Question 10: Memory Allocation in OOP (Object-Oriented Programming)

Ans. Memory allocation is of two types:

1. Static Memory: It is generally the allocation of memory for an array during compile time, in which the size of an array is fixed that cannot be increased or decreased at array run time. If the value stored in the array at run time is less than size specified, then there will bw wastage of memory. Similarly, if the value stored at run time is greater than the size specified, program may crash or misbehave.
2. Dynamic Memory Allocation: It’s the process of allocating memory at the time of execution. The memory is segmented into Heap and Stack. Heap is the segment where dynamic memory allocation takes place randomly. In Stack, memory is allocated or deallocated in a defined order. Pointers play an important role in Dynamic Memory Allocation. The allocated memory can only be accessed through pointers.