



*Republic of Rwanda  
City of Kigali*



## **GASABO DISTRICT**

### **DISTRICT COMPREHENSIVE ASSESSMENT, RTQF LEVEL... 2022-2023**

**TRADE: NETWORKING AND INTERNET TECHNOLOGIES**

**MODULE: APPLY NETWORK FUNDAMENTALS**

**DATE OF EXAM: 17/03/2023 Duration: 3 H**

**ACADEMIC YEAR: 2022-2023**

#### **Instructions:**

- 1. Answer all questions in section A (55 Marks)**
- 2. Answer three questions in section B (30 Marks)**
- 3. Answer one question in section C (15 Marks)**

#### **Section A**

Q1. Define computer network? **2marks**

Q2. What is the benefit of network in real life? **4marks**

Q3. As a technician, what is the classification of network by geographical area?  
**4marks**

Q4. We have network technologies, what are the technologies below? **4marks**

- I. IEEE 802.3**

## II. IEEE802.11

Q5. Description of network topology by definition and types of topology? **4marks**

Q5 Examine the advantages of topology? **4marks**

Q6. What are the components of network? **4marks**

Q7. As an IT of level 3 describe the classification of network devices? **3marks**

Q8. Explain two types of standard? **3marks**

Q9. Define protocol and what the function of protocols? **4marks**

Q10. What is importance of standard organizations? **4marks**

### **Q11. Multiple questions 2mark for each question.**

1. In what type of topology do all of the computers directly tap into the same cable
  - I. Ring
  - II. Bus
  - III. Star
  - IV. Mesh
2. Which network topology provides multiple communication paths so that an alternative path may be used if a connection fails?
  - I. Ring
  - II. Bus
  - III. Star
  - IV. Mesh
3. The largest WAN is the internet.
  - I. True
  - II. False
4. Computer network require both hardware and software.
  - I. True
  - II. False
5. Even large networks have only one server.
  - I. True
  - II. False
6. A gateway connects networks using different communications.

- I. True
  - II. False
7. A server provides a service to one or many clients to share files, folder or printer.
- I. True
  - II. False
8. A LAN or (local area network) connects computers across the world.
- I. True
  - II. False
9. A router is a device that performs the same tasks as a hub.
- I. True
  - II. False
10. Protocols are rules that computers use to communicate.
- I. True
  - II. False
11. OSI stands for
- I. Open system interconnection
  - II. Operating system interface
  - III. Optical service implementation
  - IV. None of the mentioned

**Section b choose only 3 10 marks for each**

Q11. Match the following

Class B → 24 network 8-Host  
Class C → 8-Host 24 Network  
Class A → 16-Host 16-Network

Q12. Give and explain the seven layers of OSI?

Q13. Differentiate private IP Address and public IP Address with examples?

Q14. Explain the methods of assigning IP address to the computer?

Q15. Differentiate IP addressing forms which are Unicast, Broadcast and Multicast

**SECTION C CHOOSE ONLY ONE 15 MARKS**

Q16. In calculation of IP addresses.

1. Convert binary to decimal conversion

a)  $10100011 =$

2. Decimal to binary conversion

b)  $12_{10} = 1100_2$

3. Hexadecimal to decimal conversion.

c)  $111101111011 = F7B$