1st Semester Back Examination 2018-19
PROGRAMMING IN C
BRANCH : AEIE, AERO, AUTO, BIOMED, BIOTECH, CHEM, CIVIL, CSE, ECE, EEE, EIE, ELECTRICAL, ENV, ETC, FASHION, FAT, IEE, IT, ITE, MANUFAC, MANUTECH, MARINE, MECH, METTA, METTAMIN, MINERAL, MINING, MME, PE, PLASTIC, TEXTILE

Time : 3 Hours
Max Marks : 70
Q.CODE : E743

Answer Question No.1 which is compulsory and any FIVE from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2 x 10)**
a) Which operator can't be used on float data type?
b) Write the syntax of conditional operator statement. Give an example.
c) Differentiate between entry controlled and exit controlled loop.
d) Give the syntax and an example of nested if else.. statement.
e) Which function is used, when we check two strings are identical or not.
f) What are the storage classes used in C?
g) What does the following declaration mean?
int (*ptr)[10];
h) When does function pointer used and how it is used?
i) How to seek to a position of a file? How to know current position? How to rewind position back to beginning?
j) Define the functions malloc, realloc, calloc, free with examples?

Q2 a) Write a C program to add first 7 terms of the following series using for loop. 1/1! + 2/2! + 3/3! + …….. **(5)**
b) Write a C program to print all Prime numbers from 1 to 100. **(5)**

Q3 a) Write a C program to find the grace marks for a student. **(5)**
b) What is a recursive function? Write a C program to calculate factorial of a no using recursive function. **(5)**

Q4 a) How parameters are passed through functions using pass by value and pass by reference? **(5)**
b) Write a program to obtain multiplication of two matrices of size [3]*[3]. **(5)**

Q5 a) Explain about different string functions used in C. **(5)**
b) Write a program to sort an array using selection sort algorithm. Find out its best time complexity. **(5)**

Q6 a) Write a program to extract a substring from a string. **(5)**
b) Write a program to read a file and copy one file to another. **(5)**

Q7 Write a C program using a function to compute the distance between two points (x,y) and use it to create another function that will calculate area of triangle ABC, given its three vertices A(x1,y1), B(x2,y2), C(x3,y3). **(10)**

Q8 **Write short answer on any TWO:** **(5 x 2)**
a) C Tokens
b) Inline function
c) malloc, realloc, calloc, free
d) File Handling Mechanisms