

QUESTION BANK
C PROGRAMMING LANGUAGE
BCA-51T-101

1. What do you mean by procedural programming language?
2. What is an algorithm?
3. Draw and list any 5 components used in a flowchart.
4. What is pseudocode?
5. Explain programming domains?
6. Give flowchart symbols for i/o, processing terminals and flow line.
7. Define the use of goto statement with example.
8. What do you mean by entry controlled and exit controlled loop.
9. Give syntax of a while loop. Describe its features.
10. Discuss purpose and syntax of goto statement.
11. Give syntax of switch statement.
12. Give the syntax of 'for' loop.
13. What is keyword in c?
14. What is constant variable and how they are declared and initialized?
15. List logical and relational operators.
16. Give a skeleton /basic outline of a c program.
17. What is operator precedence.
18. What is enumerated data type? Give example.
19. What are the different methods to declare a constant in 'c'? Give example.
20. How do we create constants in c? Give syntax.
21. What are c-tokens?
22. Define the programming language.
23. What is imperative language?
24. What is functional programming language?
25. What is compiled programming language?
26. Define syntax.
27. Explain semantics.
28. Define algorithm.
29. What is flowchart?
30. Define denotational semantics.
31. Define operational semantics.
32. Define axiomatic semantics.
33. Define translator.
34. What is comment in c programming?
35. What are tri-graph characters?
36. Define c – tokens.
37. What is keyword?
38. Define constant in c programming.

39. What is backslash character constant?
40. Define variables.
41. What do you understand by c character by c character set?
42. What are identifiers and constants?
43. Distinguish between constant and variable.
44. Define operator and operands.
45. What is type conversion?
46. What do you mean by casting a value?
47. What is ternary operator?
48. Define prefix and postfix notation in increment and decrement operator.
49. Where bit wise operator are used?
50. What is comma operator? What is its purpose?
51. Define formatted input output function.
52. Define unformatted input output function.
53. What is library functions?
54. Define control structure.
55. What is if statement?
56. What is if else statement?
57. What is Loop? Explain goto statement with example.
- 58.2. What do you mean by entry controlled and exit controlled loop?
- 59.3. What is nested loops?
- 60.4. Write syntax of do... while loop.
- 61.5. Write difference between while loop and do... while with example.
- 62.6. What are jump statements? Explain.
- 63.7. Write syntax of for loop and give example.
64. Write the syntax of if statement.
65. Write the syntax of if else statement.
66. Define loops in c programming.
67. What is entry control loop?
68. What is exit control loop?
69. Write the syntax of for loop.
70. What is break statement?
71. What is continue statement?
72. What is goto statement?
73. Write an algorithm to complete factorial of a number.
74. Draw a flowchart to find out maximum of 3 number.
75. What is loop in c? Write difference between while and do-while with example.
76. Differentiate between for, while and do-while loops.
- 77.5. what is the difference between a do-while loop and a while loop?
78. Differentiate break and continue statements with the help of appropriate examples.
79. Explain while and do-while loop with examples.
80. Define the basic structure of c program.

81. What is data type? Draw the classification diagram of data type in c along with their size and range.
82. Write a c program to check if the year entered is a leap year or not.
83. (Leap year is defined as every 4th year, if it is a non-century year, and every 400th year, otherwise.)
84. Describe the skeleton of 'c' program.
85. Draw a flowchart to find out sum and average.
86. Describe fundamental data types in c with examples.
87. Explain different logical operators of 'c' with suitable examples.
88. Describe four fundamental data types in c with examples.
89. Describe the two different forms of the if-else statement. How do they differ?
90. Explain the classification of programming languages.
91. Define the programming language. Write the importance of studying programming language.
92. What is a basic programming concept?
93. Write a C program to calculate Factorial of a number using loop.
94. Write a C program to calculate and print multiplication table upto 10.
95. Write a C program to print Fibonacci series upto n terms.
96. Write a C program to print full pyramid of *.
97. Write a C program to print numbers from 1 to 5 using while loop.
98. Write a C program using do... while loop to add numbers until the user enters zero.
99. Write a C program to print multiply of two numbers to numbers using while loop.
100. Write a C program to print multiply of two numbers to numbers using do...while loop.
101. Write a C program to print numbers from 1 to 10 using for loop.
102. Write a C program to calculate the sum of first n natural numbers using for loop.
103. Why is readability important to writability?
104. What does it mean for a program to be reliable?
105. What does it mean for a program to be writable?
106. Explain imperative programming language.
107. Explain functional programming language.
108. What is syntax? What are the general syntax criteria?
109. Define various symbols of flow chart with their meaning.
110. Explain the pseudocode and syntax of pseudocode.
111. Describe the types of flowcharts.
112. Explain the parse tree.
113. Describe syntax graph.
114. Write the advantage and disadvantage of flowcharts.
115. Write the difference between assemblers and compiler.
116. Write the difference between interpreter and compiler.
117. What is the importance of c programming?
118. Write the features of c programming.
119. Explain the execution of a program.

120. Define variable and write the rules for constructing variable name.
121. Difference between float and double variable.
122. List various bitwise operations available in c?
123. Explain arithmetic operator using example.
124. 40.describe logical operators.
125. Explain type conversion in expression.
126. What do mean by casting a value.
127. Explain the increment and decrement operator.
128. For each of the statement below assume that x=100 prior to execution of the statement. In each case what are the value of 'y' after execution
 - Y=X=X++;
 - Y=X==X++;
129. What is format specifier? Give list of some format specifier.
130. Define library function. Give name of some library functions.
131. Explain decision making and branching and what is its importance.
132. Explain the if statement with proper syntax and example
133. Explain the if – else ladder with proper syntax and example.
134. What is the use of switch statement?
135. Explain the for loop and its properties.
136. Explain the while loop and its properties.
137. Explain the do while loop and its properties.
138. What is loop control statement? Explain
139. What is loop? Explain goto statement with example.
140. What is nested loops?
141. Explain different types of flow control or control structure or statements in c.
142. What is the use of goto statement? Explain with example.
143. Go what do you mean by typedef?
144. Explain decision making statements with suitable example
145. Write difference between if. Else and nested if statement with example.
146. Explain switch statement with example.
147. What is an array?
148. What do you mean by an Array? What are the different types of Array? Explain with example.
149. What is a 2-D array?
150. Write a code to declare and initialize an array.
151. Explain all types of string functions with example.
152. What is string?
153. Explain predefined string functions.
154. Explain various functions used for reading and writing strings.
155. What is c programming?
156. What are the features/characteristics of c language?
157. What is a keyword in c?
158. Explain how can we execute a c program?

159. Explain pre-processor directives. When do we use #define and #include?
160. What are comments in c?
161. What is the basic concepts of c language?
162. What is a constant variable and how they are declared and initialized?
163. Explain the term variable and constants. Explain the types of constants.
164. Explain a brief history of c.
165. Define the basic structure of c program.
166. Explain escape sequence characters.
167. What is data type? Explain various data types in c.
168. Explain tokens in c language with proper example.
169. Explain the history of evolution of c programming language.
170. What is operator? Explain various operators in c.
171. Explain different types of input/output functions with syntax.
172. What do you mean by operator precedence and associativity.
173. Write difference between bitwise operator (and, not and or).
174. What is type conversion.
175. Write difference between algorithm, pseudocode and flowchart with proper example.
176. WHAT IS :
 - AN COMPILER
 - AN INTERPRETER
 - AN ASSEMBLER
 - A LINKER
177. Write pseudo-code and draw flow-chart to compute sum of digits of a positive integer.
178. Write pseudocode to find the sum of first 100 even numbers.
179. Draw a flowchart to calculate factorial of a given number.
180. Write an algorithm to check whether a number entered by user is prime Or not.
181. Discuss machine level, assembly level and high-level languages in
182. Write a note on evaluation of programming languages in detail.
183. Write a pseudocode to display the following series:
 - 0,1,1,2,3,5.....n
 - 1,4,9,16,25.....n
184. What is flowchart? List the flowcharting rules. Draw a flowchart for finding the biggest and smallest of given set of numbers in an array.
185. Explain in detail the features of a good programming language. Give the merits and demerits of machine language.
186. What do you mean by iterative statements? Explain different types of loop supported by 'c' with use of break and continue keywords.
187. What do you mean by looping? Give the syntax of looping statements in c.
188. Explain the history of evolution of c programming language. What is
189. The basic concept of c language?
190. Explain tokens in c language with proper example.
191. Explain decision making statement with example.

192. Discuss about different operators available in c language. What is meant by operator precedence and associativity?
193. Write a C program using switch-case to print marks range given a student's grade per the following table:

GRADE LETTER	MIN. MARKS	MAX. MARKS
D	0	40
C	40	60
B	60	80
A	80	100

194. Write a program to find all prime numbers between 1 and n. [ru 2019]
195. Explain different data types available in 'c'.
196. Write a program to input basic salary of an employee and calculate its gross salary according to the following:
- BASIC SALARY 10000 HRA 20%, DA :=80%
 - BASIC SALARY <= 20000 HRA-25%, DA 90%
 - BASIC SALARY >20000 HRA 30%, DA = 5%
197. WRITE THE PROGRAM TO FIND OUT:
- FACTORIAL OF A GIVEN NUMBER.
 - SUM OF 1ST 10 NATURAL NUMBER.
198. Discuss various operators of 'C'.
- 199.. Write a program in 'C' to find the grade of a student on the following condition:
- i. PER IS < 40 GRADE IS D
 - (II) PER IS >= 40 GRADE IS C
 - (I) PER IS >= 50 GRADE IS B
 - (III) (IV) PER IS >= 60 GRADE IS A
 - (IV) (V) PER IS >= 75 GRADE IS A+
200. With the help of suitable examples, discuss the various decision-making statements of 'c'.
201. Explain the different data types of 'c' in brief.
202. What are different parts of a c program? Explain by giving an example.
203. List the different types of operators in c with suitable examples.
204. Explain the categories of programming language.
205. Explain the areas dealt with programming domain.
206. Explain the evaluation criteria for a programming language.
207. What are the main features of good programming language.
208. Define syntax. Explain general syntax criteria.
209. Explain syntactic elements of a programming language.!
210. What is semantics? Explain the classification of semantics.

211. Explain the pseudocode with example.
212. Define algorithm. Write the steps of development an algorithm with example.
213. What is flowchart? Write a flowchart to calculate simple interest.
214. Explain the formal methods of describing syntax.
215. Draw the flowcharts for the following
 1. to find sum of n numbers.
 2. to compute the factorial of a number.
 3. to compute the square of a number.
 4. to compute the cubes of a number.
216. How can you define a c program structure. Explain the different part of a c program using an example.
217. Explain the constant in c programming in detail.
218. Describe the data types in c programming with examples.
219. Explain the various operators in c.
220. Explain the precedence and associability of the operators.
221. Explain the following statements with example
 - (i) getchar()
 - (ii) putchar()
222. EXPLAIN THE FOLLOWING STATEMENTS WITH EXAMPLE
 - i. printf()
 - (iii) scanf()
223. Explain the following statements with example
 - (iv) gets()
 - (v) puts()
224. Explain decision making and branching and its categories.
225. Describe switch statement with proper example and its c program.
226. Describe if else ladder with proper example and its c program.
227. Explain for loop with its syntax, flow diagram and example.
228. Write the short note on the following:
 1. Break statement
 2. Continue statement
 3. Goto statement
229. Write a C program to find the average of n ($n < 10$) numbers using arrays
230. Write a C program to store temperature of two cities for a week and display it.
231. Write a C program to read n number of values in an array and display it in reverse order.
232. Write a C program to find the maximum and minimum element in an array.
233. Write a C program for a 2D array of size 3x3 and print the matrix
234. Write a C program to print multiplication of two square Matrices.
235. Write a C program to find transpose of a given matrix.
236. Write a C program to input a string and print it.
237. Write a C program to separate the individual characters from a string.
238. Explain call by value.

239. What is nesting of functions?
240. What is recursion?
241. What is function?
242. Explain the difference between user defined and library/pre-defined functions.
243. Explain at least two categories of function with example.
244. Differentiate call by value and call reference with example.
245. Explain the user defined and library/pre-defined functions in C with example.
246. Explain Scope, Visibility and Lifetime of a variable.
247. What is the difference between actual and formal parameters?
248. Explain string handling functions in C.
249. Explain formal and actual arguments of a function.
250. Write a program in C to swap two numbers using the function.
251. Write a program in C to get largest element of an array using the function.
252. Write a program in C to check whether a number is a prime number or not using the function.
253. Write a program in C to calculate the sum of numbers from 1 to n using recursion.
254. Write a C program of call by reference.
255. Write a C program of call by value.
256. What is a pointer? How they are initialized?
257. What are pointers uses?
258. How can we access the address of a variable through its pointer?
259. What do you mean by memory addresses.
260. Explain functions returning pointers.
261. Explain the array of pointers.
262. What is null pointer and void pointer?
263. Explain pointer to pointer with example.
264. Write a program in C to add two numbers using pointers.
265. Write a program in C to store n elements in an array and print the elements using pointer.
266. Write a program in C to find the largest element using Dynamic Memory Allocation.
267. What is structure?
268. How the structure is different from an array?
269. Explain the term 'Array of Structure' and 'Nesting of structure' with example.
270. Write the structure declaration syntax.
271. Explain accessing structure members through example.
272. Write difference between Nested structure and Embedded structure.
273. What do you mean by Size of structure.
274. Write a program in C to store Information and Display it Using Structure.
275. Write a program in C to access members of a structure using pointers, through the -> operator.

276. What is union?
277. What is formatted and Un-formatted I/O functions?
278. Explain bit fields.
279. What is union?
280. How Union is different from structure?
281. Explain file handling functions.
282. Explain the methods used for file handling in C with syntax.
283. What do you mean file text and binary file in file handling?
284. What are the different types of files?
285. What is stream in c?
286. What is Enumerated types
287. Write a C program to declare and initialize a UNION.
288. Write a program to create and store information in a text file.
289. Write a C program to merge two files and write it in a new file.
290. Write a C program to read the file and store the lines into an array.