Subject Code: CAEN 153
Subject: English II

Full Marks: 60
Time: 50 min

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt **ALL** the questions.

Group B: Short-Answer Questions (ANY SIX) [6 x 5 = 30]

1. What are the key principles of effective business writing? Explain how to write a good business letter.

2. Draft a formal email to a potential client, introducing your company's services and inviting them to a virtual meeting to discuss a potential project.

3. What role does body language play in oral presentations? Analyze the importance of non-verbal communication such as gestures, posture, eye contact, and facial expressions during an oral presentation. How can effective use of body language enhance the delivery of your message"

4. Define science fiction. How does it differ from fantasy? Provide examples to illustrate your answer.

5. How does Ballard depict overpopulation in "Billenium," and what is the psychological impact of living in such confined spaces?

6. Analyze the following argument: "If you study hard, you will get good grades. You studied hard. Therefore, you will get good grades." Identify the fallacy, if any, and explain why it's fallacious.

7. What is a sound argument? How does it differ from a valid argument? Explain with examples.

8. Analyze the following moral dilemma: A runaway trolley is headed towards five people tied to the tracks. You can pull a lever to divert the trolley onto a side track, but doing so will kill one person. Should you pull the lever? Justify your answer.

Group C: Long-Answer Questions (ANY TWO) [10 x 2 = 20]

9. Compare and contrast the portrayal of human and machine relationships in Jack Williamson's "The Metal Man" and Brian Aldiss' "Who Can Replace a Man?" How does each story explore the theme of human dependency on machines, and how do their views on the consequences of this dependency differ?

10. In your argumentative essay, argue for or against the statement, "Artificial intelligence poses a significant threat to humanity." Support your position with evidence from relevant sources and address potential counterarguments.

11. Write a persuasive letter to a potential investor, outlining your startup idea, its potential market, and the reasons why they should invest in your company.

~ The End ~

PREBOARD EXAM, 2024, BATCH 2023

Bachelors in Computer Application   **Full Marks:60**
Course Title: C Programming   **Pass Marks:24**
Code No:CACS151   **Time:3 Hrs**
Semester II, Machhapuchre/Annapurna Batch

Group B

Attempt any Six Questions

2. What is formatted and unformatted input? Also explain recursion with ex.
3. Expain Bitwise and conditional operator?Explain in details with examples.[2.5+2.5]
4. What is SDLC model explain any two models in detail .[2.5+2.5]
5. What are the advantages of an loop? Write a C program for the following expression using function. $7x\sqrt{y^2 + 10}$
6. How break statement is different from continue statement? WAP to find weather a number is prime number.?[2+3]
7. WAP to display the following pattern using loop.

   ```
   1
   1 2
   1 2 3
   1 2 3 4
   1 2 3 4 5
   ```
   [5]

8. What is DMA. Write a C program to enter age of 20 students and count age between 18 to 25 from array using DMA function.

Group C

Attempt any TWO Question

9. What is Function?Explain types of function in detail? [5]
   (b)Write a program to find whether a given string is Palindrome or not? [5]
10. (a)Write a program to swap two numbers using pointer[5]
    (b)Write a program in C to draw rectangle and circle according to the users input.[5]

11. (a)How structure is different from union? [2]

    (b)Write a program to store in file "student.txt" and display basic information (roll, name, address, id and phone) of students of using a structure.Also use the menu to add data, search using id and delete the data from file using id .[8]

The money was collected as below:
- The holder of 100 shares paid the final call money with allotment.
- The holder of 400 shares fail to pay final call.
- Other shareholders paid their money when required by the company.
- **Required:** Journal entries. [1+2+2]

Group C

Attempts any TWO questions. [2×10]

8. You are given following transactions of Jyoti Suppliers
   a. Started business with cash Rs. 5,00,000 and equipment Rs. 7,50,000
   b. Purchased goods Rs. 25,000 on account and made partial payment Rs. 10,000
   c. Paid insurance for the year Rs 6,000
   d. Sold goods on account for Rs 30,000 and received as partially Rs 20,000
   e. Paid rent Rs 4,800 and travelling expenses Rs 2,800
   f. Sold goods on cash Rs 55,000
   g. Purchased good on credit Rs 21,000
   h. Cash paid to Accounts payable Rs. 90,000 in full settlement of Rs 92,000
   i. Cash withdraw from bank Rs 40,000 for office use
   j. Paid assistant's salary Rs 12,000
   k. Goods costing Rs 12,000 lost by fire and the insurance company admits full claim
   l. Bought furniture from S.S furniture Udhyog on credit for Rs 30,000

   Required: a. Journal Entries b. Sales Account, Account Payable account and Account Receivable Account.

9. The following is the Trail Balance of a Trading concern for the year ended Ashadh 31, 2079.

Particulars	Dr. Amount	Particulars	Cr. Amount
Purchases	4,00,000	Capital	3,00,000
Opening Stock	3,50,000	Purchase return	10,000
Sales return	10,000	Sales	6,90,000
Carriage inward	8,000	Creditors	30,000
Debtors	42,000	Bank loan	80,000
Advertisement Expenses	14,000		
Discount	2,000		
Insurance expenses	10,000		
Salaries	65,000		
Interest on bank loan	4,000		
General expenses	20,000		
Wages	40,000		
Furniture	50,000		
Rent paid	40,000		
Bank and cash balance	55,000		
Total	11,10,000	**Total**	11,10,000

Additional Information:
i. Closing stock Rs. 3,75,000
ii. Bad debts Rs. 2,000
iii. Provide reserve for bad debts 5% of debtors
iv. Advance for salaries Rs. 5,000
v. Outstanding wages Rs. 2,000
vi. outstanding interest of bank loan Rs. 4,000
vii. Depreciation furniture at 5% p.a

Required: a) Trading Account b) Profit and loss account c) Balance sheet [3+4+3]

10. Defined Company and Explain its Features. what are the different between private and public company? [5+5]

Full Marks:60

Pass Marks.24

Attempt the following question
Group B

Attempt any SIX Question.   [6*5=30]

2. Define Microprocessor. Differentiate harvard vs von neumann architecture .

.3. Define instruction cycle .Draw the timing diagram for STA 2050 (LDA=3A)

.4. The following block of data is stored in memory location from CO55 to C05A H. Transfer the entire block of data to the locations C080 to C085 H in reverse order.

Data: 22, A5, B2, 99, 7F, 37

5. What is cache memory? Explain the element of cache design?

6. Write a program for 8085 to find the greatest number among ten numbers stored at memory location 4500H.

7. How to handle the branch instruction in pipeline. Explain.?

8. Write Short notes on any two
    ➤ vector operations
    ➤ mapping of instructions
    ➤ Stored Program Organization.

Group c

Attempt any two Question.   [2*10=20]

9. What are control instructions? Explain the different types of program controlinstructions with their roles?

10. What is control word. Explain about the structure of control unit and its basic requirement?

11. Write a program to evaluate the arithmetic expression

$$Y=A+B(CD+EF-G/H)$$

·   Using Two register,One register and Zero register

Thank You.

Faculty: Bachelor in Computer Application   Full Marks: 60
Subject: Mathematics - II (CAMT 154)   Pass Marks: 24
Year/Semester: I/II   Time: 3 hours

Candidates are required to answer the questions in their own words as far as possible.

Group B

Attempt any SIX questions.   [6*5=30]

1) If a function $f(x)$ is defined as:

$$f(x) = \begin{cases} 3x^2 + 2, x < 1 \\ 4, x = 1 \\ 2x + 3, x > 1 \end{cases}$$

Discuss the continuity of $f(x)$ at $x = 1$.

2) Find the derivative of $f(x) = e^{\cos x}$ using definition.

3) Evaluate $\int e^{ax} \cos bx$.

4) Solve the linear differential equation $(1 + x^2)\frac{dy}{dx} + 2xy = 4x^2$.

5) The demand function of a new product introduced by a company is $p = 50 - 8Q$ and the average cost function $AC = -6 + 2Q$. Find the marginal profit function and its value $Q = 2$.

6) Find the surface area of the region enclosed by the parabola $y = x^2$ and $y = 2x - x^2$.

7) Find the equation of the tangent and normal to the curve $y = 4 - x^2$ at $(-1,3)$.

Group C

Attempt any TWO questions.   [2*10=20]

8) State Rolle's theorem and Lagrange's mean value theorem with their geometrical interpretation. Verify Rolle's theorem for the function $f(x) = \sin x$, $x \in [0,\pi]$. Also find a point in the curve represented by given function where the tangent is parallel to the x-axis.

9) Using simplex method, maximize $max. Z = 2x_1 - x_2 + 2x_3$
subjected to the constraints

$$2x_1 + x_3 \leq 10;$$
$$x_1 + 2x_2 - 2x_3 \leq 20;$$
$$x_2 + 2x_3 \leq 5;$$
$$x_1, x_2, x_3 \geq 0.$$

10) (i). Solve the system

$$2x + 3y + 4z = 20,$$
$$3x + 4y + 5z = 26,$$
$$3x + 5y + 6z = 31$$

using Gauss elimination method.

(ii). Use the bisection method to find the solution of $x^3 - x - 1 = 0$ in the interval (1,2) correct to two places of decimal.