



Course: CCNA Semester: 2 nd term 2024/2025.	Lecturers: Assoc. Prof. Osama Elnahas, Dr. Nehal ElAzly Assistant: Eng Rania Helal, Eng. Israa Mohsen, Eng. Mariam, Eng. Hazem Hamdy
---	--

Tutorial 7 : Network layer

Answer the following questions:

Q1. Choose the correct Answer:

1- What are the principal network layer communication protocols?			
a) TCP and UDP	b) IPv4 and IPv6	c) HTTP and FTP	d) ICMP and ARP
2- Which of the following is NOT one of the basic operations performed by the network layer?			
a) Addressing end devices	b) Encapsulation	c) Data encryption	d) Routing
3- What operation involves preparing data for transmission over the network?			
a) Addressing	b) Routing	c) Encapsulation	d) De-encapsulation
4- how does IP addressing behave from source to destination?			
a) It changes frequently	b) It remains constant	c) It varies based on the protocol.	d) It is variable depending on the device
5- What is the main function of the IP layer in relation to transport layer segments?			
a) To encrypt data	b) To encapsulate the transport layer segment	c) To route data to the application layer	d) To manage physical connections
6- What type of service does IP provide?			
a) Connection-oriented	b) Connectionless	c) Session-based	d) Stream-based
7- How is the delivery of IP packets characterized?			
a) Guaranteed delivery	b) Best Effort	c) High Priority	d) Secure transmission





8- What type of control information is needed when using IP?			
a) Synchronizations and acknowledgments	b) Only acknowledgments	c) No control information is needed	d) High-level control information
9- What happens when the destination receives an IP packet?			
a) It must send a pre-notification.	b) It receives the packet without pre-notifications.	c) It establishes a connection first.	d) It sends a synchronization signal.
10- What does it mean that IP is unreliable?			
a) It guarantees delivery of packets	b) It cannot manage undelivered or corrupt packets	c) It always retransmits lost packets	d) It ensures packets are received in order
11-What types of media can IP be sent over?			
a) Only copper	b) Only wireless	c) Copper, fiber, or wireless	d) Only fiber optics and coaxial
12-Which of the following functions can IP NOT perform?			
a) Retransmit after an error	b) Route packets	c) Encapsulate data	d) Address end devices

Q2. Mention the basic operations of the network layer.

Q3. Determine with details the drawbacks and advantage of IP protocol.

