1(4').Is Moore's Law a natural law as Newton's Law?

2(4').Choose the flip-flop from 3 pictures, and : the one u choose is a flip-flop, is it because it has an XOR gate?

3(4').What does the floating-point notion 01101011 represent?

4(10').A machine language as shown in Text Book Appendix C:

Two blocks of memory shown as follows:

A0	15	7B	30
A1	7C	7C	35
A2	16	7D	32
A3	7D	7E	15
A4	50		
A5	56		
A6	30		
A7	7E		
A8	C0		
A9	00		

Question:

If the Program counter is A0, the Instruction register is ____

What are in 7B, 7C, 7D and 7E after the machine halts?

5(4').Has Internet a regular topology?

6(4').

7(4').What is the maximum number of entries that must be interrogated when applying the binary search to a list of 1000 entries?

A. 1000 B. 9 C. 10 D. 11

8(4').There is a definition of a procedure:

Procedure Modify(Y)

Assign Y the value 8;

Print Y.

What will be printed after the following if parameter is passed by

(1)value, (2)referrence:

Assign X the value 4;

Apply Procedure Modify(X);

Print X.

9(4').Which of the following does not belong to P problems?

A. complexity of n! B. of n^3 C. of n^2 D. of 3nlogn

10(10').Relation X: Relation Y:

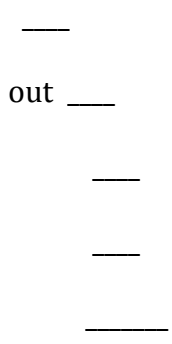
U	V	W
A	Z	5
B	D	3
C	Q	5

R	S
3	J
4	K

RESULT <- JOIN X AND Y WHERE X.W>=Y.R

Draw the RESULT Relation.

11(10').A station :



exchange

4 cars numbered "1,2,3,4" in, can we get the sequence out "1,3,2,4"?

If you can , draw out;if you can't, explain why.

12(4').A trees stored: each node has three blocks.

1st: the node itself, 2nd: it's left child, 3rd: it's right child.

If the content is 0, it means NIL.

40 | G

41 | 0

42 | 0

43 | X

44 | 0

45 | 0

46 | M

47 | 0 If the root is stored in 55,

48 | 0 Show what's the tree like!

49 | J

50 | 46

51 | 0

52 | F

53 | 43

54 | 40

55 | W

56 | 49

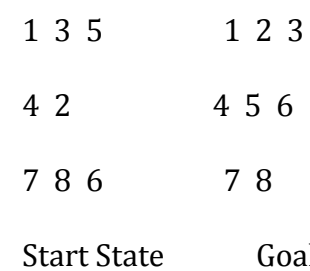
57 | 52

13(4').A hashed file using devision hashing algorithm. 99, 100, 101, 102

buckets to choose, which is the best?

14(10').8-puzzle: Apply heuristic with the number of tiles out of its place.

Draw the search tree.



Start State Goal State

15(10').A Turing machine...

16(10').What's your comment on this course/what do youu think computer science is for(as a subject>
