

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-1st / 2nd EXAMINATION- WINTER 2015

Subject Code: 110003

Date: 30/12/2015

Subject Name: Computer Programming and Utilization

Time: 10:30am to 01:00pm

Total Marks: 70

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks

- Q.1** (a) Explain the structure of 'c' program **14**
(b) What will be the output of following program segment ?
 int a=2, j=4, k;
 float a,b;
 k=i/j*j ;
 a=i/j*j;
 b=j/i*I;
 printf("%d,%d%f, k,a,b);
(c) Write the syntax of scanf() function and printf() function.
- Q.2** (a) Explain the syntax of multiple if...else statement. **14**
(b) Write a program that converts Fahrenheit temperature to centigrade
 Cent.=5/9(fahr.-32)
(c) Write a program that evaluates the polynomial $4x^3 - 5x + 9$
- Q.3** (a) What are the different types of looping structures? **14**
(b) Compare break statement with continue statement.
(c) Write a program to print following pattern using loop
 1
 1 3
 1 3 5
 1 3 5 7
 -- --
- Q.4** (a) For the declaration as int a[10]; the last element is stored at a[9], is it **14**
 true ? explain your answer.
(b) What is string ? what are the operations that can be performed on
 string ?
(c) Write a program to multiply two matrices A and B of size 3*3 and
 store the answer in matrix C . C =A*B.
- Q.5** (a) Explain following string manipulation functions **14**
 Strstr(), strchr(), strlen()
(b) Write a program that read two strings and compare them using the
 function strcmp() and print message that first string is equal, less,
 greater than second one.

- Q. 6** (a) What is pointer ? explain how pointers are declared and initialized?
(b) Write a program to find factorial of a given number using recursion.
(c) What are the difference between local and global variables ?

- Q.7** (a) Explain how the members of structure can be accessed? **14**
(b) What is nested structure ? explain with suitable example.
(c) Explain in brief fscanf(), and fprintf() function in handling data types from a file.
