

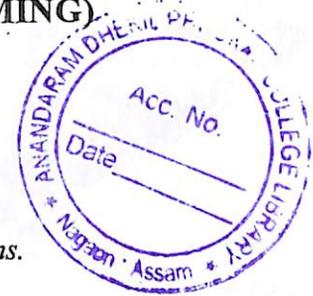
2025  
COMPUTER SCIENCE (Minor)  
Paper: COM4100204MN  
(COMPUTER FUNDAMENTAL AND PROGRAMMING)

SET - A

Full Marks: 45

Time: 2 hours

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



1. Answer all questions:

1x5=5

- Which of the following is a valid C identifier?  
(i) -average (ii) lvalue (iii) \_sum (iv) total%
- Which of the following is not a valid C data type?  
(i) double (ii) real (iii) float (iv) int
- Name the header file that is required for using input/output functions like printf() and scanf().
- Name the hardware that was used in second generations of computers.
- Name the first electronic digital computer.

2. Write very short answers. (*any five*).

2x5=10

- Define computer and mention any one of its characteristics.
- Define system software and application software. Give one example of each.
- Convert  $(101.101)_2$  into decimal.
- Convert  $(F1.A)_{16}$  into octal.
- What is a variable in C? Write one example of variable declaration.
- What are the basic data types of C language?
- Explain the working of if-else statement with the help of an example.
- Define pointer with example.
- What is array? Distinguish between one and two dimensional array.
- Subtract 5 from 7 using 4 bit 2's complement binary equivalent.

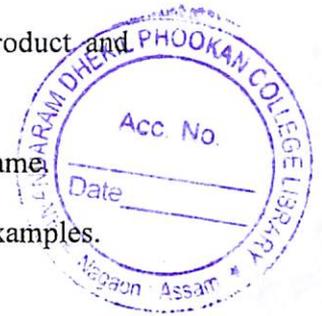
3. Answer the following questions: (*any four*)

5x4=20

- What do you mean by computer memory? Differentiate between RAM and ROM.
- Explain different types of loops in C with suitable examples.
- What are functions in C? Explain different types of functions with suitable examples.

(Turn Over)

- d) Write a C program to take input of two numbers and print their sum, product and difference.
- e) Write a C program to reverse a number.
- f) Write a C program to create an array with inputs from the user and print the same.
- g) Explain structures and unions. Highlight the differences between them with examples.
- h) What is file handling in C? Explain different file operations with examples.



4. Describe the following questions: (*any one*).

10

- a) Draw the block diagram of a modern digital computer and explain the functions of its various components.
- b) Explain in detail the structure of a C program. Discuss the role of header files, preprocessor directives, main() function and user defined functions with suitable examples.
- c) Explain various types of operators in C with examples.
- d) Write a C program to take two matrices from the user and find the sum and product of both.

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