1. **True/False**

(a) Ⓣ Ⓕ
(b) Ⓣ Ⓕ
(c) Ⓣ Ⓕ
(d) Ⓣ Ⓕ
(e) Ⓣ Ⓕ
(f) Ⓣ Ⓕ
(g) Ⓣ Ⓕ
(h) Ⓣ Ⓕ
(i) Ⓣ Ⓕ
(j) Ⓣ Ⓕ
(k) Ⓣ Ⓕ
(l) Ⓣ Ⓕ
(m) Ⓣ Ⓕ
(n) Ⓣ Ⓕ
(o) Ⓣ Ⓕ

2. **Short Questions**

(a) Fragmentation
i. Ⓐ Ⓑ Ⓒ
ii. Ⓐ Ⓑ Ⓒ
iii. Ⓐ Ⓑ Ⓒ

(b) DHCP
i. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
ii. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
iii. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
iv. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

(c) IPv4 vs IPv6
Ⓐ Ⓑ Ⓒ Ⓓ

(d) Routing
i. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
ii. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
iii. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
iv. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
v. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
vi. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
vii. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
viii. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ
ix. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ

(e) Layers
Ⓐ Ⓑ Ⓒ

3. **LPM**

(a) ⑥ ⑦ ⑧ ⑨ ⑩ ⑪
(b) Ⓨ Ⓝ
(c) Ⓨ Ⓝ
(d) Ⓨ Ⓝ

4. **Discovery**

(a) Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ Ⓛ
(b) Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ Ⓛ
(c) Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ Ⓛ
(d) Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ Ⓛ
(e) Ⓨ Ⓝ
(f) Ⓨ Ⓝ

5. **Distance Vector**

(a) Computing Shortest Paths
i. ● Ⓑ Ⓒ Ⓓ Ⓔ ● –
ii. Ⓐ Ⓑ ● ● Ⓔ Ⓕ –

(b) Full Updates
i. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ –
ii. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ –

(c) Partial Updates
i. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ –
ii. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ –
iii. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ –
iv. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ –
v. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ –
vi. Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ –

6. **ACKing**

(a) Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ
(b) Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ

7. **When Things Go Awry**

(a) i. Ⓨ Ⓝ
ii. Ⓨ Ⓝ
(b) i. Ⓨ Ⓝ
ii. Ⓨ Ⓝ
(c) i. Ⓨ Ⓝ
ii. Ⓨ Ⓝ

8. **Putting It All Together**

(a) i. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
ii. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
(b) i. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
ii. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
(c) i. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
ii. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
iii. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
iv. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
(d) i. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
ii. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
iii. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
iv. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
(e) i. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
ii. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
iii. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2
iv. Ⓐ Ⓑ Ⓒ Ⓡ1 Ⓡ2

9. **ARP and Learning**

(a) i. Ⓐ Ⓑ Ⓒ Ⓓ
ii. Ⓐ Ⓑ Ⓒ
iii. Ⓐ Ⓑ Ⓒ
iv. Ⓐ Ⓑ Ⓒ Ⓓ
v. Ⓐ Ⓑ Ⓒ
vi. Ⓐ Ⓑ Ⓒ
vii. Ⓨ Ⓝ
viii. Ⓨ Ⓝ
(b) i. Ⓐ Ⓑ Ⓒ
ii. Ⓐ Ⓑ Ⓒ
iii. Ⓐ Ⓑ Ⓒ
iv. Ⓐ Ⓑ Ⓒ