

# 武汉大学试卷纸

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科目	成绩	总分	1	2	3	4	5	6	7	8	9	10

A = "2017302580067"

B = 580067

一. C = 1101 1001 1110 0011

C+D = 1011 1001 1110 0100

the checksum is 0100 0110 0001 1011

C+D = 1011 1001 1110 0100

the checksum is 0100 0110 0001 1011

二. C-1 = 1110 0011 = 227

C-2 = 1101 1001 = 217

When in a 10 Mbps broadcast channel.

A-1 have to wait  $227 \times 512 \times 10^3 / 8 \times 10 \times 10^6 = 1.4528s$

A-2 have to wait  $217 \times 512 \times 10^3 / 8 \times 10 \times 10^6 = 1.3888s$

When in a 100Mbps broadcast channel.

A-1 have to wait 0.14528s

A-2 have to wait 0.13888s

A-2 have to wait 0.138885

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④.  $E = 2400 + 227 = 2627$   $C-2 = 217$ .

There will be 4 generated fragments.

1. identifier = 217 flag = 1 fragmentation offset: 0
2. identifier = 217 flag = 1 fragmentation offset: 700
3. identifier = 217 flag = 1 fragmentation offset: 1400
4. identifier = 217 flag = 0 fragmentation offset: 2100

五.  $C-1 = 227$ .  $d(x, w) = 232$   $d(y, u) = 233$

a. 

	x	y	w	u
x	0	4	2	234

b. let  $c(x, w) = 5$   $c(x, y) = 2$   $d(x, u) = 235$

c. let  $c(x, w) = 2$   $c(x, y) = 1$   $d(x, u) = 234$ .

★  $C = 1101 \ 1001 \ 1110 \ 0011$ .

7. find all prefixes that can match C.

se. C will be forwarded to Interface 10

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⑤. C-1 = 1110 0011    G = 10011    CRC = 1110 0011 0011

$  \begin{array}{r}  1011 \\  10011 \overline{) 1110\ 0011\ 0000} \\  \underline{1001\ 1} \phantom{000} \\  100101 \phantom{00} \\  \underline{1001} \phantom{00} \\  100101 \phantom{00} \\  \underline{1001} \phantom{00} \\  100100  \end{array}  $	$  \begin{array}{r}  10111111 \\  10011 \overline{) 1110\ 0011\ 0000} \\  \underline{1001\ 1} \phantom{000} \\  0100101 \phantom{00} \\  \underline{0000} \phantom{00} \\  100101 \phantom{00} \\  \underline{1001} \phantom{00} \\  100100 \\  \underline{1001} \phantom{00} \\  100010 \\  \underline{1001} \phantom{00} \\  11110 \\  \underline{1001} \phantom{00} \\  10110 \\  \underline{1001} \phantom{00} \\  11  \end{array}  $	$  \begin{array}{r}  1011011 \\  10011 \overline{) 0110\ 0011\ 0011} \\  \underline{10011} \phantom{000} \\  001111 \phantom{00} \\  \underline{1001} \phantom{00} \\  11000 \phantom{00} \\  \underline{1001} \phantom{00} \\  011101 \phantom{00} \\  \underline{1001} \phantom{00} \\  010101 \phantom{00} \\  \underline{1001} \phantom{00} \\  00010 \neq 0  \end{array}  $
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1). C = 1101 1001 1110 0011  
M-3 = D9E3.

se. receiver detect an error.

x 0 4 2 234

a. let  $c(x,w) = 5$      $c(x,y) = 2$      $d(x,w) = 235$

c. let  $c(x,w) = 2$      $c(x,y) = 1$      $d(x,w) = 234$

→

⑤. C = 1101 1001 1110 0011

Because there is no prefix that can match C.

se. C will be forwarded to Interface 10

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⑤. C-1 = 1110 0011    G = 10011    CRC = 1110 0011 0011

$  \begin{array}{r}  1011 \\  10011 \overline{) 1110\ 0011\ 0000} \\  \underline{1001\ 1} \phantom{000} \\  100101 \phantom{00} \\  \underline{1001} \phantom{00} \\  100101 \phantom{00} \\  \underline{1001} \phantom{00} \\  100100  \end{array}  $	$  \begin{array}{r}  10111111 \\  10011 \overline{) 1110\ 0011\ 0000} \\  \underline{1001\ 1} \phantom{000} \\  0100101 \phantom{00} \\  \underline{0000} \phantom{00} \\  100101 \phantom{00} \\  \underline{1001} \phantom{00} \\  100100 \\  \underline{1001} \phantom{00} \\  100010 \\  \underline{1001} \phantom{00} \\  11110 \\  \underline{1001} \phantom{00} \\  10110 \\  \underline{1001} \phantom{00} \\  11  \end{array}  $	$  \begin{array}{r}  1011011 \\  10011 \overline{) 0110\ 0011\ 0011} \\  \underline{10011} \phantom{000} \\  001111 \phantom{00} \\  \underline{1001} \phantom{00} \\  11000 \phantom{00} \\  \underline{1001} \phantom{00} \\  011101 \phantom{00} \\  \underline{1001} \phantom{00} \\  010101 \phantom{00} \\  \underline{1001} \phantom{00} \\  00010 \neq 0  \end{array}  $
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$$\begin{array}{r} 10011 \\ 100010 \\ 10011 \\ 11110 \\ 10011 \\ 10110 \\ 10011 \\ 11 \end{array}$$

1)  $C = 1101\ 1001\ 1110\ 0011$   
 $M_3 = D9E3$

$Mac_0 = 00-15-JD-41-80-A8$   
 $Mac_1 = 00-15-JD-41-D9-E3$   
 ~~$00-15-JD-41-80-A8$~~

First the switch table is null and when frame is sent from laptop to the desktop. The  $00-15-JD-41-D9-E3$  1 time will be added into table.

The switch table is

Address	Interface	Time
$00-15-JD-41-D9-E3$	1	9:36

so. the receiver detect an error.

Type field is  $0x0806$ . ARP protocol

1) Channel partitioning protocol, it assign each node with by TDMA and FDM and CDMA.

2) Random Access protocol, when nodes collision happens, the node will wait a random delay before resending like slotted ALOHA, ALOHA, CSMA, CSMA/CD.

3) Taking - Turns Protocols: node can send frames when it gets specified. Like polling protocol and token-passing protocol.

(2) I prefer ~~polling~~ protocol CSMA/CD, because its efficiency is higher.



③ Taking-Turns Protocols: node can send frames when it gets special turn like polling protocol and token-passing protocol.

(2) I prefer ~~polling protocol~~ CSMA/CD, because its efficiency is higher than others.

(3) I will use CSMA/CD during multiple Access Links.

~~MAC~~ Ethernet for the frame transfer.

ARP protocol to translate between IP and MAC.

OSPF protocol used in AS, BGP protocol is used to transfer between AS.

DHCP protocol is used so that you can get network access everywhere.

VLAN is used so that allows multiple virtual local network to a single physical network infrastructure.