



**Kafrelsheikh University - Faculty of Engineering**

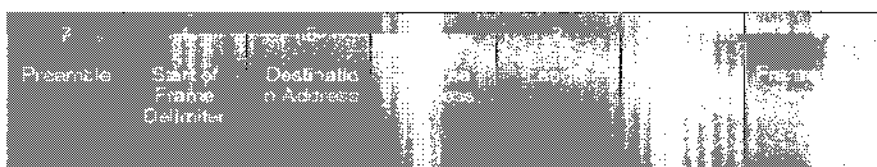
<b>Course</b>	<b>Telecommunication Networks</b>	<b>Date</b>	<b>27/6/2021</b>
<b>Time</b>	<b>3 Hours</b>	<b>Mark</b>	<b>90</b>
<b>Students</b>	<b>4<sup>th</sup> year Electronics and Electrical Communications</b>		

**Answer all the following questions:**

**Clarify your answer with suitable diagrams**

**Q1. Explain in detail the characteristics of the IP protocol. (5 Marks)**

**Q2. In the following figure:**



**a: Explain what this figure represents. (5 Marks)**

**b: Explain Each part of this figure. (10 Marks)**

**Q3. Compare between the TCP and UDP protocols. (10 Marks)**

**Q4: What are the limitations of IPv4? And how these limitations are overcome at IPv6? (10 Marks)**

**Q5: Explain the Rule of the transport layer. (10 Marks)**

**Q6: Explain the three-way handshake of the TCP protocol. (5 Marks)**

**Q7. For the following IPv6 addresses:**

**1. FE80::52: FE37:7FF: FE75:118**

**2. 21F:33FF: FE65:FE75: 5::1**

**a. Write the full address. (10 Marks)**

**b. Is this address EUI-64? Explain why. If it is, write the Mac address. (10 Marks)**

**Q9. The following is the internet settings of a Pc.**

**Ip address: 192.16.0.7**  
**Subnet mask: 255.255.255.0**  
**The default Getway: 172.16.0.8**  
**DNS: 192.168.1.0**

- a. Explain why this PC cannot access the internet. (10 Marks)**  
**b. Write a suitable internet configuration to access the internet. (5 Marks)**

**Good Luck and Best Wishes**

**Dr. Ibrahim Elashry**