Date - 18/05/18
Time - 1:30 PM

Roll No. .....

TCS–201

End

B. TECH. (SECOND SEMESTER)

~~MID~~ SEMESTER EXAMINATION, 2018

PROGRAMMING IN C

Time : Three Hours

Maximum Marks : 100

Note : (i) This question paper contains two Sections.

(ii) Both Sections are compulsory.

Section—A

1. Fill in the blanks/True-False : (1×5=5 Marks)
   (a) If we pass an array as an argument to a function than value of first element of array will pass. (True/False)
   (b) malloc() function returns single block of memory. (True/False)
   (c) FILE *fp
   fp=fopen ("source.txt", "rb');
   will open a file in which mode ?
   (d) _____ pointer is a generic pointer.
   (e) _____ function takes file pointer to the starting location.

2. Attempt any *five* parts : (3×5=15 Marks)
(Define/Short Numerical/Short Programming/ Draw)
   (a) Draw a flowchart to input a string. Print the vowels in reverse order.
   (b) Is it possible to return multiple values from a function ? If yes, than how, explain with an example.
   (c) Explain the concept of static storage class with an example.
   (d) Write a code to dynamically store n elements in array and print all odd numbers.
   (e) Give difference between structure and union.
   (f) Explain different file access modes. Which function is used to create a new file through file handling ?
   (g) What is the difference between static and dynamic memory allocation.

Section—B

3. Attempt any *two* parts of choice from (a), (b) and (c). (10×2=20 Marks)
   (a) A matrix a [–10.....178] [34.....242] is used to store float. The first element is stored at address 126, calculate the address

for a [88][123]considering the array is row major implemented.
   (b) Draw a flowchart to input n unequal numbers and sort them in descending order using selection sort.
   (c) Write a program to input a matrix of size n×m. Find and print smallest even number stored in that matrix.

4. Attempt any *two* parts of choice from (a), (b) and (c). (10×2=20 Marks)
   (a) Explain the difference between call by value and reference with example.
   (b) Draw a flowchart to input two unequal sized array. Pass the arrays to a user defined function add(). Add the elements of the two arrays and print the resultant array with a user defined function display().
   (c) Write a program to input n elements in an array and reverse the elements of that array using pointer.

5. Attempt any *two* parts of choice from (a), (b) and (c). (10×2=20 Marks)
   (a) What are the advantages of using structures in C ? Explain the difference between array of structures and array within a structure with example.

(b) Draw a flowchart to define a structure for employees with field emp_id, emp_name, emp_ designation, e_salary. Store records of 50 employees. Search and print details of all the employees having salary above 50,000.

(c) Write a program to input a string and print all the 3 letter word present in that string.

6. Attempt any *two* parts of choice from (a), (b) and (c). (10×2=20 Marks)

(a) Explain the need of file. Describe the syntax and working of the following functions :
fopen(), getw(), putw() ftell(), fseek().

(b) Write an algorithm to input multiple words in a file. Read the file and print all the palindrome strings on monitor.

(c) Write a code to read 50 integers in a file. Calculate the factorial of all the numbers which are divisible by 5 and store them into another file.

F. No. : a-98