

**108/J**

**003-003102**

**B.C.A. (CBCS) (Sem.-I) Examination  
December-2013**

**CS-02 : Problem Solving Methodologies & Programming in C  
(New)**

**Faculty Code : 003  
Subject Code : 003102**

**Time : 2½ Hours]**

**[Total Marks : 70**

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

**I. Multiple Choice Question : 20**

- (1) 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) a definition occurs once, but a declaration may occur many times.
  - (d) a declaration occurs once, but a definition may occur many times.
- (2) C is supported by the following operating system :
  - (a) Unix
  - (b) Linux
  - (c) Windows
  - (d) All of above
- (3) C is the \_\_\_\_\_ language.
  - (a) low level
  - (b) high level
  - (c) both low and high level
  - (d) none of these
- (4)  $\text{int } x = 2 * 3 + 4 * 5;$   
What value will x contain in the sample code above ?
  - (a) 22
  - (b) 26
  - (c) 46
  - (d) 50
- (5) Which is the type of int ?
  - (a) Int
  - (b) Unsigned int
  - (c) Long
  - (d) All of above

003-003102

1

P.T.O.

- (6) Which is not the fundamental data types ?
  - (a) Char
  - (b) Array
  - (c) Int
  - (d) Float
- (7) In \_\_\_\_\_ language '\a' used for
  - (a) Form feed
  - (b) Line break
  - (c) Alarm
  - (d) None of above
- (8) The arithmetic operator '%' can be used with
  - (a) int
  - (b) float
  - (c) double
  - (d) void
- (9) Which is not the string handling function ?
  - (a) `strlwr()`
  - (b) `strcat()`
  - (c) `strcmp()`
  - (d) none of these
- (10) An array can be declared
  - (a) Statically
  - (b) Dynamically
  - (c) Both
  - (d) None of these
- (11) Which term is not related to function ?
  - (a) Prototype
  - (b) Definition
  - (c) Call
  - (d) Receive
- (12) Which is the file opening mode ?
  - (a) a
  - (b) wb
  - (c) rb
  - (d) all of above
- (13) Which is not the selective control flow statement ?
  - (a) while
  - (b) if
  - (c) switch-case
  - (d) if-else
- (14) Which is the correct example of label ?
  - (a) Label:
  - (b) Label
  - (c) Label.
  - (d) # Label
- (15) An efficiency algorithm \_\_\_\_\_
  - (a) takes efficient time
  - (b) takes efficient memory
  - (c) both
  - (d) none of these

003-003102

2

(16) In C language size of is ?

- (a) Keyword (b) Operator  
(c) Variable (d) Not exist

(17) Mathematical function are stored in \_\_\_\_\_ header file.

- (a) stdio.h (b) conio.h  
(c) math.h (d) string.h

(18) A function can return only \_\_\_\_\_.

- (a) Single value (b) Two value  
(c) Many value (d) None of these

(19) Which is the string termination character ?

- (a) '\n' (b) '\b'  
(c) '\0' (d) None of these

(20) C has \_\_\_\_\_ keywords.

- (a) 30 (b) 31  
(c) 32 (d) 33

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

- (1) Explain if-else statement with example.
- (2) List out available operators in C. Explain any one.
- (3) Explain #define.
- (4) Explain strcmp( ) and strcmp( ) functions.
- (5) Explain break statement.
- (6) Explain calloc( ) function with example.

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

- (1) Explain exit control loop.
- (2) What is array ? Explain one dimension array.
- (3) Explain pointer to structure.
- (4) Explain fwrite( ) and fread( ) functions.
- (5) Explain return statement.
- (6) Explain continue statement.

(c) Attempt the following : (any **two**) 10

- (1) Explain switch case statement with example.
- (2) Explain storage classes available in C language.
- (3) Write a note on general structure of C program.
- (4) Explain data types available in C language.
- (5) Explain call by value and call by reference with example.

3. (a) Attempt the following : (any **three**) 6

- (1) Differentiate getch( ) and getche( ).
- (2) Explain type casting.
- (3) Explain fabs( ) and fmod( ) functions.
- (4) Write a note on C constants.
- (5) Write a note on pointer.
- (6) Explain two dimensional arrays.

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

- (1) Write down rules for giving variable names.
- (2) Write an algorithm to check whether the number is positive, negative or zero.
- (3) Write a note on union.
- (4) Explain flowchart with its symbols.
- (5) Explain nesting of loops with example.
- (6) Explain back slash codes with examples.

(c) Attempt the following : (any **two**) 10

- (1) Write a program to enter any 10 values in array and sort them in ascending order.
- (2) Write a note on UDF.
- (3) Explain recursion with example.
- (4) Explain command line argument with example.
- (5) Write a program to print following :  
1  
2 2  
3 3 3  
4 4 4 4  
5 5 5 5 5