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RV COLLEGE OF ENGINEERING®

(An Autonomous Institution affiliated to VTU)

III / IV Semester B. E. Fast Track Examinations Oct-2020

Common to all branches

BRIDGE COURSE C PROGRAMMING

Time: 03 Hours ***Maximum Marks: 100***

Instructions to candidates:

1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
2. Answer FIVE full questions from Part B. In Part B question number 2, 7 and 8 are compulsory. Answer any one full question from 3 and 4 & one full question from 5 and 6

PART-A

1	1.1	Write an algorithm to swap two numbers.	02
	1.2	Differentiate between double $d[4]$ & $d[4]$	01
	1.3	Write an equivalent expression using !(not operator) for $x == y$	01
	1.4	Mention whether the following decimal constants are valid or invalid a) 15,678 b) _85a c) 099 d) 3562.	02

	1.5	What is the outputs of the following programs:
		i)
		$void\ main()$
		{
		$int\ a\ =\ -45;$
		$int\ b = 34;$
		$if(a! = b)\ ;$
		$printf(\text{“}True\text{”});$
		$printf(\text{“}false\text{”});$
		}
		ii)
		$void\ main()$
		{
		$printf(\text{“}RVCE\text{”});$
		$if(-7.3)$
		$printf(\text{“}INVALID\text{”});$
		$else$
		$printf(\text{“}VALID\text{”});$
		}
			02

	1.6	Identify valid and invalid statements in each of the following array declaration/initialization statements i) $double\ amount[6,8];$ ii) $int\ id[] = \{1,2,3,4\};$ iii) $float\ value\ [][] = \{\{1,2\},\{2,3\},\{3,4\}\};$ iv) $int\ double\ a[6];$	02
	1.7	write a structure declaration and initialize statement to describe a structure Book containing fields pageno, name of author and title	02
	1.8	Evaluate the following expression: $if\ float\ a = 1.5, int\ b = 3;$ $a = b/2 + b * 8/b\ -\ b + a/3$ a =?	02
	1.9	State the difference between formal argument and actual argument with example	02
	1.10	Write “for” statement to print the following: $-6\ -4\ -2\ \ 0\ \ 2\ \ 4\ \ 6$	02

	1.11	what value integer "i" hold in the following code
		$main()$
		{
		$char\ s1[] = "dills";$
		$char\ s2[20];$
		$char\ s3[] = "Daffo";$
		$int\ i;$
		$i = strcmp(strcat(s3, strcpy(s2, s1)), "Daffodills");$
		$printf("\%d", i);$
		}
			02

PART-B

2	a	Write a C program to find the largest of three numbers using conditional operator.	04
	b	Write a flowchart to find the factorial of a number	06
	c	Define constant. Explain different types of constants used in C language.	06
3	a	Write a program to illustrate the use of type cast operator in a real world scenario.	04
	b	Write a C program to compute distance D between two points (x_1, y_1) (x_2, y_2) given the coordinate points $D_2 = (x_2 - x_1)^2 + (y_2 - y_1)^2$	06
	c	With example explain bitwise operators.	06
		OR	
4	a	List out the different rules for writing the switch case and default statements with examples.	06
	b	Explain the following decision making statements with an example for each i) simple if ii) If Else iii) else if ladder.	10
5	a	Explain the following functions with syntax and examples for each i) gets() and scanf() for reading string values ii) strcmp and strncmp for string comparison.	06
	b	Explain the methods for declaring $1D$ and $2D$ arrays with example.	06
	c	Write a C program to compute the sum of elements in a $2D$ array.	04
		OR	
6	a	Write a C program to find addition of two matrices of order $m \times n$.	08
	b	List and explain with example elements of user defined functions.	08
7	a	Write a recursive function to determine the factorial of a given number	06
	b	What is a structure? Explain the definition of a structure with proper syntax and example.	06
	c	What is the difference between array and structure?	04
8	a	Discuss declaration and initialization of pointer variables with syntax and example.	08
	b	Write a C program to read from file1 and write to file2.	08