



003-003102

B.C.A. (CBCS) (Sem. I) Examination
November - 2011
CS-02 : Problem Solving Methodologies &
Programming in C
(New Course)

Faculty Code : 003
Subject Code : 003102

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

Instruction : Write answers of all the questions in main answer sheet.

1 Multiple Choice Question : 20

(1) C is which type language ?

- (A) Machine
- (B) Assembly
- (C) Procedural-oriented
- (D) Object-oriented

(2) How many categories of data type in C lanaguage ?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

(3) The rule of arithmetic modulo division operator is

- (A) Use only int data type
- (B) Use all data type
- (C) Use only float data type
- (D) Use only char data type

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- (4) Which one known as jumping statement ?
- (A) if.....else
 - (B) for loop
 - (C) Ternary operator
 - (D) goto
- (5) What is other name of Array variable ?
- (A) Base
 - (B) Elements
 - (C) Members
 - (D) Subscript
- (6) Which is more appropriate for reading in multi-word string ?
- (A) gets ()
 - (B) printf ()
 - (C) scanf ()
 - (D) puts ()
- (7) Arguments of functions are separated with
- (A) Comma (,)
 - (B) Semicolon (;)
 - (C) Colon (:)
 - (D) None of these
- (8) How many way to declare structure variable ?
- (A) 4
 - (B) 3
 - (C) 2
 - (D) 1

- (9) What is a difference between a declaration and a definition of a variable ?
- (A) Both can occur multiple times, but a declaration must occur first.
 - (B) There is no difference between them.
 - (C) Definition occurs once, but a declaration may occur many times.
 - (D) Declaration occurs once, but a definition may occur many times.
- (10) What is other name of Backslash Character Constants ?
- (A) Slash characters
 - (B) Space characters
 - (C) Escape sequences
 - (D) None of these
- (11) The statement `char ch='H';` would store in `ch` :
- (A) The character H
 - (B) ASCII value of H
 - (C) H along with the single inverted commas
 - (D) Both A and B
- (12) The body of the loop contains only a semicolon, known as a :
- (A) NULL value
 - (B) null statement
 - (C) NULL loop
 - (D) Infinite loop
- (13) In array `int x[5];` the name `x` represent as :
- (A) Base address
 - (B) Member
 - (C) Value of first element
 - (D) Index

- (14) The linker combines different object files to produce actual which type of file ?
(A) Library file
(B) Executable file
(C) Source file
(D) None of these
- (15) A do-while loop is useful when we want that the statements within the loop must be executed :
(A) Only once
(B) At least once
(C) More than once
(D) None of the all
- (16) What will be output if you will compile and execute the following C code ?

```
#include<stdio.h>
#define x 5+2
void main ( )
{
    int i; i=x*x*x;
    printf("%d", i);
}
```


(A) 27
(B) 147
(C) Compiler error
(D) Runtime error
- (17) What will be output if you will compile and execute the following C code ?

```
#include<stdio.h>
void main ( )
{
    int i=4, x;
    x=++i + ++i + ++i;
    printf("%d", x);
}
```


(A) 12
(B) 21
(C) 18
(D) Compiler error

(18) What will be output of following C code ?

```
#include<stdio.h>
extern int x;
void main ( ) {
    do{
        do{
            printf("%o",x)
        }
        while(!-2);
    }
    while(0);
}
int x=8;
```

- (A) 8
- (B) 10
- (C) 6
- (D) Compilation time error

(19) What is the output of the following C code ?

```
#include<stdio.h>
void main ( )
{
    printf("%d", printf("BCASEM1));
}
```

- (A) 7
- (B) Complication time error
- (C) Runtime error
- (D) BCASEM17

(20) What will be output of following C code ?

```
#include<stdio.h>
void main ( )
{
    int i=0;
    for(i;)
        printf("\nHellow how are you");
}
```

- (A) Hellow how are you
- (B) Complication error
- (C) Runtime error
- (D) Nothing to display

2 (a) Attempt the following : (any three) 6

- (1) What is typecasting ?
- (2) Explain the rules of variables name.
- (3) Explain ternary operator with an example.
- (4) Explain fflush () with an example.
- (5) Explain the typedef keyword with example.
- (6) What is directive statement.

(b) Attempt the following : (any three) 9

- (1) What is an array ? Explain 1-D array with an example.
- (2) Differentiate : Local variable v/s static variable.
- (3) How to define structure with an example.
- (4) Differentiate : break v/s continue.
- (5) What is prime number ? Draw a flowchart to print prime number from 1 to 100 number.
- (6) Write algorithm for input one integer and print sum of even and odd digits sum.

- (c) Attempt the following : (any two) 10
- (1) Explain various data types in C language.
 - (2) Explain the elements of function.
 - (3) Explain passing entire array to function with an example.
 - (4) Explain memory allocation of structure with an example.
 - (5) Explain importance of preprogramming techniques.

- 3 (a) Attempt the following : (any three) 6
- (1) Write any two advantage of UDF.
 - (2) What is header file ?
 - (3) Explain increment prefix and postfix operator.
 - (4) Why 'goto statement" is not advisable to use in C language.
 - (5) What is an infinite loop ?
 - (6) What is an Union ?

- (b) Attempt the following : (any three) 9
- (1) Differentiate : getch(), getche(), getchar()
 - (2) Explain any two string handling function.
 - (3) Explain nesting if.....else with an example.
 - (4) Differentiate : While loop v/s do.....while loop.
 - (5) What is a flowchart ? Use of various symbols in flowcharts.
 - (6) Explain scope of variable.

- (c) Attempt the following : (any two) 10
- (1) Explain C program structure.
 - (2) Write a program to print and sum of following series :
$$1-x^2/2! + x^4/4!-x^6/6!.....N \text{ terms}$$

(3) Write a program to print following triangle :

```
A
BA
ABA
BABA
ABABA
```

(not static but user can input no. of rows.)

(4) Write a program to given number is armstrong or not using function with argument, with return value.

(5) Write a program to print student information in table format and sort ascending order on name field, use the following structure :

```
struct stud
{
    int rno;           // student roll number
    char name[20];    // student name
    float per;        // student percentage
}fy[3]
```
