Subject Code: R10105/R10

I B.Tech I Semester Supplementary Examinations August - 2015
C PROGRAMMING
(Common to All Branches)

Time: 3 hours   **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
✷ ✷ ✷ ✷ ✷

1.(a)   What is a flow chart? Explain different blocks of flowchart
   (b)   Explain different basic data types defined in C.

[7+8]

2.(a)   Differentiate between if statement and if-else statement with suitable examples and proper syntax.
   (b)   Write a program that will read the value of x and evaluate the following functions.

$$y = \begin{cases} 1 & \text{for} \quad x > 0 \\ 0 & \text{for} \quad x = 0 \\ -1 & \text{for} \quad x < 0 \end{cases}$$

Using
(i)   nested if statements
(ii) else if statements and
(iii) conditional operator ? :

[7+8]

3.(a)   Explain various string handling functions with suitable examples.
   (b)   Write a 'C' program to find sum of digits of an integer using while loop.

[8+7]

4.(a)   What is an Array? Define and initialise 1-D, 2-Dimensional Arrays.
   (b)   Write a program to evaluate the average of the values in an array.

[8+7]

5.(a)   What is a function? Explain need for user defined functions.
   (b)   Write a program to evaluate the equation s=sqr(m() + n()) using function.

[8+7]

6.(a)   What is a pointer? List the benefits of pointers.
   (b)   Write a 'C' program to arrange the given names in alphabetical order using pointers.

[8+7]

7.(a)   What is a structure? Explain nested structures.
   (b)   List the differences between structures and Unions.

[8+7]

8.(a)   What is a File? Explain fopen and fclose functions with suitable examples.
   (b)   Write a program to copy the contents of one file into another.

[8+7]

Subject Code: R10105/R10   Set No - 2

I B.Tech I Semester Supplementary Examinations August - 2015
C PROGRAMMING
(Common to All Branches)

Time: 3 hours   **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
✱ ✱ ✱ ✱ ✱

1.(a) Define Algorithm.
  (b) What is the use of flowchart?
  (c) What are the different steps followed in the program development?

[3+3+9]

2.(a) Explain different bit wise operators of C.
  (b) What are the input and output functions used in C? Classify and explain them with syntax.

[7+8]

3.(a) Explain different loop defined C with suitable example.
  (b) Write a program to copy one string into another and count the number of characters copied.

[8+7]

4.(a) What is a string? Explain different string manipulations with examples.
  (b) Write C program multiply of two matrices?

[8+7]

5.(a) What is a recursive function? In what way recursive function is different from function.
  (b) Write a program to find factorial of a number using recursion.

[7+8]

6.(a) What is null pointer? What is a void pointer? Explain when null pointer and void pointer are used.
  (b) Write a program using pointers to compute the sum of all elements stored in an Array.

[8+7]

7.(a) What are the different ways to copy the elements of one structure into another structure. Explain with an example.
  (b) What is an Union? List the difference between structures and unions.

[8+7]

8.(a) Explain any four console I/O function with examples
  (b) Explain any four File I/O function with examples.

[7+8]

Subject Code: R10105/R10   Set No - 3

I B.Tech I Semester Supplementary Examinations August - 2015
C PROGRAMMING
(Common to All Branches)

Time: 3 hours   **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
✱ ✱ ✱ ✱ ✱

1.(a) Explain different computer languages in detail.
  (b) Describe about standard input and standard output functions used in with syntax.

[8+7]

2.(a) What is if statement? Give different forms of if-else statements using syntax and flow chart notations (use suitable examples).
  (b) Write a program to read four values a,b,c and d from the terminal and evaluates the ratio of (a+b) to (c-d) and prints the result, if c-d is not equal to zero.

[8+7]

3.(a) Write a program to calculate m^n value using do-while loop.
  (b) Write a program to check whether the given number is a perfect number or not

[8+7]

4.(a) what is an array? Explain the initialization, accessing, and printing of the array elements?
  (b) Write a C program for addition of two matrices.

[8+7]

5.   Explain the working of following functions with examples.
  (a) ceil(x)
  (b) exp(x)
  (c) rand()
  (d) toascii(x)

[15]

6.   Explain dynamic memory management functions in detail.

[15]

7.(a) What is nested structure. Give the syntax. Explain with an example.
  (b) When do we use the following
    (i) Unions
    (ii) Bit fields
    (iii) The Size of operator.

[8+7]

8.(a) What is file? Explain briefly about text files and binary files.
  (b) Explain different modes of a file with examples.

[8+7]

Subject Code: R10105/R10   Set No - 4

I B.Tech I Semester Supplementary Examinations August - 2015
C PROGRAMMING
(Common to All Branches)

Time: 3 hours   **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
∗ ∗ ∗ ∗ ∗

1.(a) Explain the basic structure of a C program.
   (b) Distinguish between the following
        (i) Global and local variables
        (ii) Automated and state variables
        (iii) Initialization and assignment of variables.

                                                                                          [8+7]

2.(a) Write syntax switch statement. List the differences between switch and ladder if-else statement.
   (b) Write a C program to find the biggest among given 4 numbers (use nested if else).

                                                                                          [8+7]

3.(a) Explain different string handling functions.
   (b) Write a program to read two strings and compose them using the str n cmp() and print a message that the first string is equal, less, or greater than the second one.

                                                                                          [8+7]

4.(a) What is character? Explain string manipulations with examples.
   (b) Write a program to read a matrix of size m X n and print its transpose.

                                                                                          [8+7]

5.(a) Write a C program to display array elements in reverse order. Use call-by-reference mechanism in this a program.
   (b) What is the scope of variables of type: extern, auto, register and static.

                                                                                          [8+7]

6.(a) Given the following declarations.
        int x=10, y=10;
        int * P1 = &x, *P2 = &y;
        What is the value of each of following expressions and explain why
        (i) (*P1) ++
        (ii) - - (*P2)
        (iii) *P + (*P2)- -
        (iv) ++ (*P2) - * P1
   (b) Write a program using pointers to read in an array of integers and print its elements in reverse order.

                                                                                          [8+7]

Subject Code: R10105/R10

7.(a)   Define a structure ? Explain, how to initialize structure during declaration? Give an example.

  (b)   Write a C program to declare a structure with the following elements and for accessing them. 1.Name. 2. Age. 3. University.

[7+8]

8.(a)   Distinguish between the following functions:
        (i) getc and getchar
        (ii) printf and fprintf
        (iii) feof and ferror

  (b)   Write a program that appends one file at the end of another.

[7+8]