

Registration No :

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Total Number of Pages : 02

B.Tech
15BE2105

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 : 100

Q.CODE : E997

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Short Answer Type Questions (Answer All-10) (2 x 10)

- What are enumerations?
- What is the default value of local and global variables?
- Which operator can be used to determine the size of a data type or variable?
- Define scope of a variable? How variables are scoped in C?
- Differentiate between declaration and definition of a variable/function
- When to use \rightarrow (arrow) operator.
- What is the purpose of built-in strcmp() function.
- Define NULL pointer?
- What is a self-referential structure?
- Distinguish between malloc() & calloc() memory allocation.

Part- II

Q2 Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Write a program to reverse the digits of a 4-digit number.
- What are the different types of operators used in C and specify its associativity?
- Specify the syntax of conditional operator. Find out whether the year is a leap year or not using this operator.
- Explain the structure of decision control statement with given example.
- Write a program to find power of a number x^y using while loop.
- Write a program to generate all combinations of 1, 2, 3 using for loop.
- Write a program to obtain the determinant value of a 3*3 matrix.
- Define recursive function. Write a program using recursive function to calculate sum of digits of the 3-digit number.
- Explain about the formatted and unformatted console I/O functions.
- Write a program that converts all lowercase characters in a given string to its equivalent upper case character.
- Distinguish between structure and union. Declare an array of structure with an example.
- Write a program to read a file and display its contents along with line numbers before each line.

Part-III

Long Answer Type Questions (Answer Any Two out of Four)

Q3 A library charges a fine for every book returned late. For first 5 days the fine is 50 paise, for 6-10 days fine is 1 rupee and above 10 days fine is 5 rupees. If you return the book after 30 days your membership will be cancelled. Write a program to accept the no of days the member is late to return the book and display the fine for the appropriate message. **(16)**

Q4 How arguments are passing through function calls? Explain call by value and call by reference with example. **(16)**

Q5 Create a structure to specify data on students given below: **(16)**
Roll Number, Name, Department, Course, Year of joining
Assume that there are not more than 450 students in the college.
a) Write a function to print names of all students who joined in a particular year.
b) Write a function to print the data of a student whose roll number is given.

Q6 Implement the bubble sort and insertion sort on the following elements: **(16)**
22, 88,44, 77, 11, 55, 33, 66,99.