



Reg. No. :

Name :

Third Semester B.Tech. Degree Examination, January 2015
(2008 Scheme)

08.302 : PROBLEM SOLVING AND PROGRAMMING IN C (R, F)

Time : 3 Hours

Max. Marks : 100

PART – A



Answer **all** questions. **Each** question carries **4** marks.

1. Explain the difference between the primary memory and secondary memory.
2. What is a compiler ? How it differ from an interpreter ?
3. What is meant by documentation ? Why it is necessary to document a program ?
4. What is an escape sequence ? Explain with examples.
5. Find the following expression. (Each expression is independent of one another.)
int i = 3, j = 4, k = 2, p ;
a) $p = i++ - j--;$ b) $p = i-1\%j+1;$ c) $i=j*k=4;$ d) $p=++i-j--+i++\%5;$
6. Distinguish between
a) constint *pi; b) int *const pi;
7. Write a C function which generates the Fibonacci sequence. Function should return the next value when it is called.
8. Explain the syntax of 'for' control statements. All its variance should be specified clearly with examples.
9. Explain three logical bit wise operators with example.
10. What are command line arguments ? With example explain the purpose of command line arguments.

(10×4=40 Marks)



PART – B

Answer **any one** question from **each** Module. **All** questions carry **equal** marks.

Module – I

11. a) Explain about the advantages and disadvantages of different types of languages used in computers.
b) Write down an algorithm to find the prime numbers between 50 and 150.

OR

12. a) Explain the functional units of computers.
b) Given n pairs of length and breadth of rectangles. Design a flowchart to find all rectangles whose area is greater than the perimeter.

Module – II

13. a) Explain about various storage classes in C with suitable examples.
b) Write a C program to sort a set of strings accepted from the keyboard. Find the numbers of strings beginning with letter 'A'.

OR

14. a) Give the syntax of switch statement. Explain it with suitable example.
b) Write a C program to read two matrices. Find the number of rows in the matrices whose row sum are same.

Module – III

15. a) Explain different parameter passing techniques in C with suitable example.
b) Write a program to read the details of n students and sort it based on total mark. Allocate memory dynamically depending upon the value of n. For each student keep roll number, name and total marks.

OR

16. a) Explain and illustrate recursion using suitable examples.
b) Explain the difference between formatted and unformatted files.
c) Write a program to replace the every occurrences of a substring in a text file with another string.

(3×20=60 Marks)