



I Semester B.A./ B.Sc. Examination, November/December 2017
(2014 – 15 and Onwards)

(CBCS) (F+R)

COMPUTER SCIENCE – I
Programming Concepts using C

Time : 3 Hours

Max. Marks : 70

Instruction : Answer *all* Sections.

SECTION – A

I. Answer **any 10** questions. **Each** question carries **2** marks. (10×2=20)

- 1) What are language translators ?
- 2) Write some of the features of C.
- 3) Find the value of m,n. in the following C statement

```
int x = 5, y = 2;  
float m, n ;  
m = x/y;  
n = (float) x/y;
```
- 4) What is the difference between if and switch statement ?
- 5) What is a function prototype ?
- 6) Give reason why the index value of an array is integer and not a float using suitable example.
- 7) What is the difference between strcmp () and strcmpi () ?
- 8) What are unions ?
- 9) What is a pointer and what are the operators associated with a pointer ?
- 10) How do you declare a file ? Give suitable example.



- 11) Write an example for creating and implementing user defined header file.
- 12) Write the difference between malloc () and calloc () functions.

SECTION - B

II. Answer any 5 questions. Each question carries 10 marks. (5×10=50)

- 13) a) Write a flowchart to find the sum of N natural numbers.
b) Write the structure of a C program and explain the various sections. (5+5)
- 14) a) Explain switch statement, with suitable example.
b) Explain do-while loop with an example. (5+5)
- 15) a) Write a C program to calculate $NCR = N! / R! * (N - R)!$ using function.
b) What is an array ? Explain the different types of arrays with their syntax and example. (5+5)
- 16) a) Write a C program to find the transpose of a given matrix.
b) What is a storage class ? Explain any 2 storage classes. (5+5)
- 17) a) What are structures ? How do you define and declare a structure variable ?
b) What is typedef ? Explain.
c) What is call-by-value and call-by-reference ? (4+3+3)
- 18) a) What do you mean by static and dynamic memory allocation ?
b) Explain any 6 file handling functions. (4+6)
- 19) a) What is a macro ? Give example.
b) Explain various categories of preprocessor directives. (3+7)
- 20) a) Write a C program to compare two strings using pointers.
b) Explain :
i) Function with arguments and no return value.
ii) Function with arguments and return value.