

國立臺北護理學院九十八學年度碩士班招生

資訊管理系碩士班

計算機概論試題

注 意	1.請用中文或英文作答。 2.請標明題號依序於答案卷上作答。
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- Please briefly describe the following technical terms. (15%)
 - Consumer-to-Business e-commerce
 - denial of service
 - business process reengineering
- How many bytes will it take to store a 4×5 inches, resolution 300 ppi, full-color (24 bits/pixel) digital image (1KB = 1024 Bytes, 1MB = 1024KB)? (5%)
 - If each address identifies a single byte of storage, what is the size of the addressable memory in the computer that uses 40-bit address bus? (5%)
- What is the value of the Abc variable after the “Command1” button is clicked and its VB statements in the following block are executed? (10%)

```

Function aFun(X)
  If Len(X) <= 1 Then
    aFun = X
  Else
    aFun = Right(X, 1) + aFun(Left(X, Len(X) - 1))
  End If
End Function

Private Sub Command1_Click()
  X = "A string"
  Abc = aFun(X)
End Sub

```

- For each of the following IP addresses and masks, determine its network address, calculate the number of the available host addresses, and derive the broadcast address: (18%)
 - 10.20.104.93 255.255.255.0
 - 212.172.38.72 255.255.255.192
 - 108.163.211.115 255.255.128.0

- You are using wired RFID readers in your company to read tags attached to merchandise. You plan to upgrade RFID readers to use a wireless-based technology to communicate with other RFID devices and hosts. Which two wireless protocols would you use? Please explain your ideas! (10%)
- The PC1 is unable to access the Server1 because of one setting problem and two incorrect cablings among the devices in the following network topology (as shown in Figure 1). Please identify and correct these problems. Note that the Routers and Switches do not support MDI/MDIX auto cable sensing function. (12%)

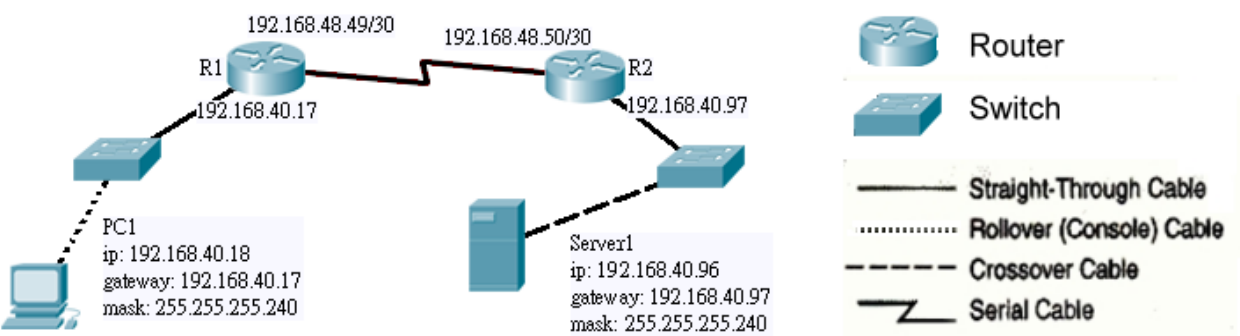


Figure 1

- Given an input sequence {527, 186, 383, 405, 232} and a hash function $h(X) = X \pmod{11}$, show the open addressing hash table with linear probing. (15%)
- In Figure 2, the undirected graph G has 7 vertices. Depict its minimum spanning tree. (10%)

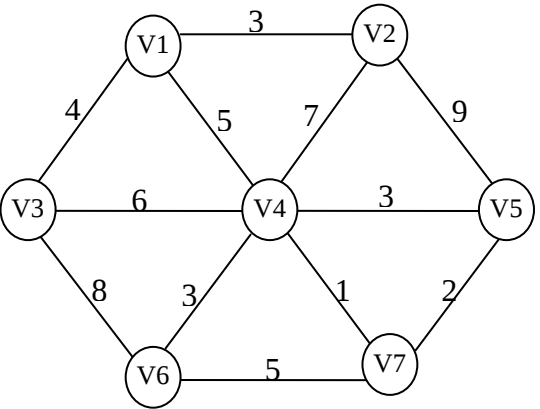


Figure 2