



*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 technician what is the classification of network by geographical area?
4marks

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

- I. IEEE802.3**

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 may clients to share files, folder or printer.
- I. True
 - II. False
8. A LAN or (local area network) connects computers a cross 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 computer uses 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 Unicasts, 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) $111101111011 = F7B$