(Affiliated to University of Mumbai)	***End Semester Examination (R-24) SH 2025 Answer Key with marking scheme***
Branch: FE/ ALL	Course: FEC104
Year/ Semester: FE/ I	Course code: C - Programming
Time: 02 hours	Marks: 60

Q.1	Attempt any Three. (All questions carry equal marks)	Marks
A.	• Documentation section – 1 mark	5
	• Link section – 1 mark # include	
	• Definition section – 1 mark	
	• Global declarations – 1 mark	
	• main() explanation & example – 1 mark	
B.	• Meaning of structure members – 1 mark	5
	• Syntax of structure – 1 mark	
	• Dot operator explanation – 1 mark	
	• Accessing members example – 1 mark	
	• Correct explanation – 1 mark	
C.	• Correct definition of array – 2 marks	5
	• Explanation of contiguous memory – 1 mark	
	• Any two advantages – 2 marks	
D.	• Definition of recursion – 2 marks	5
	• Explanation of recursive call – 1 mark	
	• Correct example program – 2 marks	
Q.2	Attempt any Three. (All questions carry equal marks)	
A.	**(i) Fibonacci Program (5 marks):**	10
	• Logic of Fibonacci – 3 marks	
	• Initialization – 1 mark	
	• Output print – 1 mark	
	(ii) break & continue (5 marks):	
	• break definition – 2 marks	
	• continue definition – 2 marks	
	• Example – 1 mark	
B.	**(i) Average Using Array (5 marks):**	10
	• Array declaration – 1 mark	
	• Input loop – 1 mark	
	• Sum logic – 2 marks	
	• Printing average – 1 mark	
	(ii) Array initialization (5 marks):	
	• Compile-time init – 2 marks	
	• Run-time init – 2 marks	
	• Example – 1 mark	

C.	**(i) Swap using functions (5 marks):**	10
	• Function prototype – 1 mark	
	• Pointer use – 2 marks	
	• Swap logic – 1 mark	
	• Call – 1 mark	
	(ii) Storage classes (5 marks):	
	• Any 3 classes – 3 marks	
	• Scope/lifetime explanation – 2 marks	
D.	**(i) Employee structure program (5 marks):**	10
	• Structure definition – 2 marks	
	• Input – 1 mark	
	• Output – 2 marks	
	(ii) Nested structures (5 marks):	
	• Definition – 2 marks	
	• Syntax/example – 2 marks	
	• Explanation – 1 mark	
E.	**(i) File write/read program (5 marks):**	10
	• FILE pointer – 1 mark	
	• fopen() – 1 mark	
	• fprintf() – 1 mark	
	• fclose() – 1 mark	
	• Reading using fscanf() – 1 mark	
	(ii) File pointer concept (5 marks):	
	• Definition – 2 marks	
	• Example – 1 mark	
	• Use/role – 2 marks	
Q.3	**Attempt any Three. (All questions carry equal marks)****	
A.	• Declaration of string – 1 mark	5
	• Input – 1 mark	
	• Loop to count length – 2 marks	
	• Print length – 1 mark	
B.	• Definition of global variables – 2 marks	5
	• Definition of local variables – 2 marks	
	• Example – 1 mark	
C.	• while definition – 2 marks	5
	• do-while definition – 2 marks	
	• Key difference (executes once) – 1 mark	
D.	• fopen() explanation & example – 2 marks	5
	• fclose() explanation – 1 mark	
	• fprintf() explanation & example – 2 marks	