# Pointer objectives

| SLNO | QUESTIONS |
|---|---|
| 1 | Which concept is called “dereference”? |
| | Doing read or write operation in memory using the help of pointer is called dereference |
| 2 | What does maximum address by a pointer refer in TC and GCC compilers? |
| | In Turbo C pointer maximum address refers up to 1 MB of memory, whereas in GCC pointer maximum address refers up to 4 GB of memory. |
| 3 | What is null pointer? |
| | When a pointer refers initial address in memory or 0th address in memory it is called null pointer. |
| 4 | What is wild pointer? |
| | When a pointer refers unauthenticated address in memory it is called wild pointer. |
| 5 | What is dangling pointer? |
| | A reference that does not actually lead anywhere |
| 6 | What are the different reasons for segmentation fault in C? |
| | When segmentation fault occurs in a program, the program is simply terminated. There are different reasons for segmentation fault, such as:<br>• Dereferencing a wild pointer<br>• Working beyond array size<br>• Stack overflow<br>• Attempts to free array memory |
| 7 | What are near and far pointers in C? |
| | Far and near pointers are only introduced in Turbo C compiler. When the pointer refers to an address in the same segment it is called near pointer, but when it refers to an address in another<br>Segment it is called far pointer. |
| 8 | What are the applications of pointers in C? |
| | * Dynamic memory allocation<br>• Array implementation<br>• Directly accessing the hardware address<br>• Calling convention of function |
| 9 | When does core dump occur in C ? |
| | A process dumps core when it is terminated by the operating system due to a fault in the program. The most typical reason for its occurrence is that the program has accessed an invalid<br>Pointer value. Given that you have a sporadic dump; it is likely that you are using an uninitialized pointer. |
| 10 | What is the difference between malloc and calloc functions? |
| | Malloc memory allocation is equivalent to a single-dimensional array but calloc memory allocation is equivalent to a doubledimensional array. |
| 11 | What is meant by static and dynamic memory allocation in C? |
| | Memory allocation in a program is only possible in load time or rum time of the program. The memory allocated at compile time is known as static allocation. That allocated at run time is called dynamic allocation |
| 12 | Why is pointer arithmetic required? |
| | Pointer arithmetic is required only to access a particular memory address. |
| 13 | Define in a one-line statement “memory leak”. |
| | At any moment if a pointer loses reference of a memory block in the heap it is called memory leak. |

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