KEY TO SELECTED TEST ONE

I、 BLANK FILLING (1 points each question, 15 points in total)

1. UTP
2. physical layer
3. email,ftp,telnet (2 points)
4. 11001101.11111111.10101010.11001101 (2 points)
5. 128
6. receiver
7. speed, bus type, network type (3 points)
8. the first 30 bits is network-bits.
9. Bps,bps (1 point)
10. Positive acknowledgement with retransmission
11. 1

II、DICIDE TRUE OR FALSE (1 point each, 10 points in total)

No.	1	2	3	4	5	6	7	8	9	10
Answer	√	×	×	√	×	×	×	√	√	√

III、 MAKE A CHOICE (1 point each question, 15 points intotal

No.	1	2	3	4	5	6	7	8	9	10
Answer	D	C	B	C	A	C	C	A	D	B
No.	11	12	13	14	15	16	17	18	19	20
Answer	B	C	C	E	A	A	D	B	A	B
No.	21	22	23	24	25					
Answer	B	D	A	C	B					

IV、 SHORT ANSWERS (6 points each question, 30 points in total)

1.key points:

Hello: ①when it starts up②when it send keep-alive message periodically.

DD(database description):the abstract of link state database, It's used when two OSPF routers are in exchange-status.

LSR(link state request): It's sent when one OSPF router know the other router has a full record about a link.

LSU(link state update): ①as an answer of LSR ②send when OSPF router discover that its link has changed.

LSA(link state acknowledgement): when an OSPF router receives a LSU, It must send back a LSA.

2.Principle:

Flooding

Filtering

Forwarding

Learning

3.

Step 1:H send S SYN segment,it's header:

Source port=____3000_____	Destination port=_____80_____
Sequence number=_____200_____	
Acknowledge number=_____	

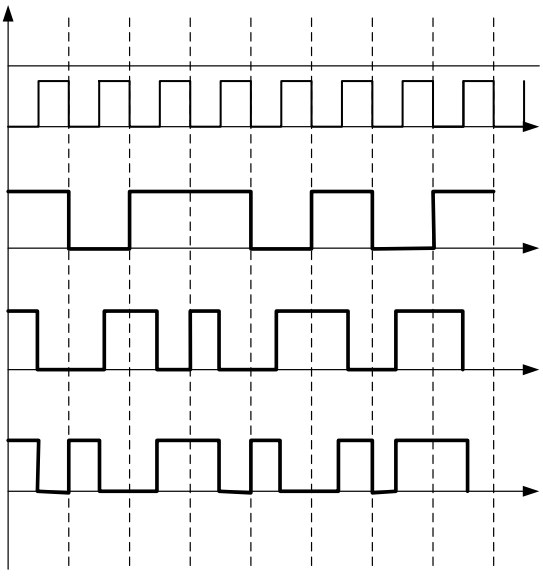
Step 2:S send back it's SYN,it's header:

Source port=____80_____	Destination port=_____3000_____
Sequence number=_____500_____	
Acknowledge number=_____201_____	

Step 3: H send S final acknowledgement, it's header:

Source port=____3000_____	Destination port=____80_____
Sequence number=____201_____	
Acknowledge number=___501_____	

4.



5. is error, correct code should be: 00101000100

No.1 bit has parity collection: 1,3,5,7,9,11

No.2 bit has parity collection: 2、3、6、7、10、11、...

No.4 bit has parity collection: 4、5、6、7、.....

No.8 bit has parity collection: 8、9、10、11、.....

V、 ANALYSIS (20 points)

1. Borrow 3 bit from the last 8 bit, so submask is 255.255.255.111000000

No. of subnet	submask	Useable Address range	Broadcast addr.	Network addr.	Is usable?
No.1	255.255.255.224	/	/	212.112.32.0	No
No.2	255.255.255.224	212.112.32.33-212.112.32.62	212.112.32.63	212.112.32.32	Yes
No.3	255.255.255.224	212.112.32.65-212.112.32.94	212.112.32.95	212.112.32.64	Yes
No.4	255.255.255.224	212.112.32.97-212.112.32.126	212.112.32.127	212.112.32.96	Yes
No.5	255.255.255.224	212.112.32.129-212.112.32.158	212.112.32.159	212.112.32.128	Yes
.....					

2.can be many answer

3.must be identical as No.2

Destination network addr.	Interface	Gateway addr.(nethop)	Metric(cost)
212.112.32.96	S0	212.112.32.65	1
212.112.32.32	E0	212.112.32.62	0
212.112.32.63	S0	212.112.32.66	0

4. must be identical as No.2 and No.3

Destination network addr.	Interface	Gateway addr.(nethop)	Metric(cost)
212.112.32.96	S0	212.112.32.65	1
212.112.32.32	S0	212.112.32.65	2
212.112.32.63	S0	212.112.32.66	0