比特就业课C++方向笔试强训48天day36

一. 单选

1.
下面关于IP地址的论述中哪个是不正确的（ ）

Ⓐ 用户主机的IP地址可静态分配也可以动态分配

Ⓑ IP地址有单播地址，也有多播地址

Ⓒ 一个用户主机只能有一个IP地址

Ⓓ 在以太局域网中使用ARP协议查找与一IP地址对应的MAC地址

正确答案：C

2.
tcp套接字中，不会阻塞的是哪一种操作（ ）

Ⓐ read

Ⓑ write

Ⓒ accept

Ⓓ bind

正确答案：D

3. 以下几条路由，10.1.193.0/24,10.1.194.0/24,10.1.196.0/24,10.1.198.0/24，如果进行路由汇聚，则能覆盖这几条路由地址的是（ ）

Ⓐ 10.1.192.0/22

Ⓑ 10.1.200.0/22

Ⓒ 10.1.192.0/21

Ⓓ 10.1.224.0/20

正确答案：C

4. 当一台 PC 从一个网络移到另一个网络时，以下说法正确的是（ ）

Ⓐ 它的 IP 地址和 MAC 地址都会改变

Ⓑ 它的 IP 地址会改变，MAC 地址不会改变

Ⓒ 它的 MAC 地址会改变，IP 地址不会改变

Ⓓ 它的 MAC 地址、IP 地址都不会改变

正确答案：B

5. 在TCP/IP建立连接过程中，客户端或服务器的状态转移说法错误的是（ ）

Ⓐ 经历SYN_RECV状态

Ⓑ 经历SYN_SEND状态

Ⓒ 经历ESTABLISHED状态

Ⓓ 经历TIME_WAIT状态

正确答案：D

6. ping命令是基于哪个协议（ ）

Ⓐ ICMP

Ⓑ TCP

Ⓒ IP

Ⓓ UDP

正确答案：A

7. 下面关于TCP的描述，错误的是（ ）

Ⓐ TCP是一种面向连接的协议，给用户进程提供可靠的全双工的字节流

Ⓑ TCP客户端和服务器之间建立连接需要经过3次握手

Ⓒ 只要有一方主动关闭连接后，这个TCP连接就结束了

Ⓓ TCP在传输数据过程中必须保持着连接，这个连接会给通信过程增加开销

正确答案：C

8. 如果将网络IP段40.15.128.0/17划分成2个子网，则第一个子网IP段为40.15.128.0/18,则第二个子网为（ ）

Ⓐ 40.15.129.0/18

Ⓑ 40.15.128.128/18

Ⓒ 40.15.192.0/17

Ⓓ 40.15.192.0/18

正确答案：D

9. 下面对Host文件描述正确的是（ ）

Ⓐ 这个文件是批处理文件,用来指定域名的访问IP

Ⓑ 一个DNS域名解析服务器文件,用于解析域名对应的IP地址

Ⓒ 作用是网址域名与其对应的IP地址建立一个关联"数据库"

Ⓓ 当用户输入网址后,系统首先到DNS服务器中寻找对应的IP地址,如果不存在会到Host文件中确定最终访问地址

正确答案：C

10. 下列选项中,属于"10.174.20.176/28"该网段的有效IP地址是（ ）

Ⓐ 10.174.20.174

Ⓑ 10.174.20.186

Ⓒ 10.174.20.191

Ⓓ 10.174.20.192

正确答案：B

二. 编程

1. `ACM编程题` 标题：Rational Arithmetic (20) | 时间限制：1秒 | 内存限制：32768K

For two rational numbers, your task is to implement the basic

arithmetics, that is, to calculate their sum, difference,

product and quotient.

输入描述：

Each input file contains one test case, which gives in one line the two rational numbers in the format "a1/b1 a2/b2".

The numerators and the denominators are all in the range of long int. If there is a negative sign, it must appear only in

front of the numerator. The denominators are guaranteed to be non-zero numbers.

输出描述：

For each test case, print in 4 lines the sum, difference, product and quotient of the two rational numbers, respectively. The format of each

line is "number1 operator number2 = result". Notice that all the rational numbers must be in their simplest form "k a/b", where k is

the integer part, and a/b is the simplest fraction part. If the number is negative, it must be included in a pair of parentheses. If the

denominator in the division is zero, output "Inf" as the result. It is guaranteed that all the output integers are in the range of long int.
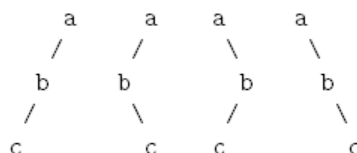
示例1:

输入

5/3 0/6

输出

1 2/3 + 0 = 1 2/3
1 2/3 - 0 = 1 2/3
1 2/3 * 0 = 0
1 2/3 / 0 = Inf

正确答案：

2. `ACM编程题` 标题：Pre-Post | 时间限制：1秒 | 内存限制：65536K

We are all familiar with pre-order, in-order and post-order traversals of binary trees. A common problem in data structure classes is to find the pre-order traversal of a binary tree when given the in-order and post-order traversals. Alternatively, you can find the post-order traversal when given the in-order and pre-order. However, in general you cannot determine the in-order traversal of a tree when given its pre-order and post-order traversals. Consider the four binary trees below:

All of these trees have the same pre-order and post-order traversals. This phenomenon is not restricted to binary trees, but holds for general m-ary trees as well.

输入描述：

Input will consist of multiple problem instances. Each instance will consist of a line of the form m s1 s2, indicating that the trees are m-ary trees, s1 is the pre-order traversal and s2 is the post-order traversal.All traversal strings will consist of lowercase alphabetic characters. For all input instances, 1 <= m <= 20 and the length of s1 and s2 will be between 1 and 26 inclusive. If the length of s1 is k (which is the same as the length of s2, of course), the first k letters of the alphabet will be used in the strings. An input line of 0 will terminate the input.

输出描述：

For each problem instance, you should output one line containing the number of possible trees which would result in the pre-order and post-order traversals for the instance. All output values will be within the range of a 32-bit signed integer. For each problem instance, you are guaranteed that there is at least one tree with the given pre-order and post-order traversals.

示例1:

输入

2 abc cba
2 abc bca
10 abc bca
13 abejkcfghid jkebfghicda

输出

4
1
45
207352860

正确答案：