

ITEC204 – Final Exam

I understand that any suspected wrongdoing on assigned assignments or exams will be reported to the proper office, and if found, will result in ~~diplm~~ disciplinary action in accordance with university rules and procedures. Only to the extent that the instructor permits, may I collaborate with others. I shall not disclose or save my solution anywhere other than in the ITEC204 google classroom for the instructor to the examine

Razo
Frederick Razo

ITEC204 – Final Exam

Part 1 Trees
A.

```

graph TD
    8((8)) --> 3((3))
    8 --> 13((13))
    3 --> 1((1))
    3 --> 6((6))
    13 --> 9((9))
    13 --> 15((15))
    6 --> 5((5))
    9 --> 10((10))
    5 --> 4((4))
  
```

B.

Pre-order: 25, 15, 10, 4, 12, 22, 18, 17, 16, 24, 50, 35, 31, 44, 70, 66, 90

In-order: 4, 10, 12, 15, 16, 17, 18, 22, 24, 25, 31, 35, 44, 50, 66, 70, 90

Post-order: 4, 12, 10, 16, 17, 18, 24, 22, 15, 31, 44, 35, 66, 90, 70, 50, 25

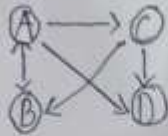
C.

1. A
2. C, E, G, F, H, K, L
3. 3
4. 3
5. 3
6. 3
7. A, B, I, D, J
8. B, A

ITEC204 – Final Exam

Part II. Graphs

A.



5pts

B.

	A	B	C	D
A	0	1	1	1
B	1	0	0	0
C	0	1	0	1
D	0	0	0	0

6pts

C.

Vertex	Indegree	Outdegree
1	0	3
2	1	2
3	2	1
4	3	3
5	1	2
6	3	0
7	2	1

6pts

D.

Bread first: ABEFC DGr HI
Depth first: ABCDEFGHI

5pts

5pts

ITEC204 – Final Exam

Part II. Sorting Algorithm
INSERTION
Given: 9 8 6 7 5 0

8	9	6	7	5	0
6	8	9	7	5	0
6	7	8	9	5	0
5	6	7	8	9	0
0	5	6	7	8	9

7pts

BUBBLE SORT
Given: 9 8 6 7 5 0

8	6	7	5	0	9
6	7	5	0	8	9
6	5	0	7	8	9
5	0	6	7	8	9
0	5	6	7	8	9

7pts