

**Disclaimer:**

1. This material is a simplified guideline to the new format of the exam.
2. In the exam, you might be asked questions on topics outside this material.
3. This material on its own is not enough to cover the questions in the exam.
4. **The new exam format** is answer 4 out of 5 questions.
5. Each question will have (A, B, C, D.....) sections each section is either 5 marks or 10 marks.
6. No multi choices in this exam.
7. If you answer all 5 questions only the first four will be marked.
8. Only sections belonging to the same question will be counted.

Q1

- A. If the transmission channels were error-free, do we still need the data link layer?
- B. What is the security goals supported by provided by the WPA2 in IEEE 802.11x?
- C. List the seven IOS layers.

Q2.

- A. Definitions Bandwidth, Refraction.
- B. Define what is the Long Term Evolution Protocol (LET)?
- C. List the service LLC provides to the Upper Layer Protocols (ULP) and explain one of your choices.

Q3.

- A. Which transport layer protocol of the TCP/IP model is preferred when using DNS?  
Discussion it's necessary properties in this context.
- B. List two disadvantages of Wireless ATM networks.
- C. Compare between Carriers Senses Multiple Access/Collision Avoidance (CSMA/CA) and the Carrier Sense Multiple Access/Collision Detection (CSMA/CD)?

Q4.

- A. Explain the independent BSS (IBSS).
- B. What is meant by the signal refraction issue?
- C. What is the purpose of having converged networks?