Name _____ **Active Learning – Dynamic Routing w/ EIGRP – (25 Points)**

For this active learning module, you will:

1. Begin with the network topology provided to you within the attached .pkt.
2. Configure the IP Address, Subnet Mask, and Default Gateway for each PC within the topology.
3. Verify you have full connectivity for all PCs and routers within the topology.
4. Add another site to the existing topology using the following criteria:
    a) Add a new Router (ie: Router4)
    b) Router3 will be connected to the new Router4 via a point-to-point T1 WAN connection using the clocking of 2000K
    c) Router3's interface S0/1/0 (DCE) is connected to Router4's interface S0/1/1
    d) Use the lowest available network address where there will be only 2 usable hosts/subnet to address the WAN connection between Router3 and Router4. The lower IP address of the two in the usable host address range should be assigned to Router3's interface S0/1/0. The next and last usable address within the range should be assigned to Router4's interface S0/1/1.
    e) Router4's interface F0/0 should be connected to Switch4's interface F0/1.
    f) PC4's FastEthernet connection is connected to Switch4's interface F0/10.
    g) Router4's LAN should use the lowest available network address where there will be only 14 usable hosts/subnet. The first available address within the usable host address range should be assigned to Router4's interface F0/0. The next available address should be reserved for Switch4 and the third available address should be assigned to PC4.
    h) Using Router3, create a configuration script for Router4 using the appropriate information (IP Addresses, Subnet Masks, hostname, EIGRP network advertisements).
    i) Paste this configuration into global configuration mode for Router4.
    j) Save the current configuration file to nvram on Router4 and Router3.
5. Verify connectivity among all devices within the topology.
6. Display the ip routing table.
7. Display the ip protocols configured on all of the routers.
8. Display the EIGRP interfaces.
9. Display the EIGRP neighbor(s) table.
10. Display the EIGRP topology table.
11. You should still have full connectivity. Save this file as "YourFirstNameYourLastName-EIGRP-Routing.pkt"

12. Create a Microsoft Word Document and include the following information:

    a) Brief Description of what topic or technology you are concentrating on within this journal. Keep this short and to the point.

b) Topology import: Take the original topology you created within Cisco Packet Tracer and take a screenshot of the topology. Then paste this into your Microsoft Word Document.

c) Table of Command Syntax and the associated description (ie: If you issued a cli command within the Cisco IOS, list it here and write a description as to what it does in your own words) – please make sure this is a nice, easy-to-read table format. (CLI Command on the left, description on the right, and add another column for what mode of Cisco IOS you are in when issuing the CLI command.)

d) Verification (ie: ping, tracert (in windows), traceroute (in Cisco IOS) tools and output)

e) Results / Outcomes (ie: what worked?, what didn't?, and why you think it didn't work if it didn't?) - keep this short and to the point.

13. Upload the following files to this assignment within iLearn:
    a) your .doc or .docx file
    b) your .pkt file

Good Luck with your active learning module!