



Establishment Inter – Etats d’Enseignement Supérieur  
Représentation du Cameroun

**CENTRE D’EXCELLENCE TECHNOLOGIQUE PAUL BIYA**

BP 13 719 Yaounde (Cameroun) Tel. (237) 242 72 99 58/691 902 120 Site web: [www.iaicamerounr.com](http://www.iaicamerounr.com)

E-mail: [contact@iaicameroun.com](mailto:contact@iaicameroun.com)

**Exam: December 2025 Continuous Assessment Cisco Certified Network Associate BA1 A, B, C, D**

Level: I      Academic year: 2025/2026      Branch: Software Engineering      Duration: 2 hours

**Part 1: Multiple Choice Questions (10 questions – 5 Marks)**

Choose the single correct answer.

1. What is the main purpose of a computer network? a) To store all data on a single large computer b) To enable communication and resource sharing without physical movement c) To replace all computers with smartphones d) To restrict Internet access for greater security
2. A network that covers a building or company over a maximum distance of about 1 km is called: a) WAN b) MAN c) LAN d) GAN
3. Among the following topologies, which one is the most vulnerable because a single break stops the entire network? a) Star topology b) Ring topology c) Bus topology d) Mesh topology
4. In which architecture can every computer act as both client and server with no centralized administration? a) Client/Server b) Three-Tier c) Peer-to-Peer (P2P) d) One-Tier (Terminal + Central Server)
5. Which network device operates only at Layer 1 (physical layer) and is used to amplify signals? a) Switch b) Router c) Repeater d) Bridge
6. The main difference between a hub and a switch is that: a) A hub sends data only to the recipient; a switch broadcasts to all ports b) A switch sends data only to the intended recipient using the MAC address; a hub broadcasts to all ports c) A hub works at Layer 3; a switch works at Layer 1 d) A switch works only in wireless mode
7. An extranet is primarily used to: a) Provide public Internet access b) Enable internal communication within a single organization c) Securely interconnect a company with its external business partners d) Connect only smartphones and tablets
8. Which device can connect two networks that use different protocols? a) Switch b) Hub c) Gateway d) Repeater
9. Among the characteristics of a reliable network, which one refers to the ability to continue operating even if one component fails? a) Scalability b) Quality of Service (QoS) c) Fault Tolerance d) Security
10. The process of adding headers to data as it moves down the layers of a model is called: a) Decapsulation b) Fragmentation c) Encapsulation d) Compression

## **Part 2: Written Questions (15 marks)**

**A. Definitions ( $5 \times 1$  marks = 5 marks)** Give a clear and concise definition of each term (maximum 2–3 sentences):

1. Computer Network
2. Network Topology
3. Intranet
4. Extranet
5. Fault Tolerance

**B. General Knowledge Questions ( $5 \times 2$  marks = 10 marks)** Answer each question precisely and in a structured way:

1. Explain the main differences (in purpose, access, and security) between an Intranet, an Extranet, and the Internet. Give a practical example of use for each.
2. Compare the advantages and disadvantages of bus, star, and ring physical topologies in a modern local network environment.
3. Explain the fundamental difference between a hub (concentrator) and a switch, and state in which situations the use of a switch is strongly recommended.
4. List and explain the main advantages and constraints of setting up a computer network in a company.
5. Describe the respective roles of a repeater, a bridge, a router, and a gateway in a network.

**End of exam – Good luck!**