Code No: 131AD **R16**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year I Semester Examinations, May - 2018
COMPUTER PROGRAMMING IN C
(Common to CE, ME, MCT, MMT, AE, MIE, PTM, CEE, MSNT)

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

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART- A

(25 Marks)

1.a)	Which statement is multi way selection statement? Why?	[2]
b)	What is meant by time sharing environment?	[3]
c)	Evaluate the value of the following when x=3.45 floor(x* 100 + 0.5) / 100	[2]
d)	Can an assignment operator copy one array to another? Justify your answer.	[3]
e)	Give the picture to show the memory configuration for the declaration int (*a) [5];	[2]
f)	Differentiate between strspn and strcspn.	[3]
g)	What is the need of typedef command?	[2]
h)	Is macro an inline function? Justify your answer.	[3]
i)	Contrast text files and binary files.	[2]
j)	What is a system created stream? Give examples.	[3]

PART-B

(50 Marks)

2.a)	Write an algorithm to find LCM of two numbers.	
b)	Describe the process of program development.	[5+5]
	OR	
3.a)	What are the three differences between the conversion codes for input formatting and output formatting? Explain them with examples.	
b)	What is the need of explicit type conversion in C? How to cast the data?	[5+5]
4.a)	Write a recursive function to solve towers of Hanoi problem and trace it with different input.	
b)	Discuss various storage classes of C.	[5+5]
	OR	
5.a)	Write a function that copies a one-dimensional array of n elements into a two-dimensional array of k-rows and j-columns. The rows and columns must be a valid factor of the number of elements in the one-dimensional array i.e., k * j = n.	
b)	Discuss the different ways of passing arrays as a parameter to a function.	[5+5]

6.a) Discuss dynamic memory management in C.
b) Explain in detail applications of pointers. [5+5]

OR

7. Write a C program that converts a string representing a number in Roman numeral form to decimal form. [Follow regular convention for Roman numbers, Read string – parse it to convert in to decimal]
Eg: Input: XL output: 40 [10]

8.a) How to pass a structure to a function? Give illustrations.
b) Define a structure of arrays. Write code to read values in to this structure. [5+5]

OR

9.a) Is enumeration a derived data type? Justify your answer with suitable example.
b) Discuss any three types of preprocessor commands. [5+5]

10.a) Compare formatting input/output functions with scanf and printf.
b) What is the purpose of ungetc( ) function. [5+5]

OR

11. Write a program to read two file names, append the first file content at the end of the second file content. [10]

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