

Seat no: \_\_\_\_\_

**GANPAT UNIVERSITY**  
**BACHELOR OF TECHNOLOGY**  
*Sem. I* December -2013 Examination  
**2CE101: COMPUTER PROGRAMMING**

Time: 3 Hours]

[Total Marks: 70

**Instructions:**

1. Figures to the right indicate full marks.
2. Each section should be written in a separate answer book.
3. Be precise and to the point in your answer.

**Section I**

**Q-1 Answer the following:**

- (a) What is Variable? Give the rules for defining variables? [4]
- (b) List out the different types of operators used in 'C' and explain Relational Operator with example. [4]
- (c) Write a 'C' program to count ODD and EVEN numbers from given 10 numbers. [4]

OR

**Q-1 Answer the following:**

- (a) Explain in detail: Basic structure of a C program. [4]
- (b) Write a program to display following pattern using nested for loops. [4]

```
*****
*****
***
**
*
```

- (c) Solve it:  $X = (a + (d * e) - (c / b) + 4 * 2 / 4)$ . Where a=2, b=2, c=6, d=1, e=3. [4]

**Q-2 Answer the following:**

- (a) Write a C program to find whether entered string is palindrome or not. [4]
- (b) Write a C program to find whether the entered number is armstrong or not. [4]
- (c) Explain forward and backward jump with the help of example. [3]

OR

**Q-2 Answer the following:**

- (a) Give the difference between following terms. [4]  
(1) while and do-while
- (b) Give the difference between following terms. [4]  
(1) break and continue  
(2) break and goto
- (c) Write a program to display all the even numbers between 100 to 500 using for loop. [3]

**Q-3 Answer the following:**

- (a) Explain Switch Statement with example. [4]
- (b) Explain Prefix & Postfix with sample program. [4]
- (c) List and explain fundamental data types of 'C' language. [4]

[P.T.O]

## Section II

Q-4 Answer the following:

- (a) Discuss 2-Dimensional Array with example [6]
- (b) Define String. Discuss any two string functions with its syntax. [6]

OR

Q-4 Answer the following:

- (a) Write a program to display the length of a given string without using strlen () function. [6]
- (b) Explain with the help of programs:
  - I. Function with no arguments and no return value
  - II. Function with arguments but no return value
  - III. Function with return value but no arguments
  - IV. Function with arguments and return value

Q-5 Answer the following:

- (a) Explain #define Statement with help of program. [4]
- (b) Discuss typedef with the help of program. [4]
- (c) Write a program to calculate simple interest. [3]

Hint: interest = ( principle\_amount \* rate \* year ) / 100

OR

Q-5 Answer the following:

- (a) Write short notes on following:
  - (i) Nested if..else statement. [4]
- (b) Explain the storage class specifiers in C. [4]
- (c) List various logical operators with example for each. [3]

Q-6 Answer any 5 of the following:

- (a) Write a program, which scans two integer numbers and then finds which one is greater Using , Conditional operator (? :). [2]
- (b) What is a size of this Structure,
  - struct account {
  - int account\_number;
  - char \*first\_name;
  - char \*last\_name;
  - float balance;
  - };
- (c) Write a function line () to print a line. (80 hyphens (-)). [2]
- (d) Differentiate between compiler and interpreter [2]
- (e) Write a C program to illustrate how to read string from terminal. [2]
- (f) Explain advantages of the use of the function. [2]
- (g) Give the output of the following code. Give the explanation for the output. [2]

```
int i;
for(i=5;i<15;i++) {
printf("%d\n",i);
i = i - 1;
}
```

-----END OF PAPER-----