

CONTINUOUS INTERNAL EVALUATION - 3

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|---|------------------------|--|-----------------|
| Dept: CSE | Sem/Div: 2 A, B, C | Sub: C Programming for Problem Solving | S Code: 18CPS23 |
| Date: 24.09.21 | Time: 3.00pm to 4.30pm | Max Marks: 50 | Elective: N |
| Note: Answer any 2 full questions, choosing one full question from each part. | | | |

| QN | Questions | Marks | RBT | COs |
|---------------|--|-------|-----|-----|
| PART A | | | | |
| 1 a | What are storage classes in C programming? Explain their life time, scope, initial value and storage space. Also explain use of auto and register storage classes. | 10 | L2 | CO4 |
| b | Implement structures to read, write, compute average marks and the students scoring above and below the average marks for a class of N students. | 10 | L3 | CO4 |
| c | Write a recursive C program to convert binary to decimal. | 5 | L3 | CO4 |
| OR | | | | |
| 2 a | What is structure? With syntax and example explain how they are defined, declared and initialized. | 10 | L2 | CO4 |
| b | Explain extern and static storage classes with a C program for each. | 10 | L2 | CO4 |
| c | List different types of parameter passing in function based on structure. Write a C program to pass members of a structure to a function using pointer. | 5 | L3 | CO4 |
| PART B | | | | |
| 3 a | What is pointer? With syntax and example explain how it is declared and initialized. Write a C program to swap two integer variables using pointer. | 10 | L3 | CO4 |
| b | Develop a program using pointers to compute the sum, mean and standard deviation of all elements stored in an array of n real numbers. | 10 | L3 | CO4 |
| c | Explain how to use <i>typedef</i> in structure. | 5 | L2 | CO4 |
| OR | | | | |
| 4 a | Explain pointer to array and array of pointers with an example for each. | 10 | L2 | CO4 |
| b | Explain categories of macro substitution pre-processor directives. Write a C program to find $ -x $ by defining macro for ABS(x). | 10 | L3 | CO4 |
| c | Explain nested structures with an example. | 5 | L2 | CO4 |


