Computer Networks
2nd Year, 2nd Semester

Tutorial 4 – SAMPLE ANSWERS

1. Which of the following describes static routing?
    a) Routes are determined by a static RARP table.
    b) Routes are automatically entered into a routing table.
    c) **Routes are manually entered into the routing table by the network administrator.**
    d) Routes are received from the local name server and are permanently entered into the routing table.

2. What are the basic functions of a router?
    a. Maintaing the configuration files
    b. Selecting the best paths(routes) to remote networks
    c. Maintaining an updated routing tables

3. Describe an AS (Autonomous System).
    A collection of inter-connected routerd and networks under ONE administrative control domain area.

4. Why do we use Routing Protocols?
    To select the best path toward remote networks and maintain an updated routing table in every router based on the receiving routing updated from neighbourng routers.

5. State the main difference between the Interior Routing protocols and Exterior Routing Protocol. Give examples of IP Routing protocols.

Interior Routing protocols	Exterior Routing Protocol
Routing Protocols used within an Autonomous system	Routing Protocols used between Autonomous systems
Ex :- RIP , EIGRP , OSPF	Ex :- BGP

6. What are the problems in RIP and write the solutions for them.

Problem	Solution
Slow convergence	Triggered Updates
Instability	Split Horizen
Counting to Infinity	Route Poisoning
RIPv2 cannot identity Classless addresses	RIPv2

7. Compare and contrast RIPv1 and RIPv2.

RIPv1	RIPv2
Used in classfull networks only	Used in classfull and classless both networks
Does not automatically summarize network addresses	Automatically summarize network addresses

8. Compare and contrast RIP and EIGRP.

RIP	EIGRP
Used in small networks lesser than 16 routers	Used in large networks lesser than 256 routers
AD is 120	AD is 90
Uses a single metric of Hop Count	Uses a composite metric of bandwidth, delay of the line , Reliability, load and Maximum Transmission Unit (MTU)
Not a proprietory protocol	A Cisco proprietory protocol