

This question paper contains 3 printed pages.

B.C.A. (Sem. - I)

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Roll No. 6801738.....

UG0801

BCA-51T-101(N)

B.C.A. Three/Four Year (Semester - I) EXAMINATION - Dec. 2025

(Faculty of Science)

Subject - Programming in C

Time Allowed: Three Hours

Maximum Marks: 100

No supplementary Answer-book will be given to any candidate. Hence the candidates should write the answers precisely in the main answer-book only.

किसी भी परीक्षार्थी को पूरक उत्तर-पुस्तिका नहीं दी जाएगी। अतः परीक्षार्थियों को चाहिए कि वे मुख्य उत्तर पुस्तिका में ही समस्त प्रश्नों के उत्तर लिखें।

Answers of short answer type questions must be given in sequential order. Similarly all the parts of one question of descriptive part should be answered at one place in the answer-book.

लघुत्तरात्मक प्रश्नों के उत्तर प्रश्नों के क्रमानुसार ही दें। इसी प्रकार किसी भी एक वर्णनात्मक प्रश्न के अन्तर्गत पूछे गए विभिन्न प्रश्नों के उत्तर, उत्तर-पुस्तिका में अलग-अलग स्थानों पर हल करने के बजाए एक ही स्थान पर क्रमानुसार हल करें।

Write your roll number on the question paper before start writing the answers of questions.

प्रश्नों के उत्तर लिखने से पूर्व प्रश्न-पत्र पर रोल नम्बर अवश्य लिखिए।

Question paper consists of two parts A and B.

प्रश्न पत्र में दो भाग अ और ब होंगे।

**PART - A: 20 Marks** भाग - अ : 20 अंक

Part A will be compulsory having 10 very short answer type questions (with a limit of 20 words) of two marks each. The first question is based on knowledge, understanding, and applications of the topics/texts covered in the syllabus.

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भाग अ में दो अंक के 10 अति लघु उत्तरीय प्रश्न (20 शब्दों की सीमा के साथ) अनिवार्य हैं। पहला प्रश्न पाठ्यक्रम में शामिल विषयों/पाठ के ज्ञान, समझ और अनुप्रयोगों पर आधारित है।

**PART - B: 80 Marks** भाग – ब: 80 अंक

Part B of question paper shall be divided into four units comprising question numbers 2-5. There is one descriptive question from each unit with internal choice. Each question will carry 20 marks.

प्रश्न पत्र का भाग ब को प्रश्न संख्या 2-5 सहित चार इकाइयों में विभाजित है। प्रत्येक इकाई से आंतरिक विकल्प के साथ एक वर्णनात्मक प्रश्न है। प्रत्येक प्रश्न 20 अंक का है।

**PART - A**

10×2 = 20 Marks

1. Define programming language and list its main categories.
2. Classify the difference between syntax and semantics in programming languages.
3. What is the purpose of a flowchart? Give one example of a symbol used in it.
4. List any two advantages of using the C programming language.
5. What are constants in C? Give one example.
6. Define an array. How is a one-dimensional array declared in C?
7. What is a function prototype in C?
8. What is the difference between actual and formal parameters in a function?
9. What is a Pointer? Write the syntax for declaring a pointer variable.
10. Discuss the differentiate between structure and union in C.

**PART - B**

20×4 = 80 Marks

**20 Marks Each (8 Question - Attempt Any 4)**

2. Analyze the different programming domains with suitable examples.

**OR**

Design an algorithm and flowchart to find the largest among three numbers.

3. Classify and explain the working of operators in C.

**OR**

Examine looping constructs (for, while, do-while) with syntax and examples.

4. Compare and use different library functions for string operations.

**OR**

Purpose of user-defined functions? Explain recursion with an example.

5. Construct the relationship between arrays and pointers by using example.

**OR**

Evaluate the concept of structures in C. How are they initialized and accessed?