

**GOA VIDYAPRASARAK MANDAI'S  
GOPAL GOVIND POY RAITURCAR COLLEGE OF COMMERCE & ECONOMICS  
PONDA-GOA**

**B.C.A. (SEMESTER – I) EXAMINATION – OCTOBER 2011**

**PROBLEM SOLVING & PROGRAMMING CONCEPTS**

Duration: 2 Hours

Marks: 50

- Instructions: 1) Read all questions carefully.  
2) Attempt any 1 question where you have been given option.

Q1) What is a program? State & explain various steps in programming. (8)

Q2) What is a Flowchart? Draw & explain any 5 flowchart Symbols. (8)

OR

Q2) Draw a Flowchart: a) To find sum of two inputted numbers.  
b) To find average of 3 inputted numbers.  
c) To find Greatest among three inputted numbers.  
d) To find whether inputted number is Positive, Negative or Zero. (8)

Q3) Write a C Program to calculate Area of: a) Circle  
b) Triangle (4)

Q4) Write sample programs using a) For loop  
b) While Loop  
c) If Else loop  
d) Ternary Operator  
e) Do While Loop  
f) Function's (15)

OR

Q4) Explain a) Type Casting  
b) Type Conversion  
c) Relational Operators  
d) Assignment Operators  
e) Logical Operators  
f) Data Types  
g) Putchar & Getchar Functions (15 Marks).

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Q5) Write a Program to input 10 Values in an array A and then generate array B containing elements of array A in reverse order. Finally output array B. (5)

OR

Q5) Define a) Array  
b) 1 Dimensional Array  
c) 2 Dimensional Array  
d) Write a sample program using array concept. (5)

Q6) Define the following terms a) Functions  
b) Return Statement  
c) String  
d) Recursion  
e) Break & Continue Statement (5)

Q7) Explain in short concept of a) Tower of Hanoi  
b) Macro & Header Files  
c) Pointers, Call by value & Call by Reference  
d) Library & Mathematical Functions  
e) Structure & Union (5)

OR

Q7) Explain a) Malloc & Calloc Functions  
b) fprintf & fscanf Functions  
c) argc & argv parameters  
d) sample program using files (5)

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