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Supplementary/Improvement Examination – 2023

Subject: Programming for Problem Solving

Paper Code: BTCSE – 203 / BTCSEAI – 203 / BTECE – 203

TIME: 3 Hours

MAX. MARKS: 75

SECTION – A (35 Marks)

❖ Attempt **ALL** questions. Each question is of **5 marks**.

Q. No.	Questions	CO*	BL*
1.	Define program and programming language. Discuss the generations of programming languages.	CO1	L1
2.	Write a program to print the following pattern on the screen using loops: # # @ # @ \$ # @ #	CO2	L3, L6
3.	Write a program to swap values of two variables using call by reference.	CO4	L6
4.	Write an explanatory note on structure data type in C-language with syntaxes and proper programming examples.	CO5	L2, L3
5.	What do you understand by static storage class? Explain with one example.	CO3	L2
6.	Explain “Pointer Pointing to Other Pointers” with proper example.	CO4	L4
7.	Explain type conversions in C with examples.	CO2	L3

SECTION – B (40 Marks)

❖ Attempt any **FOUR** questions. Each question is of **10 marks**.

Q. No.	Questions	CO*	BL*
1.	a) Define algorithm and write the pseudo code to find factorial of a given number. (5 Marks) b) Explain flow charts with all symbols used in it. (5 Marks)	CO1	L1, L2, L6
2.	Write a menu driven program using switch-case statements.	CO3	L6
3.	What will be the array elements after 5 th iteration to sort the following array in ascending order using bubble sort: 34, 27, 19, 72, 20, 14, 29, 5, 62, 18, 25, 79, 31, 56, 89, 91	CO3	L5, L6

4.	Write a program to print the concatenation of two given strings without using any library functions.	CO3, CO4	L2, L3, L6
5.	What will be the output of the following program? <pre> #include <stdio.h> int rec(int, int, int); int main(void) { int i = 224, j = 628, k = 484; int x=rec(i+32, j-68, k-108); printf("%d", x); return (0); } int rec(int p, int q, int r) { int m, n, o; m=p%r; n=q%r; o=m%n; if(o == 0) { return (n); } else { return(rec(m, n, o)); } } </pre>	CO3, CO4	L3, L4, L5
6.	Write an explanatory note on FILE with one programming example.	CO5	L1, L2, L3, L6

CO* - Course Outcomes from Syllabus, BL* - Bloom's Taxonomy Levels (1: Remembering, 2: Understanding, 3: Applying, 4: Analyzing, 5: Evaluating, 6: Creating)

END