

Seat No. : _____

DA-107

December-2018

B.C.A., Sem.-I

**CC-102 : Introduction to Programming Language Using C
(New Syllabus)**

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Answer the following :

- (1) What is machine level language ? Explain machine level language with all its limitations and advantages. 7
- (2) What is basic structure of C program ? Write steps to execute C program. 7

OR

- (1) Write an algorithm and draw a flowchart to generate even numbers between 100 to 200.
- (2) Define constant and variable. Write different rules for the name of variable.

(B) Answer the following : (any **four**) 4

- (1) Which is the incorrect variable name ?
 - (a) goto (b) ok
 - (c) hello (d) i_m
- (2) Mnemonic code is used in _____.
 - (a) Assembly language (b) Higher level language
 - (c) Machine level language (d) None of the above language.
- (3) Flowchart can consist of which different parts ?
 - (1) Input (2) Process (3) Output
 - (a) (1) and (2) (b) (2) and (3)
 - (c) None (d) All of the above
- (4) _____ is the first function that is called up when the program is executed.
 - (a) main () (b) printf ()
 - (c) scanf () (d) clrscr ()
- (5) _____ is single line comment.
 - (a) // (b) \\
 - (c) /* (d) /* */
- (6) The word 'int' is a
 - (a) keyword (b) password
 - (c) header file (d) none of the above

2. (A) Answer the following :

(1) Explain relational and logical operators. 7

(2) Explain IO functions: printf(), scanf(), getchar() and putchar(). 7

OR

(1) Explain different if statements with syntax.

(2) Explain unary, binary and ternary operators with syntax.

(B) Answer the following : (any **four**) 4

(1) A header file is : _____

(a) A file that contains standard library functions.

(b) A file that contains definitions and macros.

(c) A file that contains user defined functions.

(d) A file that is present in current working directory.

(2) In C size of is a _____.

(a) Variable

(b) Operator

(c) Keyword

(d) None of the above

(3) The extension of header file is

(a) .f

(b) .p

(c) .h

(d) .c

(4) Precedence of operators determines operator _____.

(a) is important

(b) is used first

(c) operates on largest numbers

(d) execute fast

(5) Switch statement cannot work with _____ data type.

(a) int

(b) char

(c) float

(d) any of the above

(6) _____ operator has highest precedence.

(a) ()

(b) *

(c) =

(d) &&

3. (A) Answer the following :

(1) Explain for loop and nested loop. 7

(2) Define an array. Explain different options to initialize one dimensional and two dimensional array. 7

OR

(1) What is loop ? Explain while loop and do while loop and differentiate both.

(2) What is an array ? Write the relation between array name and element number. How array elements can be referred using base address ?

(B) Answer the following : (any **three**)

3

- (1) The keyword _____ is used to terminate the loop.
(a) break (b) goto
(c) quit (d) short
- (2) The size of the array can be defined by
(a) [] (b) ()
(c) { } (d) < >
- (3) Int a[5]={1,2,3,4,5};
What does a[2] in the sample code above contain ?
(a) 2 (b) 4
(c) 1 (d) 3
- (4) Two dimensional array a [3] [4] has _____
(a) 3 rows and 4 columns (b) 12 rows and 12 columns
(c) 4 rows and 3 columns (d) 7 rows and 7 columns
- (5) The continue statement is used to _____
(a) Continue the next iteration of the loop statement.
(b) Skip the block of loop statement.
(c) Exit from the outermost block even it is used in the innermost block.
(d) Continue execution of the program even error occurs.

4. (A) Answer the following :

- (1) Explain strcmp() and strcat() functions in depth. **7**
- (2) Write different categories of user defined function. Explain any two in depth. **7**

OR

- (1) Explain different elements of user defined functions.
- (2) What is function ? Explain nesting of function with syntax.

(B) Answer the following : (any **three**)

3

- (1) A function calls itself is called _____.
(a) calling itself (b) main calling
(c) recursion (d) none of the above
- (2) The function name itself is _____.
(a) an address (b) definition
(c) value (d) none of the above
- (3) What is the length of null string ?
(a) 0 (b) 1
(c) 2 (d) None of the above
- (4) Which variable retains its value in between function calls ?
(a) Auto (b) Static
(c) Register (d) Extern
- (5) _____ function is used to copy source string in the destination string.
(a) strcat() (b) strcpy()
(c) strcmp() (d) strlen()
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**CC-102 : Problem Solving and C Programming
(Old Syllabus)**

Time : 2:30 Hours]

[Max. Marks : 70

1. (A) Answer the following :

- (1) Write features of machine level language and differentiate it with assembly language. 7
- (2) Write an algorithm and draw a flowchart to generate a series : 7
1, 4, 9, 16, 25..., 100

OR

- (1) Write features of higher level language and differentiate it with assembly language.
- (2) Write an algorithm and draw a flowchart to find N!. Where the value of N is provided by the user.

(B) Fill in the blanks : (any **four**) 4

- (1) C is _____ language.(procedural / non-procedural)
- (2) To convert assembly language to machine language _____ is used.
- (3) The symbol of process is _____ in flowchart.
- (4) The graphical representation of an algorithm is called _____.
- (5) The task of compiler is, to convert _____ language to machine language.
- (6) _____ language is also called symbolic language.

2. (A) Answer the following :

(1) Differentiate variable and constant and write rules to define name of variable. 7

(2) Explain all logical operators provided by C language. 7

OR

(1) Explain in depth : (i) Typecasting (ii) Comments

(2) Explain relational operators in depth.

(B) State true or false : (any **four**) 4

(1) Local variables belongs to automatic storage class.

(2) The name of variable can be keyword.

(3) There can be any number of main functions in a single C program.

(4) Every C program ends with END word.

(5) The putchar function is used to write character.

(6) The purpose of header file is to store source code of a program.

3. (A) Answer the following :

(1) Explain switch case statement with its limitations in depth. 7

(2) Explain while loop in depth and differentiate it with do while loop. 7

OR

(1) Explain different types of if statements with syntax.

(2) Explain break and continue in depth and differentiate both.

(B) State true or false : (any **three**) 3

(1) One if can have only one else statement.

(2) In the nested loop the innermost loop executed minimum time.

(3) The while loop is exit controlled loop.

(4) With use of goto, backward jump is possible in C program.

(5) for loop can not be written within while loop.

4. (A) Answer the following :

(1) Explain how array can be created of different dimensions and can be initialized ? 7

(2) How string can be created ? Explain strlen and strcmp functions. 7

OR

(1) Define an array. Explain relation between array name and index number.
How elements can be referred using base address ?

(2) Define string and explain strcat and strcpy functions.

(B) Fill in the blanks : (any **three**) 3

(1) The array data type is _____ to store a string.

(2) The string manipulation functions are available in _____ header file.

(3) The string is terminated with _____ character.

(4) The array index starts with _____.

(5) To store double value in array, the datatype of an array should be _____.
