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Code No. : 13713

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (CBCS) III-Semester Main Examinations, December-2018

Bridge Course: C Programming
(Civil, EEE & Mech. Engg.)

Time: 3 hours

Max. Marks: 50

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Q.No.	Stem of the question	M	L	CO	PO
Part-A (5 × 2 = 10 Marks)					
1.	Differentiate between a time-sharing and a client/server environment.	2	2	1	1
2.	If originally x=2, y=1 and z=1, What is the value of x, y and z after executing the following code? <pre>switch (x) { case 0 : x = 2; y = 3; case 1 : x = 4; break; default : y = 3; x = 1; }</pre>	2	2	2	1,2
3.	What is recursive function? Give example.	2	2	3	1
4.	How pointer arithmetic is performed?	2	1	4	1
5.	Give the output of the following code. <pre>#include <stdio.h> struct values { int i; int val[10]; }v={1,2,3,4,5,6,7,8,9}, *ptr=&v; int main(void) { printf("%d %d", v.i ,ptr->i); printf("\n %d %d %d", v.val[3], ptr->val[3]); return 0; }</pre>	2	2	5	1,2
Part-B (5 × 8 = 40 Marks)					
6. a)	Give a brief description of generation of programming languages. Highlight the advantages and disadvantages of languages in each generation.	4	2	1	1
b)	Write a program to calculate salary of an employee, given his basic pay, HRA=10% of the basic pay, TA = 5% of the basic pay. Hint: Assume salary = basic pay + HRA + TA	4	3	1	1,2,3

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7. a) What is the need for functions in c? Differentiate between function declaration and function definition with a suitable example.	4	2	2	1
b) Write a program to calculate parking charges of a vehicle. Given the type of vehicle as a character (like c for car, b for bus, etc.) and number of hours then calculate charges as given below: Truck/bus - Rs. 30 per hour Car- Rs.20 per hour Scooter/cycle/motor cycle- Rs. 10 per hour.	4	4	2	1,2,3
8. a) Explain the concept of Bubble sort using an example.	4	2	3	1
b) Write a program to interchange the largest and the smallest number in an array.	4	4	3	1,2,3
9. a) What are strings? Discuss some operations that can be performed on strings.	4	1	4	1
b) Write a program to read a string and rewrite its characters in alphabetical order.	4	4	4	1,2,3
10. a) Explain any 4 character input/output functions available in C.	4	1	5	1
b) Write a program to read and display the employee information using array of structure.	4	3	5	1,2,3
11. a) Differentiate between a compiler and an interpreter.	4	2	1	1
b) Write a program to find whether the given number is an Armstrong number or not using a user-defined function.	4	4	2	1,2,3
12. Answer any <i>two</i> of the following:				
a) Write a program to initialize all diagonal elements of a two-dimensional array to zero. Accept the order of the array from the keyboard.	4	4	3	1,2,3
b) Explain the concept of pointer to pointers using a suitable example.	4	2	4	1
c) Differentiate between a structure and a union.	4	2	5	1

M: Marks; L: Bloom's Taxonomy Level; CO: Course Outcome; PO: Programme Outcome

S. No.	Criteria for questions	Percentage
1	Fundamental knowledge (Level-1 & 2)	60%
2	Knowledge on application and analysis (Level-3 & 4)	35%
3	*Critical thinking and ability to design (Level-5 & 6) (*wherever applicable)	05%
