Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE SEMESTER– 1st / 2nd (SPFU) EXAMINATION – WINTER 2016

Subject Code: CPU002 **Date: 24/01/2017**

Subject Name: Computer Programming and Utilization

Time:10:30 AM TO 1:00 PM **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)** What is Dynamic Memory Allocation ? Explain memory allocation function briefly. **07**

(b) What is function ? What is user defined function ? Explain actual argument and formal argument. **07**

Q.2 **(a)** Write a c program to check the no. is Palindrome using function. **07**

(b) What is structure and union? Explain them in brief . **07**

Q.3 **(a)** Using structure write a C program: Define a structure student_record to contain name,branch and entry year. Read this information from keyboard and print the same on screen. **07**

(b) Explain different file management functions in C shortly. **07**

Q.4 **(a)** What are the different categories of functions ? Explain any two category with example **07**

(b) Write a C program to find factorial of a given number using recursion. **07**

Q.5 **(a)** How to initialize Pointer? Explain arrays of Pointer using suitable sample program. **07**

(b) Explain the difference between call by value and call by reference with suitable Example. **07**

Q.6 **(a)** Explain with suitable example pointer to structure. **07**

(b) Describe variable declaration in structure and accessing members of structure. **07**

Q.7 **(a)** What is structure? How does a structure differ from an array? How is an array of structure initialized ? **07**

(b) Write a function program to find out average of first n numbers, where n is entered through keyboard. **07**