

B.C.A Semester - 1 (CBCS) Examination
Oct/Nov. -2019 (OLD COURSE)

PROBLEM SOLVING METHODOLOGIES AND PROGRAMMING IN C (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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- Q-1 (A) Answer the following (04)**
- (1) C is developed by _____
 - (2) Define constant.
 - (3) How many keywords are there in C?
 - (4) 'C' is a _____ oriented language.
- (B) Attempt any one: (02)**
- (1) What is a variable? How can we declare a global variable?
 - (2) What is type casting? Where it is useful?
- (C) Attempt any one: (03)**
- (1) Define and explain 'Logic' in computer programming
 - (2) List various logical operators. Explain any one
- (D) Attempt any one: (05)**
- (1) Briefly state the history of 'C' programming language
 - (2) What is a Flow chart? Explain in detail
- Q-2 (A) Answer the following (04)**
- (1) _____ loop executes atleast once.
 - (2) Give one example of Jumping Statement in C
 - (3) What is nesting of loops?
 - (4) Give syntax of Simple if statement
- (B) Attempt any one: (02)**
- (1) What is the use of ternary operator?
 - (2) Differentiate between for loop and while loop
- (C) Attempt any one: (03)**
- (1) List various selective control structures. Explain any one.
 - (2) List various looping control structures. Explain any one
- (D) Attempt any one: (05)**
- (1) What is control structures? Explain how they are used in implementing programming logic?
 - (2) Write a program to decide whether the entered number is odd/even. Display appropriate message.
- Q-3 (A) Answer the following (04)**
- (1) What is the full form of UDF?
 - (2) What is 'C' Library?
 - (3) Define recursion.
 - (4) What does a memory allocation function do?
- (B) Attempt any one: (02)**
- (1) What are library functions? What is their use?
 - (2) What is the difference between scanf() and gets()?

- (C) **Attempt any one:** (03)
(1) List various storage classes. Explain any one.
(2) Explain with example any one Mathematical function.
- (D) **Attempt any one:** (05)
(1) Explain various types of user defined functions.
(2) Write a program of your choice in which a function is called by reference.
- Q-4** (A) **Answer the following** (04)
(1) Define array
(2) What is 'Union'?
(3) What is meant by 'Nested structures'?
(4) Write syntax/example of initializing a one dimensional integer array at the time of declaration
- (B) **Attempt any one:** (02)
(1) What is two – dimensional array? How they are defined?
(2) What is a structure? What is the basic use?
- (C) **Attempt any one:** (03)
(1) State differences between structure and union
(2) Explain with syntax and example: String Arrays.
- (D) **Attempt any one:** (05)
(1) Write a program to take a string from the user and convert it into proper case using programming logic
(2) Write a program that takes up and lists down name, roll number and phone number of 10 students using structure.
- Q-5** (A) **Answer the following** (04)
(1) Define pointer
(2) What is a data file?
(3) Which function is used to transfer single character to data file?
(4) What is the use of fscanf() function?
- (B) **Attempt any one:** (02)
(1) What is the basic use of pointers?
(2) Explain with syntax : fopen()
- (C) **Attempt any one:** (03)
(1) Explain with example : pointer to structure
(2) What is command line argument? Explain with example
- (D) **Attempt any one:** (05)
(1) Write a program that shows the concept of pointer to pointer
(2) Write a program to write a small paragraph to a data file. Read it back and display on screen.
