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# CISC7002 Computer Communications and Networks CISC7102

# Computer Networks and Internet Fall Semester 2019
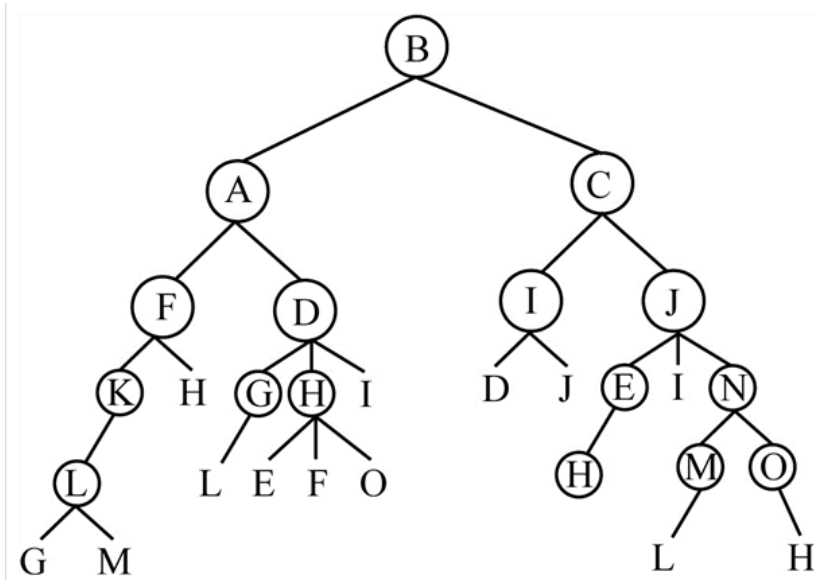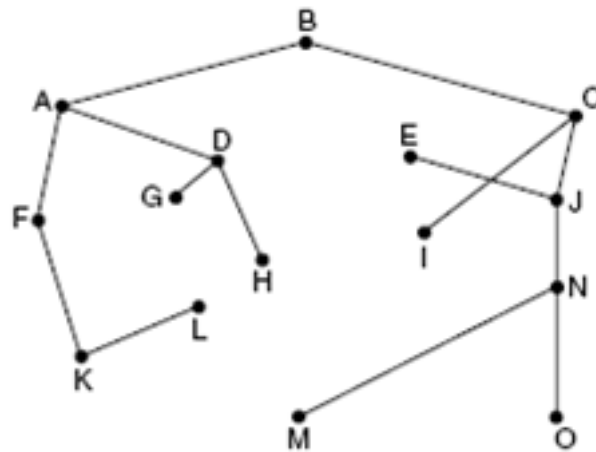
November 6, 2019

**Problem 1:**

| From / To | B | D | E | C |
|---|---|---|---|---|
| A | 5 | 16 | 7 | |
| B | 0 | 12 | 6 | 6 |
| C | 8 | 6 | 3 | |
| D | 12 | 0 | 9 | 3 |
| E | 6 | 9 | 0 | 5 |
| F | 2 | 10 | 4 | |

**New Table for C:**

| To | Calculate | Route | Cost |
|---|---|---|---|
| A | C- B- A 6+5=11<br>C- D- A 3+16=19<br>C- E- A 5+7 =12 | C- B- A | 11 |
| B | C- B 6<br>C- D- B 3+12 =15<br>C- E- B 5+6 =11 | C- B | 6 |
| C | N/A | N/A | 0 |
| D | C- B- D 6+12=18<br>C- D 3<br>C- E- D 5+9=14 | C- D | 3 |
| E | C- B-E 6+6 =12<br>C- D-E 3+9=12<br>C- E 5 | C- E | 5 |
| F | C-B-F 6+2=8<br>C-D-F 3+10=13<br>C-E-F 5+4=9 | C-B-F | 8 |

**Problem 2:**

The Sink tree is below:

Round 1:
  B to A and C
   total 2 packets
Round 2:
  A to F and D
  C to I and J.
   total 4 packets
Round 3:
  F to K and H
  D to G, H and I
  I to D and J
  J to E I and N
   total 10 packets

Round 4:
  K to L
  H to E, F and O
  G to L
  E to H
  N to M and O
   Total 8 packets
Round 5:
  L to G and M
  M to L
  O to H
   Total 4 packets

Therefore, 2+4+10+8+4=28 Packets.