C sizeof operator (Answers)

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1) Answer is c) 1 byte

2) Answer is c) 4

Explanation: sizeof('a'): Here, sizeof operator will treat 'a' as 97 (ASCII value corresponding to the character. This thing happens if we are trying to find the size of a character constant

3) Answer is a) sizeof(a)

4)Answer is c) 4

Explanation: Size of an identifier defined within the union name space is always =maximum size(member of union). Here, the maximum size of a member of union=size of int member/size of float member

5) Answer is c) sizeof

6) Answer is d) None of the mentioned

7) Answer is b) The sizeof(void) in a 32-bit c is: 1

8) Answer is c) unsigned int

9) Answer is c) 41

10) Answer is a) size of a is 4, value of a is 1

Explanation: The sizeof operator yields the size (in bytes) of its operand, which may be an expression or the parenthesized name of a type. The size is determined from the type of the operand. The result is an integer. If the type of the operand is a variable length array type, the operand is evaluated; otherwise, the operand is not evaluated and the result is an integer constant.

Or, in a simple language.

sizeof is a compile-time operator, so at the time of compilation sizeof and its operand get replaced by the result value. The operand is not evaluated (except when it is a variable length array) at all; only the type of the result matters.

11) Answer is c) sizeof(struct stemp*) = sizeof(union utemp*) = sizeof(char *)

Explanation: Since, pointer size is not depended upon datatype of the pointer, it is solely depended upon compiler (32 bit compiler or 64 bit compiler)

12) Answer is a) Output, 4

Since, the return type of strlen is unsigned int

13) Answer is d) None of the mentioned

Explanation: In case of pointers, sizeof(pointer) will return 4 if it is a 32 bit compiler and sizeof(pointer) will return 8 if it is a 64 bit compiler

In case of functions, sizeof(function)=sizeof(return type of the function)

In case of macros, sizeof(macro) =sizeof(the datatype of the constant value associated with macro)

14) a) Output is 8)

Explanation: Since, PI will simply be replace with the value 3.14 after preprocessing and 3.14 is a double constant