

**Answer all the questions**

- 1- State all the types of network with comparing between them.
- 2- Assume you have two servers and four clients and you have all the requirements of software and hardware to setup two local area network, draw how you connect the two local area network and what is the required components if we need to connect the two local area network with the internet.
- 3- Define the data communication and there are different types of data transmission medium to make a connection between devices in network, state the different types with giving examples for each one.
- 4- Transmission of data in network occur by different types of connection explain with giving examples each type.
- 5- Explain the main function of the following network device
  - a) hub
  - b) repeater
  - c) bridge
  - d) switch
  - e) router
  - f) gateway
  - g) wireless access point
- 6- Compare between Proxy , VPN, Firewall to illustrate how each one of them works
- 7- What do you know about MAC address and how can you read it using a program in java?
- 8- Explain briefly the main function of each layer in OSI module.
- 9- According to the application layer there are many applications level protocol that are fall in this layers write these application ( choose at least 5 application with defining the full name and the function of each one).
- 10- According to the functions in transport layer in OSI protocol explain what is meant by the following with giving an example for each one
  - a) segmentation
  - b) reliability
  - c) flow control
- 11- In transport layer there are two different protocols fall in this layer explain the reason of using these two protocols and compare between them.
- 12- Explain how the computers communicated with each other using IP address.

I HOPE YOU ANSWER ALL THE  
QUESTIONS WITH SUCCESSFUL