



**Q1/ Define two only: (1 mark)**

Bandwidth ,10BASE-T, packet, Fiber Single-mode protocol

**Q2/ How long does it take to transmit a  $x$  KB over a  $y$ -Mbps link? Give your answer as a ratio of  $x$  and  $y$ . (2 marks)**

**Q3/ Answer *THREE* from the following: (3 marks)**

1. What is the Advantages and Disadvantages of Ring topology?
2. What is the Advantages and Disadvantages of Mesh topology?
3. What are the differences between Peer-to-Peer and Client/Server Network?
4. List LANs characterized and components

**Q4/ Answer *TWO* from the following: (2 marks)**

1. What is the name of connectors that used Coax cables, UTP, Phone?
2. In fiber optics, the signal source is \_\_\_\_\_ waves.
3. Optical fibers, unlike wire media, are highly resistant to \_\_\_\_\_
4. You are installing cables for an Ethernet network in an office. The cable segments will not be over 100 m. Which type of media should you choose?

**Q5/ Explain one type of Copper Cables: (1 mark)**

**Q6/ Answer *EIGHT* from the following: (4 marks)**

1. What is correct order of OSI model? P= presentation, S= session, D= data-link, Ph= physical, T= transport, A= application, N= Network.
2. What is the protocol name that resolves domain into IP addresses?
3. What goes into TCP data?
4. What layer converts data into frames?
5. Which layers converts data in to segments?
6. What layer converts data into bits?
7. What is the purpose of TCP protocol?
8. What layer converts data into packets?
9. How many layers TCP/IP model has?
10. Which OSI layer responsible for mail and file transfers?

**Q7/ Answer *TWO* from the following: (2 marks)**

1. What are the benefits of the OSI model?
2. List all steps need for networks to encapsulate data
3. What are Similarities and Differences between TCP/IP and OSI model