



*Republic of Rwanda
City of Kigali*



**GASABO DISTRICT COMPREHENSIVE ASSESSMENT
FOR 2nd TERM, ACADEMIC YEAR 2022-2023.**

TRADES: NIT

LEVEL: 3

SUBJECT: IOT installation System

Duration : 3-HOURS On/03/2023

instructions to candidates:

- Answer all questions **(100 marks)**.
- Use only blue or black pen for answering.

Note: Results for any candidate who is caught in examination malpractices are nullified.

SECTION A

Q1. What are the following terms 10Marks

- A. IoT and LTE
- B. ARPANET and SigFox
- C. LoRa and LPWAN
- D. Qr-Code and NFC
- E. Ethernet and cellular technology

Q2. What is the difference between ZigBee and Bluetooth? 10 Marks

Q3. How WiFi-6 is Different? 5 Marks

Q4. Benefits of WiFi 6 beyond speed and what do I need to make wifi 6? 5Marks

Q5. What is peer to peer mode? 5 Marks

Q6. What is the Different between Qr-code and NFC. 5 Marks

Q7. Describe Radio frequency Identification. 5Marks

Q8. What are the IoT application? Outline at least 5. 5Marks

Q9. What are things in IoT? outline at least 5 things in IOT. 5Marks

Q10. Describe the satellite and differentiate it from cellular technology. 8Marks

Q11. What are the key abilities of IoT projects? 5Marks

Q12. What are IoT security challenge? 6Marks

Q13. List 6 layers of ZigBee 6Marks

Q14. List and explain ZigBee Network topologies **10Marks**

Q15. Outline Characteristics of ZigBee **5Marks**

Q16. What was the very first connected network? And what happened in 1982? **10Marks**