

B.Tech I Year I Semester (R15) Regular Examinations December/January 2015/2016

COMPUTER PROGRAMMING

(Common to CE, EEE, CSE, ECE, ME, EIE and IT)

Time: 3 hours

Max. Marks: 70

PART – A

(Compulsory Question)

1 Answer the following: (10 X 02 = 20 Marks)

(a) Find and remove the error in the following C statement.

`a > b ? g = a : g = b;`

(b) Define algorithm.

(c) What is the use of continue key word?

(d) Consider the following declaration of 2D-array in C:

`char a[R][C];`Assume that char type require one bytes of memory and that array is stored starting from memory address 2015, find the address of `a[i][j]`.

(e) Write the syntax of dynamic allocation functions in C language.

(f) Give syntax to create a pointer to function.

(g) What is the role of stack in recursion?

(h) Why to use typedef?

(i) Define a file.

(j) What is the use of the preprocessor directives?

PART – B

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

UNIT – I

2 (a) List and explain the various symbols used in flowchart with figures.

(b) Write a C Program to find maximum number among three numbers using conditional operator.

OR

3 (a) Write an algorithm to find product of two integers using repetitive addition.

(b) Evaluate the following expressions:

(i) $4 - 768 / (6 * 2)$.(ii) $8^2 * 2 - 100 + 50 / 5(25 - 5)$.**UNIT – II**

4 (a) There are four coins a, b, c, d out of which three coins are of equal weight and one coin is heavier. Write a C program to find the heavier coin.

(b) Explain the ways in which we can pass a one dimension array to functions.

OR

5 (a) Give a note on iteration statements in C language.

(b) A program P reads in 500 integers in the range (0,100) representing the scores of 500 students. It then prints the frequency of each score above 50. Implement program P in C language.

UNIT – III

6 Give a detailed note on pointer expressions.

OR

7 List and explain the storage classes with examples.

Contd. in page 2

Code: 15A05101

UNIT – IV

- 8 (a) Write a recursive function in C to find the sum of array elements.
(b) Explain the following:
(i) Structure with in structure.
(ii) Self reference structure.

OR

- 9 (a) $f(n) = n/2$ when n is even; $f(n) = f(3n + 1)$ when n is odd. Write the recursive function to compute $f(n)$.
(b) How to pass the structures to functions as an argument? Explain with a suitable example.

UNIT – V

- 10 Describe the following file functions.
(a) `fopen()`.
(b) `fclose()`.
(c) `getc()`.
(d) `putc()`.
(e) `feof()`.

OR

- 11 (a) How to use `fseek()` for random access of the file content?
(b) Explain about Macros with an example.

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