

B.Tech I Year (R13) Supplementary Examinations December/January 2015/2016
PROBLEM SOLVING & COMPUTER PROGRAMMING
 (Computer Science and Engineering)

Time: 3 hours

Max. Marks: 70

PART – A
 (Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- Differentiate between variable and constant.
 - What is an identifier? Give two examples for invalid identifiers.
 - Let a=0, b=0, and c=1, what is the value of a, b, c after executing the following code?

```
If (c>a || b >=c && c==1)
if (c&&b) b=1; else a=1;
```
 - Give an example of event controller loop.
 - How to declare multi dimensional array in C language?
 - What is the need of functions in a program?
 - What is the difference between getch() and gets()?
 - List the logical bitwise operators.
 - Differentiate between fscanf() and fread().
 - List the arithmetic operators applicable to pointers.

PART – B
 (Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 How to choose an appropriate data structure for problem solving? What issues need to be considered in this choice? Explain them in detail.

OR

- 3 Explain the phases in system development.

UNIT – II

- 4 Explain the significance of multi way selection statement. Write a program to display the number in word form (356 – three five six). Using above statement.

OR

- 5 Design an algorithm for converting a decimal number to its corresponding octal representation.

UNIT – III

- 6 Explain inter function communication. With examples, explain parameter passing techniques.

OR

- 7 How to find longest monotone sub sequence? Explain with illustrations.

UNIT – IV

- 8 (a) Write a program to insert a word before a given word in the text.
 (b) How are strings represented in main memory?

OR

- 9 Declare a structure that represents the following hierarchical information about an employee and write a program to display the information pertaining to an employee whose id is accepted as input.
 Employee-id, name {initial, name, surname}, gender, date of birth {day, month, year}, salary{basic, da, hra, allowances}.

UNIT – V

- 10 Write a program to read a text file, convert all the lowercase characters into upper case and re-write the uppercase characters in the file.

OR

- 11 (a) Discuss the applications of pointer programming.
 (b) How to have pointers to pointers?
