

## B4.5-R3: INTERNET TECHNOLOGIES AND TOOLS

### NOTE:

1. Answer question 1 and any FOUR questions from 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

**Time: 3 Hours**

**Total Marks: 100**

**1.**

- a) How do we reuse IP address using Network Address Translation (NAT) mechanism?
- b) What is 127.0.0.1? Explain with example.
- c) What is the difference between a packet and a frame?
- d) What is MAC Address Filtering?
- e) Explain the significance of DNS server.
- f) What is Wired Equivalent Privacy (WEP)? Discuss the Security Issues.
- g) Why is HTTP known as a stateless protocol?

**(7x4)**

**2.**

- a) What are the types of wireless networks?
- b) What are EAP, LEAP, PEAP and EAP-TLS & EAP-TTLS?
- c) What is a firewall? Explain with packet filtering concept.

**(6+6+6)**

**3.**

- a) What are routing protocols? Compare and contrast different types of protocol.
- b) What is QoS? Discuss the MPLS & DiffServ techniques in WAN network scenario.
- c) Why is Open Shortest Path First (OSPF) protocol required? What kinds of connections does it support?

**(6+6+6)**

**4.**

- a) What is ATM? Discuss the four types of services provided by it.
- b) Discuss the reasons behind the definition of IPv6/IPng, including the main new features associated with it.
- c) What are the Internet security threats? What are the factors that constitute a good firewall system?

**(6+6+6)**

**5.**

- a) How does a router differ from a bridge?
- b) Differentiate between multi-protocol router and a traditional single-protocol router.
- c) Explain, how multicasting and broadcasting differentiate each other.

**(6+6+6)**

**6.**

- a) Briefly discuss major wireless networking standards.
- b) Describe the risks involved in Plaintext communication over the Internet? What can be done to ensure that these dangers (risks) are dealt with.

**(10+8)**

**7.**

- a) Explain the Reverse Address Resolution Protocol (RARP). Why is it required?
- b) Define the terms Web Site, Web Page, Web Server, URL, Home Page and CGI.

**(6+12)**