

2411000901011002-A
EXAMINATION APRIL - 2025
BACHELOR OF COMPUTER APPLICATIONS (PRACTICAL)
(FIRST SEMESTER)
104- COMPUTER PROGRAMMING & PROGRAMMING
METHODOLOGY (PRACTICAL)

[Time: As Per Schedule]

[Max. Marks: 25]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination: **BACHELOR OF COMPUTER APPLICATIONS (PRACTICAL) (FIRST SEMESTER)**
 - b. Name of the Subject: **104- COMPUTER PROGRAMMING & PROGRAMMING METHODOLOGY (PRACTICAL)**
 - c. Subject Code No: **2411000901011002-A**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

- Q.1** (A) Write a C program to input a string from input device. Count number of capital and small letters in a string and display on screen. **12**
- (B) Write a C program that accepts Roll No. Name and total (out of 500) from input device. Calculate Percentage and display Roll No, Name. Total and Percentage in proper format. **8**
- Q.2** VIVA & Journal **5**

2411000901022002-A
EXAMINATION APRIL - 2025
BACHELOR OF COMPUTER APPLICATIONS (PRACTICAL)
(FIRST SEMESTER)
BCA SEM-1 (PRACTICAL -105)
(DATA PROCESSING ANALYSIS)

[Time: As Per Schedule]

[Max. Marks: 25]

Instructions:

1. Fill up strictly the following details on your answer book
 - a. Name of the Examination: **BACHELOR OF COMPUTER APPLICATIONS (PRACTICAL) (FIRST SEMESTER)**
 - b. Name of the Subject: **(PRACTICAL-105) (DATA PROCESSING AND ANALYSIS)**
 - c. Subject Code No: **2411000901022002-A**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Create table product with the following fields and assign appropriate constraints: **10**

(product_id, product_name, Quantity, rate_per_unit)

Note:

Rate_per_unit field should have price of single product.

Constraint:

Product_id must be unique.

1. Insert at least 10 records.
2. List out the product_name which have quantity greater than 50.
3. List out the product whose quantity is less than 10.
4. Display maximum quantity of product.
5. Display products whose name starts from M.

Q.2 Create a worksheet, name as **Student** with the following fields. **10**

Roll No	Student Name	Sub 1	Sub 2	Sub 3	Total	Percentage
101	Sachin	35	20	30		

Attempt the following:

1. Enter at least 05 records.
2. Calculate total and percentage of each student.
3. Make column chart for rno and total.
4. Highlight marks in red colour if student is fail.
5. Filter records of students who got distinction.

Q.3 Viva + Journal

05

2411000901022004-B
EXAMINATION APRIL - 2025
BACHELOR OF COMPUTER APPLICATIONS (PRACTICAL)
(FIRST SEMESTER)
MAJOR - 105-02 D.P.A (A.I AND D.A)(PR) NEW

[Time: As Per Schedule]

[Max. Marks:25]

Instructions:

1. Fill up strictly the following details on your answer book
 - a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATIONS (PRACTICAL) (FIRST SEMESTER)**
 - b. Name of the Subject : **MAJOR - 105-02 D.P.A (A.I and D.A)(PR) NEW**
 - c. Subject Code No : **2411000901022004-B**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.
5. All students must carry their certified journal.
6. Students are required to carry their exam Hall ticket.

Seat No:

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Student's Signature

Q.1 Create a worksheet for the following fields and do the following operation: **10**

Sports Team Management

Fields: Player ID, Player Name, Sport, Team, Total Score

Operations:

1. Insert at least 6 records.
2. Highlight players with a Total Score above 500 in yellow.
3. Arrange data alphabetically by Sport.
4. Display the details of the player with the highest Total Score.

Q.2 Create following table with appropriate constraint: **10**

Sports Team Management

Table: `player_master` (player_id, player_name, sport, team, total_score, joining_date)

Queries:

1. Insert at least 6 records.

2. Display details of players whose sport is 'Cricket'.
3. Update the total score of the player with `player_id = 'P104'` to 750.
4. Delete all players who joined before 1/1/2020.

Q.3 VIVA

5

4. Wi-Fi stands for _____
- A. Wireless Fidelity B. Wireless Field
C. Wireless Firm D. Wireless Fire
5. _____ is used for storing frequently used instruction for faster access.
- A. ROM B. RAM
C. Cache D. Hard disk
6. $(A)_{16} = (?)_{10}$
- A. 10 B. 0
C. 1 D. 13
7. Which is typically the Smallest: bit, byte, nibble, word?
- A. Bit B. Byte
C. Nibble D. Word

[B] Answer the following in brief.

5

1. What is the unit of measurement used to measure the speed of a dot matrix printer?
2. Give full form of ALU and CU?
3. What is the feature that allows you to open multiple web pages in a single browser window?
4. How many characters are supported in ANSI character code?
5. What is software? List types of software.

Q.2 [A] Answer the following

10

1. Enlist and explain the characteristics of computer.
2. What is ROM? Explain PROM, EPROM and EEPROM.

OR

1. Draw a block diagram of Computer and explain its functional units.
2. What is Memory? Explain the concept of Virtual memory.

[B] Answer the following

6

1. Explain any 3 applications of computer.
2. Differentiate between CPU and GPU

OR

1. What is the difference between a Desktop computer and a Laptop computer?
2. Explain the concept of Data Bus and Address Bus.

Q.3 [A] Answer the following

10

1. Explain the working of Touchscreen monitor.
2. What do you mean by Web browser? List out the names of Web browser. Discuss the various terminologies of web browser.

OR

1. What is the purpose of RFID technology in FastTag?
2. What is online data backup and why is it important?

[B] Answer the following

6

1. Differentiate between Laser Printer and Inkjet Printer.
2. Explain different types of Monitors.

OR

1. Write short note on Firestick.
2. Differentiate between OMR and OCR.

Q.4 Solve the following (Any 4)

8

1. $(999)_{10} = (?)_2$
2. Add binary numbers $(110110)_2$ and $(101010)_2$
3. $(1101001)_2 = (?)_{10}$
4. Subtract: $(11011)_2$ from $(11101)_2$
5. $(547)_{10} = (?)_2$
6. $(DAB)_{16} = (?)_{10}$

2311000901040001
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATION (NCF-NEP)
(FIRST SEMESTER)
MDC-102-MATHEMATICS

[Time: As Per Schedule]

[Max. Marks: 50]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATION (NCF-NEP) (FIRST SEMESTER)**
- b. Name of the Subject : **MDC-102-MATHEMATICS**
- c. Subject Code No : **2311000901040001**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.
5. Follow usual notations.
6. Use of non-programmable scientific calculator is allowed.

Seat No:

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Student's Signature

Q.1 Answer the following:

10

1. Define proper subset with illustration.
2. If $f(x) = x^2 - x - 1$ then find $f(1) + f(-1)$.
3. Prove that $p \vee (\sim p) = t$.
4. Define Boolean algebra.
5. If $A = \begin{bmatrix} 4 & 7 \\ -1 & -2 \end{bmatrix}$ then find $\det(A)$.

Q.2 Attempt any two.

10

(a) In usual notations prove that $A \cap (B \cup C) = (A \cap B) \cup (A \cap C)$.

(b) If $A = \{x/x^2 - 17x + 16 = 0\}$; $B = \{y/y^2 - 7y + 12 = 0\}$ $C = \{1,2,3,4\}$ then find

(1) $A - (B \cap C)$, (2) $(A \cup B) - (A \cap C)$.

(c) If $A = \{x/x \leq 3; x \in N\}$, $B = \{x/1 < x \leq 5; x \in N\}$ and

$C = \{x/x \text{ is an even positive integer} < 10\}$. then verify that

$$A \cap (B - C) = (A \cap B) - (A \cap C)$$

Q.3 Attempt any two

10

(a) If $f(x) = \frac{1}{x} + \frac{2}{x-3}$; $x \in R - \{0,3\}$ then find

$$f(2) + f(4), f(2) - f(4).$$

(b) If $f(x) = x(x + 1)(2x + 1)$ then prove that

$$f(x) + f(x + 1) = 2x(2x^2 + 1).$$

(c) It is observed that a quadratic function $ax^2 + bx + c$ fits the data points (1,9), (2, 14) and (3,23). Find the constants a, b and c and find y when $x = 4$.

Q.4 Attempt any two.

10

(a) Check the validity of the following argument:

$$\text{Hypothesis } S_1: p \Rightarrow (\sim q), S_2: r \Rightarrow q, S_3: r$$

$$\text{Conclusion: } S: \sim p$$

(b) Using truth tables prove that $p \vee (q \wedge r) = (p \vee q) \wedge (p \vee r)$.

(c) Show that $(D_9, +, \cdot, ', 1, 9)$ is not a Boolean Algebra $\forall x, y \in D_9$

$$x + y = \text{LCM of } x, y$$

$$x \cdot y = \text{GCD of } x, y$$

$$x' = 9/x$$

Q.5 Attempt any two.

10

(a) $A = \begin{bmatrix} 0 & 4 & 3 \\ 1 & -3 & -3 \\ -1 & 4 & 4 \end{bmatrix}$ then prove that $A^2 = I$.

(b) Solve the following equations by Cramer's Rule:

$$x + 6y = 2xy$$

$$3x + 2y = 2xy$$

(c) Find inverse of the matrix $A = \begin{bmatrix} 2 & 1 & -1 \\ 1 & 0 & -1 \\ 1 & 1 & 2 \end{bmatrix}$

2311000901050001
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATION
(NCF-NEP) (FIRST SEMESTER)
AEC-101-COMMUNICATION SKILLS

[Time: As Per Schedule]

[Max. Marks: 25]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF COMPUTER APPLICATION (NCF-NEP) (FIRST SEMESTER)**
- b. Name of the Subject : **AEC-101-COMMUNICATION SKILLS**
- c. Subject Code No : **2311000901050001**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Answer the following questions (Any Three)

6

1. Explain Grapevine communication
2. List out the steps involved in the communication process.
3. List out the types of Listening.
4. What is Scanning techniques of Reading.

Q.2 You are a software engineer with expertise in block chain technology. Write a job application letter to Meta, applying for a position in their block chain development team. Emphasize your interest in decentralized applications and your relevant project experience.

7

OR

Draft an email to a famous fashion influencer on Instagram, requesting a collaboration for the launch of your new fashion brand, Fashion Forward. Explain your brand's ethos and how their style aligns with it.

7

Q.3 Think about any product you are promoting in the market. It could be a detergent, an electronic item or a health drink. Prepare a presentation along with speech of 5 to 7 slides. **7**

OR

Prepare a group discussion on, " Are Indian films losing their charm?" **7**

Q.4 Write a blog on Paris Olympic winners. **5**

OR

Read the passage carefully and answer the question below. **5**

Nutrition experts say that healthy eating is essential for us, not only to keep good health but also to do well in the class. What we do not realize today is that better food is actually equal to better learning in classroom. If you are unable to do well in class or not concentrate on your lessons, then a poor diet may be one of the factors responsible for it. Now a day we see so many children, digging into the water bags into the lunch break. But can this sort of junk food provide nutrition? A bag of chips is usually followed by a glass of soft drink. If taken frequently, all this is a harmful for your health. There are possibilities that junk food may lead to a generation of unhealthy adults. Junk food hardly contains any vitamins. It only contains a high amount of fat and unhealthy calories. Junk food and lack of physical activity can also lead to obesity. It can be hard to change your eating habits. It helps to focus on small changes. Making changes to your diet may also be beneficial if you have diseases that can be worsened by the things you eat or drink. Symptoms from conditions such as kidney diseases, lactose intolerance and celiac disease can all benefit from changes in diet. Balanced nutrition and regular exercise are good for your health.

These habits can help you lose or maintain weight. Try to set realistic goals. Our immune system requires essential Vitamins and minerals in order to functions at peak performance and guards against illness and immunodeficiency problems.

1. How is better food equal to better learning?
2. What do the nutrition experts say?
3. Does junk food provide nutrition?
4. What leads to obesity?
5. Which disease one can control and get benefit from changes in diet?

2311000901070001
EXAMINATION FEB-MAR - 2025
BACHELOR OF COMPUTER APPLICATION
(NCF-NEP) (FIRST SEMESTER)
VAC-IKS-BHARATIYA KNOWLEDGE SYSTEMS
- AN INTRODUCTION

[Time: As Per Schedule]

[Max. Marks: 25]

Instructions:

1. नीचे दशविव विगतो उत्तरवडी पर अवश्य लभवी.

Fill up strictly the following details on your answer book

- Name of the examination : **B.C.A. (NCF-NEP) (SEM. I)**
 - Name of the Subject : **VAC-IKS-BHARATIYA KNOWLEDGE SYSTEMS - AN INTRODUCTION**
 - Subject Code No : **2311000901070001**
- Sketch neat and labelled diagram wherever necessary
 - Figures to the right indicate full marks of the question.
 - All questions are compulsory.

Seat No:

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Student's Signature

English Version

[Max. Marks: 25]

Q.1.

7 – MCQ (2 Marks each) (Any 5 out of 7)

(10)

- Which karmas are a part of a person's Sanchita Karmas?
(A) iniquity (B) Kriyaman Karma
(C) Nishkam Karma (D) Prarabdha Karma
- How many Angas in Yoga?
(A) 2 (B) 4
(C) 6 (D) 8

3. Which three characteristics are readily accepted in Indian philosophy of life?
(A) Birth - Death - Rebirth
(B) Motion - Progress - Decline
(C) Spiritual - metaphysical - divine
(D) Both B and C
4. Who is the inventor of Indian Missiles like Agni and Pruthvi?
(A) C V Ramana (B) Dr Abdul Kalam
(C) Gete (D) Eistein
5. Nalanda Vidyapith is located in which state?
(A) Gujarat (B) Maharashtra
(C) Punjab (D) Bihar
6. What is the sixth century age of India called?
(A) Adhunik Age (B) Samprat Age
(C) Golden Age (D) Dharmayug
7. ऊर्ध्वमूलोऽवाक्शाख एषोऽश्वत्थः सनातनः । तदेव शुक्रं तद् ब्रह्म
तदेवामृत्मुच्यते॥ Which Upanishad does this verse belong to?
(A) Ishavasyopanishad (B) Kathopanishad
(C) Kenopanishad (D) Mundaka Upanishad

Q.2. Write Following Answers (15)

Q.2. (a) Answer in Detail (Any 1 out of 2) (05)

1. Explain the ancient history of Indian education system.
2. Explain the importance of scriptures.

Q.2. (b) Answer in Detail (Any 1 out of 2) (05)

1. Discuss the reasons of the loss of knowledge in India.
2. Explain Kama and Moksha.

Q.2. (c) Write a short note (Any 1 out of 2) (05)

1. Sarve Bhavantu Sukhi
2. Tradition of knowledge in India and today's reality.

Gujarati Version

[Max. Marks: 25]

પ્ર.૧. 7 – MCQ (દરેકનો ૨ માર્ક્સ) (૭ માંથી કોઈ પણ ૫) (10)

1. કયા કર્મો એ વ્યક્તિનાં સંચિતકર્મોનો એક ભાગ છે?
(A) અકર્મ (B) ક્રિયામણકર્મ
(C) નિષ્કામકર્મ (D) પ્રારબ્ધકર્મ
2. યોગમાં કેટલા અંગો છે?
(A) ૨ (B) ૪
(C) ૬ (D) ૮

3. ભારતીય જીવનદર્શનમાં કયી ત્રણ ઘટમાળનો સહજ સ્વીકાર થયેલો છે?
- (A) જન્મ - મૃત્યુ - પુનર્જન્મ
 (B) ગતિ - પ્રગતિ - અધોગતિ
 (C) આધ્યાત્મિક - આધિભૌતિક - આધિદૈવિક
 (D) B અને C બન્ને
4. અગ્નિ અને પૃથ્વી જેવી ભારતીય મિસાઇલોના પ્રણેતા કોણ છે?
- (A) સી. વી. રામન
 (B) ડૉ. અબ્દુલ કલામ
 (C) ગેટે
 (D) આઇસ્ટાઇન
5. નાલંદા વિદ્યાપીઠ કયા રાજ્યમાં આવેલી છે?
- (A) ગુજરાત
 (B) મહારાષ્ટ્ર
 (C) પંજાબ
 (D) બિહાર
6. ભારતની છઠી સદીના યુગને શું કહેવામાં આવે છે?
- (A) આધુનિક યુગ
 (B) સાંપ્રત યુગ
 (C) સુવર્ણ યુગ
 (D) ધર્મયુગ
7. ऊर्ध्वमूलोऽवाकशाख एषोऽश्वत्थः सनातनः । तदेव शुक्रं तद् ब्रह्म
 तदेवामृतमुच्यते।। આ શ્લોક કયા ઉપનિષદનો છે?
- (A) ઈશાવાસ્યોપનિષદ
 (B) કઠોપનિષદ
 (C) કેનોપનિષદ
 (D) મુણ્ડકોપનિષદ

પ્ર.૨. નીચેના જવાબો લખો (15)

પ્ર.૨. (અ) સવિસ્તાર પ્રશ્ન (૨ માંથી કોઈ પણ ૧) (05)

1. ભારતીય શિક્ષણ પ્રણાલીનો પ્રાચીન ઇતિહાસ સમજાવો.

2. શાસ્ત્રોનું મહત્વ સમજાવો.

પ્ર.૨. (બ) સવિસ્તાર પ્રશ્ન (૨ માંથી કોઈ પણ ૧) (05)

1. ભારતમાં જ્ઞાનની વિસ્મૃતિના કારણો ચર્ચો.

2. કામ અને મોક્ષ સમજાવો.

પ્ર.૨. (ક) ટૂંકનોંધ લખો (૨ માંથી કોઈ પણ ૧) (05)

1. સર્વ ભવન્તુ સુખિનઃ

2. ભારતમાં જ્ઞાનની પરંપરા અને આજની વાસ્તવિકતા.

***** END *****

2411000901011001
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATION (NCF-NEP)
(FIRST SEMESTER)
MAJOR-104-COMPUTER PROGRAMMING &
PROGRAMMING METHODOLOGY (CPPM)(TH)

[Time: As Per Schedule]

[Max. Marks: 25]

Instructions:

1. Fill up strictly the following details on your answer book

a. Name of the Examination : BACHELOR OF COMPUTER APPLICATION (NCF-NEP) (FIRST SEMESTER)

b. Name of the Subject : MAJOR-104-COMPUTER PROGRAMMING & PROGRAMMING METHODOLOGY (CPPM)(TH)

c. Subject Code No : 2411000901011001

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Answer the following: (Any Five)

5

1. Which symbol is used display condition in flowchart?
 - A) Rectangle
 - B) Diamond
 - C) Circle
 - D) Square
2. Which is not valid identifier?
 - A) abc123
 - B) 123abc
 - C) abc_123
 - D) _abc123

3. Which header file is required for getch() function?
 - A) conio.h
 - B) stdio.h
 - C) stdlib.h
 - D) coninput.h
4. Which function is needed for accepting input char by char?
 - A) gets()
 - B) getchar()
 - C) getch()
 - D) None of the above
5. In switch.....case statement, which data types can be checked?
 - A) int and float
 - B) int and char
 - C) int
 - D) All of the above
6. Which loop is executed at least once, if condition is false also?
 - A) while
 - B) do-while
 - C) for
 - D) All of the above
7. & is an_____Operator
 - A) Relational
 - B) Logical
 - C) Address
 - D) Arithmetic

Q.2 A) What is constant in C? Also explain how to create constant and different types of constant. **4**

OR

A) Explain C Program structure with example.

B) Explain any four string functions. **4**

OR

B) Explain any four categories of operators.

Q.3 A) Explain switch-case statement with example **4**

OR

A) Explain else if ladder with example.

B) Explain for loop statement. **4**

OR

B) Explain difference between break and continue.

Q.4 A) Explain one dimensional character array. **4**

OR

A) Explain bubble sort.

2411000901022001
EXAMINATION MARCH 2025
BACHELOR OF COMPUTER APPLICATION
(NCF-NEP) (FIRST SEMESTER)
MAJOR-105-DATA PROCESSING AND ANALYSIS
(DPA) (TH)

[Time: As Per Schedule]

[Max. Marks:25]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination: **BACHELOR OF COMPUTER APPLICATION (NCF-NEP) (FIRST SEMESTER)**
 - b. Name of the Subject: **MAJOR-105-DATA PROCESSING AND ANALYSIS (DPA) (TH)**
 - c. Subject Code No: **2411000901022001**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Choose appropriate correct option. (Any 5)

05

1. What is the purpose of cell alignment in a spreadsheet?
 - A. To Change the Color of the Text
 - B. To adjust the width of the cell
 - C. To control the position of text within a cell
 - D. To format the cell as a date

2. What term describes the adjustment of text to appear either at the left, right, or center of a cell?
 - A. Text spacing
 - B. Cell Formatting
 - C. Text Alignment
 - D. Te Overflow

3. What is Entity?
 - A. Document
 - B. Database Language
 - C. Things or Object in a real world
 - D. Block of SQL Query

4. Which command preserves the structure of table even after data Loss?
 - A. Drop Table
 - B. Alter Table
 - C. Truncate Table
 - D. No such command Exist

5. What is the term for a mathematical expression used to perform calculations in a spreadsheet?
 - A. Formula
 - B. Function
 - C. Calculation
 - D. Bar

6. Which type of relationship in an E/R diagram allows multiple instances of one entity to relate to multiple instances of another?
 - A. One to One
 - B. One to Many
 - C. Many to One
 - D. Many to Many

7. What is the purpose of the NOT NULL constraint?
 - A. To allow duplicate values
 - B. To set a default Value
 - C. To prevent NULL value in Column
 - D. To enforce Unique Value

- Q.2** A. Explain the steps to add Headers and Footers in a worksheet. **04**
OR
A. Describe the various methods of saving a worksheet, including Save, Save As and saving a file as CSV. **04**
- B. What is Chart? Explain its types. **04**
OR
B. Explain Date and Day functions in spreadsheet. **04**
- Q.3** A. What is Database? Explain its architecture. **04**
OR
A. Explain various types of Keys giving an example. **04**
- B. What is Normalization? Explain 1NF and 2NF in details. **04**
OR
B. Explain SQL Data Types. **04**
- Q.4** A. Explain SQL aggregate functions. **04**
OR
A. What is view? Explain view in detail. **04**
