepreneurship?
- A. Starting a brick-and-mortar business
  - B. Creating a business that operates primarily online or through digital platforms
  - C. Selling digital items only
  - D. Opening a store of digital watches
- viii. Which of the following is a challenge of digital entrepreneurship?
- A. Limited access to technology
  - B. High digital infrastructure cost
  - C. Cybersecurity risks
  - D. No need for marketing
- ix. What is one of the major challenges faced by women entrepreneurs in India?
- A. Access to new technology
  - B. Limited access to finance and funding
  - C. Additional government support
  - D. Lack of business ideas
- x. Which of the following qualities is essential for an entrepreneur to adapt to changing market conditions?
- A. Resistance to change
  - B. Flexibility and adaptability
  - C. Focus on past successes
  - D. Reliance on a single strategy

**Q2)** Give Reasons (Any two out of three)

- a. Women entrepreneurs face additional challenges [5]
- b. Environmental analysis is essential to identify business opportunities [5]
- c. Why is risk-taking considered a key characteristic of successful entrepreneurs? [5]

**Q3)** Analyze the challenges and opportunities for women entrepreneurs in India. [10]

**Q4)** Evaluate the importance of a business plan in entrepreneurial success. [10]

**Q5)** Discuss the impact of entrepreneurship on India's economic development. [10]

**Q6)** What important qualities do IT entrepreneurs like Azim Premji, N.R. Narayan [10]  
Murthy, and Shiv Nadar have that make them successful in the digital world?

**Q7) Write notes on (Any Four out of Six)**

- a.**
1. SIDCO
  2. Digital Entrepreneurship
  3. Start-Up
  4. Innovation
  5. Venture Capital
  6. DIC



**[20]**

**\* \* \***



**MAR-APR 2025 SUMMER EXAMINATION****11949 Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: ERP****Sub. Code: 110989/94742/91182****Day and Date: MAY ,03-05-2025****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) Choose appropriate from following options.****[12]**

- i. Which of the following is a primary function of an ERP system?
  - A. Accounting and Financial Management
  - B. Human Resource Management
  - C. Customer Relationship Management (CRM)
  - D. All of above
  
- ii. What is the purpose of ERP integration?
  - A. To create silos of data
  - B. To increase data redundancy
  - C. To streamline business processes and data flow across departments
  - D. To complicate data access for users
  
- iii. Which phase of the ERP implementation lifecycle involves selecting an appropriate vendor and negotiating contracts?
  - A. Requirements gathering
  - B. Vendor selection
  - C. Implementation
  - D. Training and deployment
  
- iv. Which factor is crucial for a successful ERP implementation?
  - A. Lack of stakeholder involvement
  - B. Resistance to change
  - C. Comprehensive training and support
  - D. Limited communication
  
- v. In ERP systems, the Production Planning module is often associated with which subsystem?
  - A. Material Requirements Planning (MRP)
  - B. Customer Relationship Management (CRM)
  - C. Inventory Control
  - D. Payroll Management



- vi. An Enterprise is a group of people with -----
- A. common goal
  - B. Separate goal for each department
  - C. multiple goals
  - D. two or more goals
- vii. ----- approach reduce data redundancy and provide update information.
- A. Legacy system
  - B. Information system
  - C. Integrated data model
  - D. Database
- viii. ERP begins with -----
- A. BPR
  - B. Selection of Vendor
  - C. SRS
  - D. Requirement Gathering
- ix. -----is one of the benefit of supply chain management.
- A. Easy process
  - B. Manufacturing make- to- stock products
  - C. Minimum time
  - D. Faster response to market changes
- x. ERP implementation process has -----phases.
- A. nine
  - B. two
  - C. ten
  - D. eleven
- xi. In -----phase roles are identified and responsibilities assigned.
- A. Project Planning
  - B. Gap Analysis
  - C. Reengineering
  - D. Configuration
- xii. Normally the ERP package needs ----- of company's functional requirements.
- A. 50%
  - B. 80%
  - C. 100%
  - D. 90%

Q2) What do you mean by BPR? Describe various phases of BPR.

[16]

- Q3) Explain ERP Implementation life cycle with neat diagram. [16]
- Q4) Explain Sales and Distribution module and Finance Module in ERP. [16]
- Q5) Describe ERP Evolution in detail. Write direct & indirect benefits of ERP. [16]
- Q6) Explain features of SAP and Oracle ERP system with their subsystems. [16]
- Q7) Describe market overview of ERP and Explain future trends in ERP. [16]
- Q8) Write a short notes on(any 4) [20]
- a. Gap analysis [5]
  - b. Inventory Module [5]
  - c. SCM [5]
  - d. Role of Consultant [5]
  - e. Selection criteria of an ERP [5]
  - f. Hidden Cost in ERP Implementation [5]

## End Of Question Paper

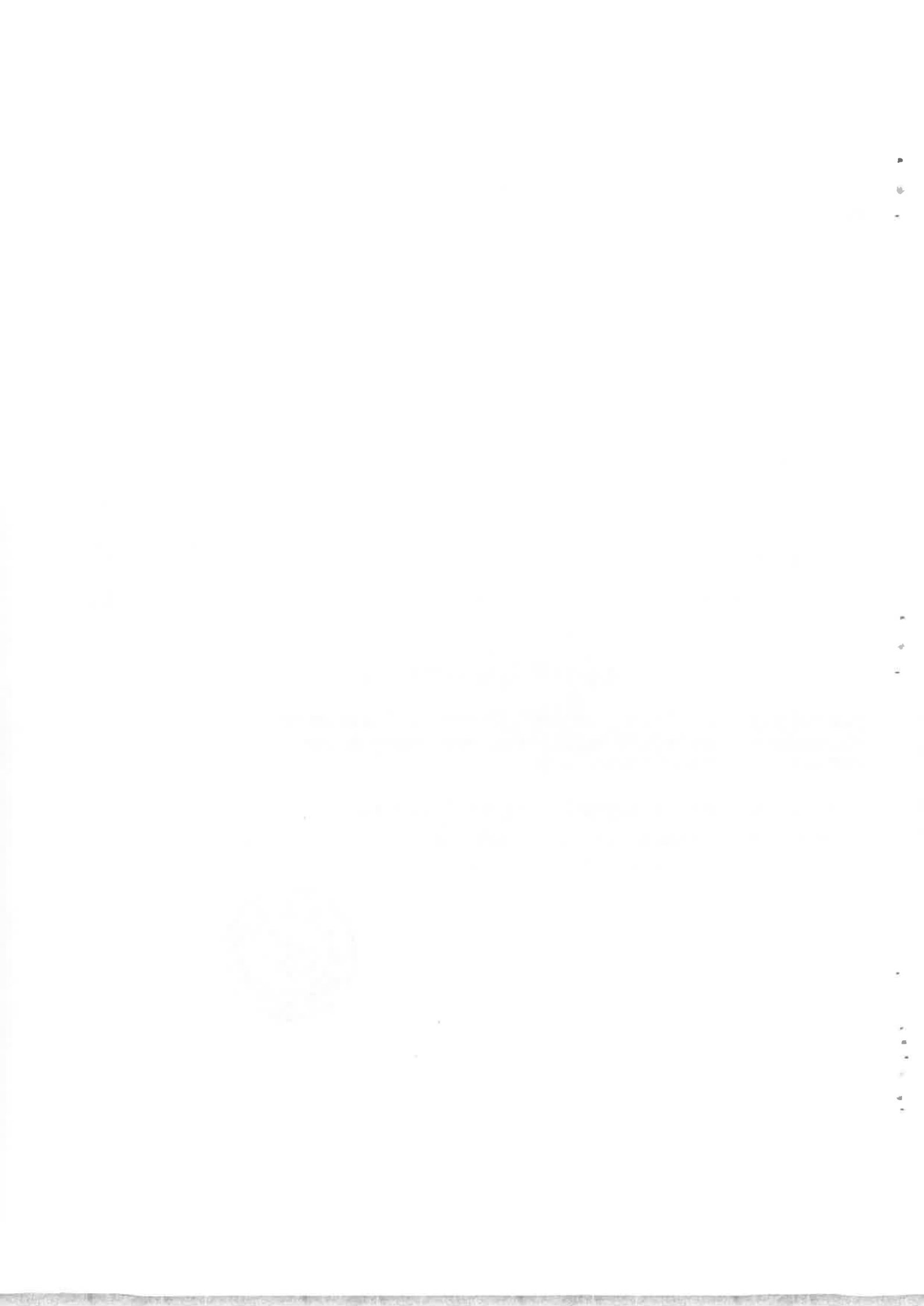
### Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

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 (110989) ERP Part 2 SEM 4
- 2] (7824) Bachelor of Computer Application (CBCS)NEP (91182) ERP Part 2 SEM 4
- 3] (7810) B.C.A. (CBCS) (94742) ERP Part 2 SEM 4





Seat No. 

**OCT\_NOV\_2024 WINTER EXAMINATION**  
**11949 Bachelor of Computer Application(BCA) NEP 2.0**  
**Sub. Name: ERP *BcA II Sem IV***  
**Sub. Code: 91182/94742**

Day and Date: DECEMBER ,09-12-2024

Total Marks: 80

Time: 02:30 PM To 05:30 PM

Instructions: 1. Draw neat labelled diagrams wherever necessary

Special Inst.: Qu. No. 1 and Qu. No. 8 are compulsory  
 Attempt any three questions from qu. no 2 to qu. no. 7



Q1) . Choose appropriate from following options.

[12]

- i. Which of the following is NOT a primary function of an ERP system?
  - A. Accounting and Financial Management
  - B. Human Resource Management
  - C. Customer Relationship Management (CRM)
  - D. Web Development and Design
  
- ii. What is the purpose of business integration?
  - A. To create silos of data
  - B. To increase data redundancy
  - C. To streamline business processes and data flow across departments
  - D. To complicate data access for users
  
- iii. Which phase of the ERP implementation lifecycle involves selecting an appropriate vendor and negotiating contracts?
  - A. Requirements gathering
  - B. Vendor selection
  - C. Implementation
  - D. Training and deployment
  
- iv. Which factor is crucial for a successful ERP implementation?
  - A. Lack of stakeholder involvement
  - B. Resistance to change
  - C. Comprehensive training and support
  - D. Limited communication
  
- v. In ERP systems, the Production Planning module is often associated with which subsystem?
  - A. Material Requirements Planning (MRP)
  - B. Customer Relationship Management (CRM)
  - C. Inventory Control

## D. Payroll Management

- vi. An Enterprise is a group of people with -----
- Common goal
  - Separate goal for each department
  - Multiple goals
  - Two or more goals
- vii. ----- approach reduce data redundancy and provide update information
- Legacy system
  - Information system
  - Integrated data model
  - Database
- viii. Customer specific production is also known as-----
- Make-to-order
  - Make-to-stock
  - Goods
  - Expected products
- ix. -----is one of the benefit of supply chain management.
- Easy process
  - Manufacturing make- to- stock products
  - Minimum time
  - Faster response to market changes
- x. ----- is called hidden cost in ERP implementation.
- Consultant
  - Training
  - A & B
  - ERP Software cost
- xi. In -----phase roles are identified and responsibilities assigned.
- Project Planning
  - Gap Analysis
  - Reengineering
  - Configuration
- xii. SAP and Oracle are well-known providers of:
- Database management systems
  - Customer relationship management software
  - Enterprise Resource Planning (ERP) software
  - Cloud computing platforms

Q2) What is BPR? Explain phases of BPR.

[16]

- Q3)** Explain ERP Implementation life cycle with neat diagram. [16]
- Q4)** Explain sales and distribution module and finance module of ERP with their [16] subsystems.
- Q5)** Define ERP. Describe the conceptual module of an ERP and advantages of ERP [16] systems.
- Q6)** What are the features of SAP and Oracle ERP? Explain various modules of SAP/R3 [16] with their subsystems.
- Q7)** Describe market overview of ERP and explain future trends in ERP. [16]
- Q8)** Write short notes on ( Any Four) [20]
- a. Growth of ERP
  - b. Inventory module
  - c. CRM
  - d. Role of Consultant in ERP
  - e. ERP selection criteria
  - f. MIS



\* \* \*



Seat No. 

BCA-II sem. IV

**MAR\_APR 2025 SUMMER EXAMINATION**  
**11949 Bachelor of Computer Application(BCA) NEP 2.0**  
**Sub. Name: PHP**  
**Sub. Code: 83385/94740/91180/110987**



Day and Date: MAY ,05-05-2025

Total Marks: 80

Time: 02:30 PM To 05:30 PM

**Instructions:**

- Special Inst.:** 1) Q.1 and Q.8 are compulsory.  
 2) Attempt any three Questions from Q.2 to Q.7  
 3) Figures to the right indicate marks.

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

I) Which of the following is a correct PHP tag?

- A <?php ?>
- B <php>
- C <? >
- D <% %>

II) Which of the following data types is not supported in PHP?

- A. String
- B. Array
- C. Object
- D. Character

III) What is the keyword used to define a function in PHP?

- A. function
- B. def
- C. create
- D. func

IV) What is the use of fopen() function in PHP?

- a) The fopen() function is used to open folders in PHP
- b) The fopen() function is used to open remote server
- c) The fopen() function is used to open files in PHP
- d) None of the above

V) Which of the following function is used to set cookie in PHP?

- a) createcookie()
- b) makecookie()
- c) setcookie()
- d) None of the above

VI) Which of the following function is used to sort an array in descending order?

[1]

P.T.O.



- a) sort()
- b) asrot()
- c) dsort()
- d) rsort()

VII) PHP's numerically indexed array begin with position \_\_\_\_.

- A. 1
- B. 2
- C. 0
- D. -1

VIII) Which looping structure is best for iterating over an associative array in PHP?

- A. for
- B. foreach
- C. while
- D. do-while

IX) Which of the following type cast is not correct?

- A. real
- B. double
- C. decimal
- D. boolean

X) In PHP, which function is used to execute a SQL query against a MySQL database?

- A. mysql\_query()
- B. mysql\_query()
- C. execute\_sql()
- D. run\_query()

XI) Which one of the following function is used to start a session?

- a) start\_session()
- b) session\_start()
- c) session\_begin()
- d) begin\_session()

XII) What is the main advantage of using prepared statements in PHP for database queries?

- A. Increased query execution speed
- B. Reduced memory usage
- C. Enhanced security against SQL injection attacks
- D. Simplified syntax

Q2) Explain the different types of operators available in PHP with example.

[16]

- Q3) Explain the different conditional statements in PHP with suitable example. [16]
- Q4) Illustrate the different built-in functions on array in PHP with suitable example. [16]
- Q5) How to connect MySQL database through PHP and retrieve data through it? [16]  
Explain with suitable example.
- Q6) Explain the different session management techniques used in PHP. [16]
- Q7) What is exception? How to handle custom exception using PHP? [16]
- Q8) Write notes on (Any Four out of Six) [20]  
I) Magic constants in PHP  
II) continue statement in PHP  
III) Defining and calling function in PHP  
IV) File functions in PHP  
V) File permissions in PHP  
VI) Prepared statements

## End Of Question Paper

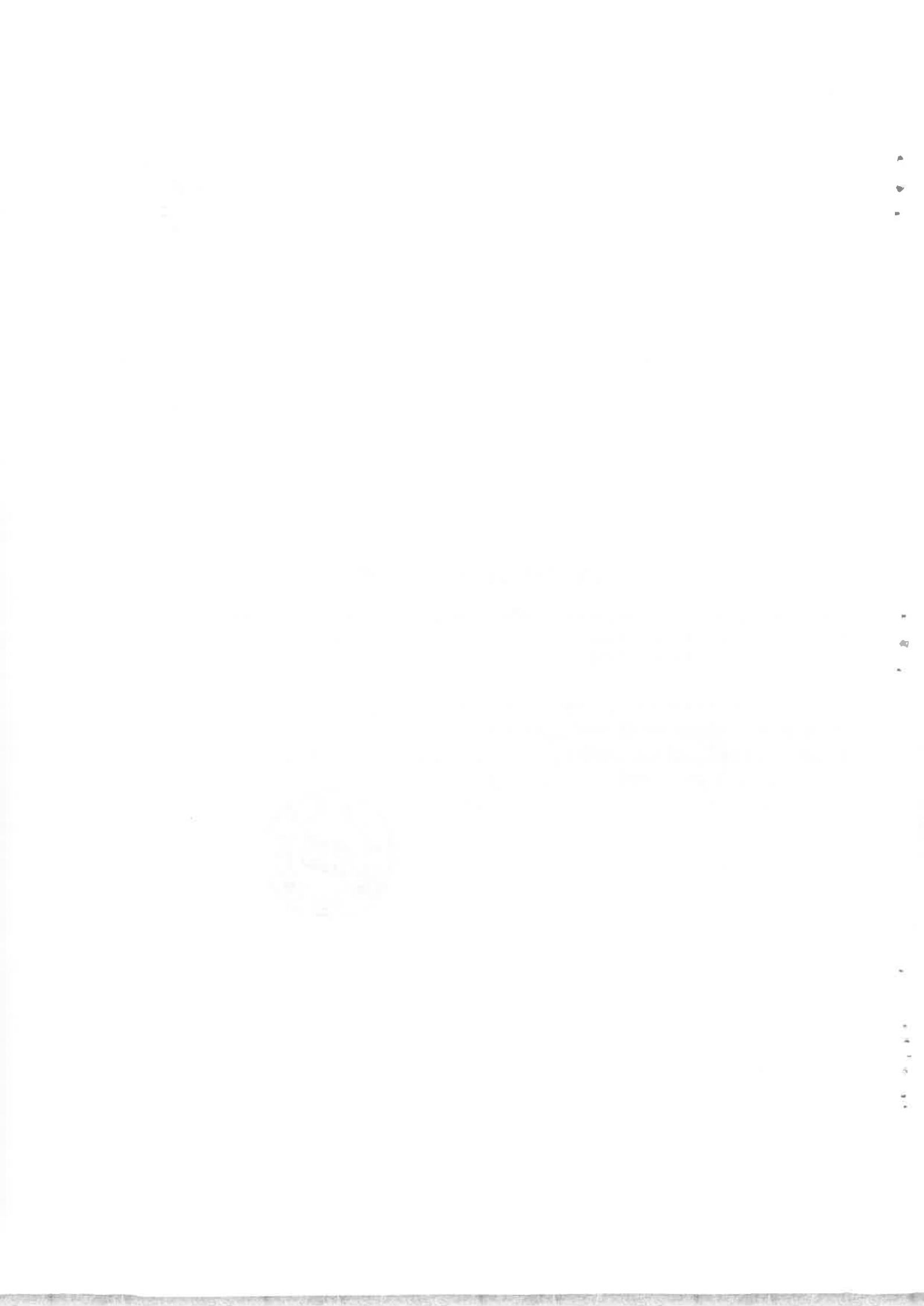
### Important Note for Chief Exam Officer / SRPD Coordinator / Sr Supervisor/ Student -

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सदरची प्रश्नपत्रिका खालील विषयांकरिता वितरित करता येईल.

- 1] (717) Bachelor of Computer Application (110987) PHP Part 2 SEM 4
- 2] (7810) B.C.A. (CBCS) (94740) PHP Part 2 SEM 4
- 3] (7824) Bachelor of Computer Application (CBCS)NEP (91180) PHP Part 2 SEM 4
- 4] (7810) B.C.A. (CBCS) (83385) PHP Part 2 SEM 4





Seat No. **OCT\_NOV\_2024 WINTER EXAMINATION****11949 Bachelor of Computer Application(BCA) NEP 2.0****Sub. Name: PHP** *BCA-II Sem IV***Sub. Code: 84649/91180/94740****Day and Date: DECEMBER ,10-12-2024****Total Marks: 80****Time: 02:30 PM To 05:30 PM****Instructions: 1. Figures to the right indicate full marks****Special Inst.: Q.1 and Q.8 are compulsory and attempt any three Questions from Q.2 to Q.7****Q1) Multiple Choice Questions (12 questions for 1 mark each)****[12]**

- i. What PHP stands for?
- A. Hypertext Preprocessor
  - B. Pretext Hypertext Preprocessor
  - C. Personal Home Processor
  - D. None of the above
- ii. PHP scripts are executed on \_\_\_\_\_
- A. ISP Computer
  - B. Client Computer
  - C. Server Computer
  - D. All of the above
- iii. Which of the following is the correct way to create a function in PHP?
- A. Create myFunction()
  - B. New\_function myFunction()
  - C. function myFunction()
  - D. None of the above
- iv. What is the use of strpos( ) function in PHP?
- A. Search for a number within a string
  - B. Search for a Spaces within a string
  - C. Search for a character/text within a string
  - D. Search for a Capitalized string/text with in a string
- v. Where setcookie( ) function must appear in PHP?
- A. Before tag
  - B. After tag
  - C. In tag
  - D. Anywhere
- vi. Which of the following function is used to sort an array in descending order?
- A. sort()





- B. asrot()
- C. dsort()
- D. rsort()

- vii. With which position PHP's numerically indexed array begin with?
- A. 1
  - B. 2
  - C. 0
  - D. -1
- viii. How .PHP files can be accessed?
- A. Through Web Browser
  - B. Through HTML files
  - C. Through Web Server'
  - D. All of Above
- ix. Which PHP function is commonly used to establish connection with MySQL database?
- A. mysql\_query()
  - B. connect\_mysql()
  - C. mysqli\_connect()
  - D. db\_connect()
- x. Which one of the following methods can be used to diagnose and display information about a MySQL connection error?
- A. connect\_errno()
  - B. connect\_error()
  - C. mysqli\_error()
  - D. mysqli\_connect\_error()
- xi. Where session\_start() function must appear in PHP?
- A. Anywhere
  - B. With <html> tag
  - C. After <html>tag
  - D. Before <html> tag
- xii. What will be the result of combining a string with another data type in PHP?
- A. int
  - B. float
  - C. string
  - D. double

Q2)

- a. Explain the different data types of available in PHP with example.

[8]

- b. Explain the concept of type juggling and type casting with example. [8]
- Q3) Explain the different conditional statements in PHP with suitable example. [16]
- Q4) Illustrate the different types of array used in PHP with suitable example. [16]
- Q5) What is form validation and sanitization? How it is performed in PHP? [16]
- Q6) Explain the different session management techniques used in PHP. [16]
- Q7)
- a. Explain the handling of file uploads in PHP with suitable example. [8]
- b. How to display data in database through PHP? [8]
- Q8) Write notes on (Any Four out of Six) [20]
- a. Variable scope in PHP [5]
- b. continue statement in PHP [5]
- c. Exception handling in PHP [5]
- d. \$\_GET [5]
- e. File manipulation functions [5]
- f. Preventing SQL injection [5]



\* \* \*



**MAR\_APR 2025 SUMMER EXAMINATION****2354 Bachelor of Science****Sub. Name: ENVIRONMENTAL STUDIES****Sub. Code: 94282/93528/67042/73487/78887****/91680/80344/91186/94746/67072 /98758/93704/110924/91697/97471****/92965/94950****Day and Date: MAY ,11-05-2025****Total Marks: 70****Time: 10:30 AM To 01:30 PM**

- Instructions:**
1. All questions are compulsory
  2. Draw neat labelled diagrams wherever necessary
  3. Figures to the right indicate full marks

**Q1) Solve following MCQ.****[10]**

- i. Ecotone means -----  
अतिव्याप्तस्थानं म्हणजे \_\_\_\_\_
  - A. Zone of least density in a community  
समुदायामध्ये कमीतकमी घनतेचे क्षेत्र
  - B. Zone of transition between two communities  
दोन समुदायामधील संक्रमणाचे क्षेत्र
  - C. Zone of maximum diversity in a community  
समाजातील जास्तीत जास्त विविधतेचे क्षेत्र
  - D. Zone of highest density in a community  
समाजातील सर्वाधिक घनतेचे क्षेत्र
- ii. Dodo bird species is-----  
डोडो पक्षी प्रजाती आहे -----
  - A. Exotic  
परस्थ
  - B. Extinct  
नामशेषत्व / विनाश झालेले
  - C. Endangered  
अस्तित्व धोक्यात असलेले
  - D. Rare  
दुर्मिळ
- iii. Conservation within the natural habitat is-----  
नैसर्गिक अधिवासात संवर्धन यांस म्हणतात -----
  - A. Ex-situ conservation  
परस्थानी संवर्धन
  - B. In-situ conservation  
मूलस्थानी संवर्धन
  - C. Internal conservation



आंतरिक संवर्धन

D. In-vivo conservation

सजीवांमध्ये संवर्धन

iv. The organisms which feed on dead organisms and excreta of living organisms are known-----

जे जीव मृत जीवांना खातात आणि मलमूत्र यांच्यावर जगतात -----

A. Decomposers

विघटन करणारे

B. Renewable

अक्षय

C. Abundant

मुबलक

D. None of the above

वरीलपैकी काहीही नाही

v. The Environment (Protection) Act, 1986 was enacted for the ----- of environment.

पर्यावरण (संरक्षण) कायदा, 1986 पर्यावरणाच्या -----साठी लागू करण्यात आला.

A. Protection and improvement

संरक्षण आणि सुधारणा

B. Law and enforcement

कायदा आणि अंमलबजावणी

C. Management and economy

व्यवस्थापन आणि अर्थव्यवस्था

D. Health and regulation

आरोग्य आणि नियमन

vi. The most important human activity, leading to the extinction of wildlife, is-----

सर्वात महत्त्वाची मानवी क्रिया, ज्यामुळे वन्यजीवांचा नाश होतो-----

A. Pollution in wildlife

वन्यजीवांमधील प्रदूषण

B. Hunting for valuable wildlife products

मौल्यवान वन्यजीव उत्पादनांची शिकार

C. Alternation and destruction of the natural habitats

नैसर्गिक अधिवासांचे नाश

D. Introduction of alien species

परदेशी प्रजातींचा परिचय

vii. Soil erosion removes surface soil which contains-----

मातीची धूप पृष्ठभागाची माती काढून टाकते ज्यामध्ये -----असते

A. sand

वाळू

B. parental rock

मूळ खडक

- C. Plant microbes  
वनस्पती सूक्ष्मजंतू
- D. Organic matter  
संद्रिय पदार्थ



viii. Eutrophication is-----

पोषणतीरेक म्हणजे -----

- A. water treatment process  
पाणी प्रक्रिया
- B. Accumulation of plant nutrient in water leads algal boom  
पाण्यात वनस्पती पोषक संचय, जैविक वनस्पती वाढ
- C. process of mineral cycle  
खनिज चक्राची प्रक्रिया
- D. Introduction of alien species  
परदेशी प्रजातींचा परिचय

ix. The objective of Environment studies is -----

पर्यावरण अभ्यासाचे उद्दिष्ट आहे-----

- A. Raise consciousness about environment problems  
पर्यावरणाच्या समस्यांबद्दल जागरूकता वाढवा
- B. To teach environmentally appropriate steps  
पर्यावरणास अनुकूल पावले शिकवणे
- C. Create an environmental problem awareness  
पर्यावरणीय समस्येची जाणीव निर्माण करा
- D. All of the above  
वरील सर्व

x. The surface area from which rainwater that runs off rainwater is collected is called -----

ज्या पृष्ठभागावरून पावसाचे वाहत जाणारे पाणी एकत्र केले जाते त्याला ----- म्हणतात

- A. Rainwater Harvesting  
पावसाच्या पाण्याचे संकलन
- B. Catchment Area  
पाणलोटक्षेत्र
- C. Water establishment  
पाणी स्थापना
- D. None of the above  
वरीलपैकी काहीही नाही

Q2) Answer any three from the following खालीलपैकी कोणतेही तीन उत्तर द्या

[15]

- a. Q1. Explain the single-channel layer model with a suitable diagram.  
Q2. Explain the need for public awareness of the environment.  
Q3. Discuss the threats to biodiversity.  
Q4. Explain details about Mineral resources.

Q5. Briefly explain water harvesting and watershed management.

Q1. आकृतीसह एकरी मार्गाने होणाऱ्या ऊर्जा प्रवाहाची प्रतिकृतीची माहिती लिहा.

Q2. पर्यावरणाबाबत जनजागृतीची गरज स्पष्ट करा.

Q3. जैवविविधतेला असलेल्या धोक्यांची चर्चा करा.

Q4. खनिज संसाधनां बद्दल तपशील स्पष्ट करा.

Q5. पाणी संकलन आणि पाणलोट क्षेत्र व्यवस्थापन थोडक्यात सांगा



Q3) Write a Short note on any three कोणत्याही तीनवर लहान टीप लिहा

[15]

a. Q1. Mitigation of pollution due to mining

Q2. Man- wildlife conflicts

Q3. Deforestation

Q4. Noise pollution

Q5. Biomass energy

Q1. खाणकामामुळे होणारे प्रदूषण कसे कमी करणे

Q2. मानव वन्यजीव संघर्ष

Q3. जंगलतोड

Q4. ध्वनी प्रदूषण

Q5. जैववस्तुमानीय ऊर्जा

Q4) Explain in detail the Air (Prevention and Control of Pollution) Act

[10]

OR

Briefly discuss the various types of terrestrial and aquatic ecosystems.

हवा (प्रदूषण प्रतिबंध आणि नियंत्रण) कायद्याचे तपशीलवार वर्णन करा.

किंवा

विविध प्रकारच्या स्थलीय आणि जलीय परिसंस्थेची थोडक्यात चर्चा करा

Q5) What is urbanization? discuss problems related to energy in urban area? Add a [10] note on rainwater harvesting.

OR

What is disaster management? explain with floods and earthquake?

शहरीकरण म्हणजे काय? शहरी भागातील ऊर्जेशी संबंधित समस्यांवर चर्चा करा? पावसाच्या पाण्याच्या संकलन साठवणुकीवर एक टीप जोडा

किंवा

आपत्ती व्यवस्थापन म्हणजे काय? पूर आणि भूकंप सह स्पष्ट करा.

Q6) What is the desertification phenomenon? Add notes on the Desert ecosystem and [10] grassland ecosystem.

OR

Explain population explosion and its impact and control measures

वाळवंटीकरणाची प्रक्रिया काय आहे? वाळवंटातील परिसंस्था आणि गवताळ प्रदेशातील परिसंस्थेवर नोंदी जोडा.

किंवा

लोकसंख्या स्फोट आणि त्याचे परिणाम आणि नियंत्रण उपाय स्पष्ट करा.

## 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] (7823) Bachelor of Business Administration NEP (91680) Environmental Science Part 2 SEM 4
- 2] (388) B. A.(Semester) (78887) Environmental Studies Part 2 SEM 4
- 3] (7824) Bachelor of Computer Application (CBCS)NEP (91186) Environmental Studies Part 2 SEM 4
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