

**GOA VIDYAPRASARAK MANDAL'S**  
**GOPAL GOVIND POY RAITURCAR COLLEGE OF COMMERCE & ECONOMICS.PONDA-GOA**  
**B.C.A CBCS (SEMESTER-I) EXAMINATION, NOVEMBER 2022**  
**PROBLEM SOLVING AND PROGRAMMING CONCEPTS**

**Duration: 2 Hrs**

**Marks: 60**

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**Instructions: 1.All Questions are compulsory**

**2.Figures to the right indicate marks**

- Q.1.A.state whether the following statements are true or false (5\*1=5)
- a. Declarations can appear anywhere in the program.
  - b. All arithmetic operators have same level of precedence.
  - c. An exit controlled loop is executed at least once.
  - d. Structures may contain members of only one data type.
  - e. Every program statement in C must end with a semicolon.
- Q.1.B.Find errors if any,in the following C statements. (2 \*1=2)
- i. `a=b++ - c*2;`
  - ii. `if(x>=10) then printf("\n");`
- Q.1.C. Determine the output of the following code segment. (2\*1.5=3)
- i. 

```
main( )
{
    int m;

    for(m=1;m<5;m++)
        printf("%d", (m%2)==0 ? m: m*2);
}
```
  - ii. 

```
int marks[5]={1,2,3,4,5};
printf("%d",marks[4]);
```
- Q.2.a.What is a computer Program? (2)
- Q.2.b.Write an algorithm and draw a flowchart to swap two numbers. (3)
- Q.2.c.Write a C program to find largest element from an array. (5)
- Q.3.a. What are symbolic constants. (2)
- Q.3.b. differentiate between a compiler and an interpreter. (3)
- Q.3.c. Write a C program to compare two strings. (5)
- Q.4.a.State the rules for naming C variable. (2)
- Q.4.b.Explain in brief the steps of program development life cycle. (3)
- Q.4.C. write a C program to read and display student data using structures. (5)

- Q.5.a.Distinguish between putchar() and printf() functions. (2)
- Q.5.b.State and explain any 3 inbuilt library functions. (3)
- Q.5.c.Explain the process of Executing a C program. (5)
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- Q.6.a. what is a pointer variable? (2)
- Q.6.b. **Do-while** is called an exit controlled loop. Explain. (3)
- Q.6.c.Write a C program to find sum of 2 numbers using functions. (5)

-----**ALL THE BEST**-----