NATIONAL VOCATIONAL QUALIFICATION

LEVEL 1

GSM REPAIRS AND MAINTENANCE

NATIONAL VOCATIONAL QUALIFICATION

QCF LEVEL 1- GSM MAINTENANCE ASSISTANT

GENERAL INFORMATION

QUALIFICATION PURPOSE

The National Vocational Qualification in GSM Repairs and Maintenance is designed to produce skilled GSM Maintenance Assistants who should be able to install GSM and mobile phone software and carry out basic repairs, and operate a GSM and mobile phone business.

QUALIFICATION OBJECTIVES

The learner should be able to:-

    i.   Work safely in a GSM Repairs and Maintenance Workshop.

    ii. Communicate effectively and understand the basic terms and terminologies required to operate in a GSM Repairs and Maintenance work environment.

    iii.   Install basic GSM and mobile phone software.

    iv.   Carryout basic GSM and mobile phone hardware faults.

    v.   Operate a GSM and Mobile Phone Spare Parts Business.

    vi.   Operate GSM and Mobile Phone Workshop Business.

Mandatory Units

S/No /Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Remark
1	ICT/GRM/001/LI	Occupational Health and Safety	2	20	Level 1
2	ICT/GRM/002/LI	Communication in GSM and Mobile Phones Workshop	2	20	Level 1
3	ICT/GRM/003/LI	Introduction to GSM and Mobile Phones Hardware Faults	3	30	Level 1
4	ICT/GRM/004/LI	Introduction to GSM and Mobile Phones Software	6	60	Level 1
5	ICT/GRM/005/LI	Operate GSM and Mobile Phones Spare Parts Business	3	30	Level 1

6	ICT/GRM/006/LI	Operate GSM and Mobile Phones Workshop Business	3	30	Level 1
			19	190	

NOTE: This is a 19 credit qualification, to achieve this qualification; Learners are required to achieve 19 credits. All units are compulsory for the learners. Each Credit is equivalent to approx. 10 Guided Learning Hours (GLH). The Total Learning Hours will therefore consist of the GLH *plus* the independent learning hours of the candidate, which is generally 50% – 150% of the GLH. ***The actual Total Learning Hours for each Credit will then be a minimum of 15 hours***.

National Vocational Qualification

LEVEL 1 GSM REPAIRS AND MENTAINANCE ASSISTANT

Unit 1: OCCUPATIONAL HEALTH AND SAFETY

Unit Reference Number: ICT/GRM/001/LI

QCF Level: 1

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: *This Unit is aimed at providing the learner with the requisite health and safety requirements when working in a GSM and mobile phone workshop.*

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)

2. Question and Answer (QA)

3. Witness Testimony (WT)

4. Assignment (ASS)

UNIT 01: OCCUPATIONAL HEALTH AND SAFETY

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
LO 1: Apply appropriate safety in GSM and mobile phone workshop.	1.1	Explain safety procedure in GSM mobile workshop.										
	1.2	Use appropriate safety needed in a GSM workshop										
	1.3	Use appropriate safety measures needed in GSM and mobile phone workshop										
	1.4	State the importance of safety equipment in a GSM and mobile phone workshop.										
LO 2: Demonstrate understanding of safety equipment in GSM and mobile phone workshop.	2.1	Identify the basic safety equipment in a GSM and mobile phone workshop.										
	2.2	Use hardware safety equipment in a GSM and mobile phone workshop.										
	2.3	State importance of using the appropriate safety equipment in a GSM and mobile phone workshop.										
LO 3: Adhere to adequate safety precautions in using GSM and mobile phone equipment.	3.1	Identify preventive/corrective steps for a safety equipment in a GSM and mobile phone workshop.										
	3.2	Explain how to maintain hygienic, safe and secure workplace.										
	3.3	Explain the uses of safety equipment in a GSM and mobile workshop as required.										
	3.4	Explain the importance of using the correct tools during GSM and mobile phone repairs.										
LO 4: Apply basic precautions while working on a GSM and mobile phones	4.1	Explain the basic precaution on working on GSM and mobile phones.										
	4.2	State the precautions to be observed when dismantling GSM and mobile phones.										
	4.3	List the correct procedures when coupling GSM and mobile phone that are uncoupled.										
LO 5: Apply personnel health and hygiene rules in GSM and mobile phone work shop.	5.1	State own responsibility under health and safety.										
	5.2	State general rules on hygiene that must be followed.										
	5.3	State correct clothing, footwear, and head wear that should be worn in workshop.										
	5.4	Describe how to deal with cuts, grazes, and wounds.										

Unit 2: COMMUNICATION IN GSM AND MOBILE PHONES

Unit Reference Number: ICT/GRM/002/LI

QCF Level: 1

Credit Value: 2

Guided Learning Hours: 20

Unit Purpose: *This Unit is aimed at equipping the learner with the relevant GSM and mobile phone communication terms and terminologies, and to enable him effectively communicate in his work environment.*

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)

2. Question and Answer (QA)

3. Witness Testimony (WT)

4. Assignment (ASS)

UNIT 02: COMMUNICATION IN GSM AND MOBILE PHONES

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. Page No.				
LO 1: Demonstrate knowledge on GSM mobile phones terms and terminologies.	1.1	State the appropriate terms to use on GSM and mobile phone.									
	1.2	Identify A-Z GSM and mobile phone terms giving their definition.									
	1.3	State the steps involved when using GSM and mobile terminology. (E.g. SMS, MMS, etc.)									
LO 2: Apply the appropriate mobile phone acronyms used by mobile phone technicians.	2.1	State the correct meaning for the GSM and mobile phone acronyms (e.g. mic, bb. etc.)									
	2.2	Interpret GSM and mobile phone number prefixes (e.g. 01, 062, 064, 0803, 0802, 0907etc.)									
	2.3	Mention GSM and mobile phone acronyms.									
LO 3: Use GSM and mobile phone applications.eg timing, navigation, sensor log etc.	3.1	Select the appropriate application to be used in GSM and mobile phones.									
	3.2	Describe how to run an application in a GSM and mobile phone.									
	3.3	State the disadvantages of using a wrong application in a GSM and mobile phone.									
LO 4: Know the importance of digital phones and the implications of social media use.	4.1	State the economic importance of GSM and mobile phone over analogue.									
	4.2	State the social medias used for GSM and mobile communication.									
	4.3	Explain the step when using any of the social media on a GSM and mobile phone.									
	4.4	State the disadvantages of GSM and mobile phone.									
	4.5	Explain security mechanism used in GSM and mobile phone.									

Unit 3: INTRODUCTION TO GSM AND MOBILE PHONE HARDWARE FAULTS

Unit Reference Number: ICT/GRM/001/LI

QCF Level: 1

Credit Value: 3

Guided Learning Hours: 30

Unit Purpose: *This Unit is aimed at acquainting the learner with the basic GSM and mobile phone hardware faults, and the knowledge of the tools/ equipment required to effect the repairs.*

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)

2. Question and Answer (QA)

3. Witness Testimony (WT)

4. Assignment (ASS)

UNIT 03: INTRODUCTION TO GSM AND MOBILE PHONE HARDWARE FAULTS

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref.	Page No.		
LO 1: Demonstrate knowledge of hardware faults and tools used in GSM and mobile phone repairs.	1.1	Explain GSM and mobile phone hardware.									
	1.2	Identify common hardware faults in GSM and mobile phone.									
	1.3	State the differences between hardware and software fault.									
	1.4	Identify common hardware tools used in GSM and mobile phone repairs.									
	1.5	State techniques for fault diagnosis in GSM and mobile phone repairs.									
	1.6	State the advantage of using the appropriate tools during repairs.									
LO 2: Demonstrate knowledge on identification of faults in GSM and mobile phone hardware component	2.1	Identify common hardware faults in GSM and mobile phone									
	2.2	State the components required in hardware fault diagnosis.									
	2.3	Explain the replacement procedure of GSM and mobile phone hardware component.									
LO 3: Diagnose and repair GSM and mobile phones.	3.1	Explain how to carry out trouble shooting, tapping and testing in GSM and mobile phone repairs.									
	3.2	Explain the process involved of tracing and tapping of GSM and mobile phone mother board.									
	3.3	Explain the techniques in tracing /tapping of GSM mobile phone.									
	3.4	Identify appropriate tools to be use when tracing, tapping and testing.									
	3.5	Identify general precaution while dismantling GSM and mobile phone.									
	3.6	State the precautions to be observed in coupling GSM and mobile phone.									
	3.7	Explain the steps in servicing a mobile phone.									

National Vocational Qualification

Unit 4: INTRODUCTION TO GSM AND MOBILE PHONES SOFTWARE

Unit Reference Number: ICT/GRM/001/LI

QCF Level: 1

Credit Value: 6

Guided Learning Hours: 60

Unit Purpose: *This Unit is aimed at providing the learner with the relevant knowledge of various application software, the ability to install and uninstall application software, and how to resolve software and security issues in GSM and mobile phones.*

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)

2. Question and Answer (QA)

3. Witness Testimony (WT)

4. Assignment (ASS)

UNIT 04: INTRODUCTION TO GSM AND MOBILE PHONES SOFTWARE

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type				Evidence Ref. No.	Page	
LO 1: Demonstrate knowledge of GSM and mobile phone software specifications.	1.1	Explain GSM and mobile phone software.							
	1.2	Identify various GSM and mobile phone software.							
	1.3	Explain GSM and mobile phone software terms.							
	1.4	Explain how to install GSM and mobile phone software.							
	1.5	State economic importance of GSM and mobile phone software.							
	1.6	State the social importance of GSM and Mobile phone software.							
	1.7	State the security issues on GSM and mobile phone software.							
LO 2: Update and upgrade GSM and mobile phone operating system.	2.1	State the various operating systems used in GSM and mobile phones.							
	2.2	Mention the steps in updating software in a GSM and mobile phone.							
	2.3	Mention the steps in upgrading software in a GSM and mobile phone.							
LO 3: Demonstrate knowledge of software applications in GSM and mobile phone	3.1	State the appropriate software applications to be used in GSM and mobile phone.							
	3.2	Explain how to run an application in a GSM and mobile phone.							
	3.3	State the implications of not using appropriate software applications in a GSM and mobile phone.							
LO 4: Format/wipe GSM and mobile phone memory.	4.1	Identify the steps involved in formatting/wiping GSM and mobile phone memory.							
	4.2	State the importance of formatting/wiping GSM and mobile phone memory.							
	4.3	State the implications of sudden formatting/wiping GSM and mobile phone memory.							
LO 5: Configure GSM and mobile phones.	5.1	State the procedures of configuring GSM and mobile phones, eg: • APN, • WAP etc.							
	5.2	Mention the requirements for configuring GSM and mobile phones.							
	5.3	Explain the importance of appropriate configuration of GSM and mobile phone.							
	5.4	Explain the use of test point on GSM and mobile phone while flashing.							

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref.	Page No.		
	5.5	Explain the use of test mode while flashing.									
	6.6	Explain the use of firmware during flashing.									
LO 6: Use various flashing boxes in GSM and mobile phone software.	6.1	Identify the various types of flashing boxes used in rectifying GSM and mobile phone faults.									
	6.2	Explain the implications of using a wrong flashing box on a GSM and mobile phone.									
	6.3	Explain the uses of flashing boxes to flash GSM mobile phones.									
LO 7: Apply various flashing USB cable used in GSM and mobile phone software.	7.1	Identify the various types of USB cables.									
	7.2	Explain the functions of USB cables.									
	7.3	Explain the use of USB cables during flashing.									
LO 8: Demonstrate knowledge of dongle/wi-fi/modem/ accessories in GSM and mobile phone software.	8.1	Explain the following: a) dongle b) wi-fi c) modem									
	8.2	Identify the differences among all the items listed above.									
	8.3	List various software accessories and their uses.									
LO 9: Demonstrate knowledge of tripping off / rebooting of GSM and mobile phone.	9.1	Explain causes of tripping off in GSM and mobile phones.									
	9.2	Explain how to perform rebooting of GSM and mobile phones.									
	9.3	Explain how to diagnose and rectify the faults of tripping off and rebooting of GSM and mobile phones.									
LO 10: Demonstrate knowledge of blinking/ hanging in GSM and mobile phones.	10.1	Explain the causes of blinking in GSM and mobile phones.									
	10.2	Explain the causes of hanging in GSM and mobile phones.									
	10.3	Explain how to diagnose and rectify the fault of blinking and hanging									
LO 11: Resolve start-up/ power problems in	11.1	Explain the causes of start-up in GSM and mobile phones.									
	11.2	Explain the causes of power problems in GSM and mobile phones									

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
GSM and mobile phones.	11.3	Explain how to identify and repair start-up and power problems in GSM and mobile phone									
LO 12: Demonstrate knowledge of coding/decoding in GSM and mobile phones.	7.1	Explain the use of codes and decoding in GSM and mobile phones.									
	7.2	Classify various type of codes used in GSM and mobile phones.									
	7.3	Identify various function of codes used in GSM and mobile phones, eg. *#06#,*#0000# ,*2767*2878#, etc.									
	7.4	Explain how to carryout decoding of GSM mobile phone with a forgotten code.									
LO 13: Apply security patterns in a GSM and mobile phone.	8.1	Draw various security patterns used in GSM and mobile phones.									
	8.2	Explain the benefits of security patterns to GSM and mobile phone user									
	8.3	Explain the implications of using mobile phone security patterns.									
LO 15: Demonstrate knowledge of network turbo SIM.	9.1	Identify various GSM and mobile phone network provider in Nigeria.									
	9.2	Identify various categories of turbo SIM.									
	9.3	Use a turbo SIM on GSM and mobile phone.									

Unit 5: OPERATE GSM AND MOBILE PHONE SPARE PARTS BUSINESS

Unit Reference Number: ICT/GRM/005/LI

QCF Level: 1

Credit Value: 3

Guided Learning Hours: 30

Unit Purpose: *This Unit is aimed at equipping the learner with the basic knowledge required to set up a GSM and mobile phone spare parts business.*

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)

2. Question and Answer (QA)

3. Witness Testimony (WT)

4. Assignment (ASS)

UNIT 05: OPERATE GSM AND MOBILE PHONE SPARE PARTS BUSINESS

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref.		Page No.		
LO 1: Demonstrate knowledge on locations of GSM and mobile phone spare parts manufacturer.	1.1	State sources of GSM and mobile phone spare parts.										
	1.2	State GSM and mobile phone spare parts manufacturers.										
	1.3	Identify quality GSM and mobile phone spare parts manufacturers.										
LO 2: Demonstrate knowledge of GSM and mobile phone scraps.	2.1	Explain GSM and mobile phone spare parts.										
	2.2	Identify various GSM and mobile phone scraps.										
	2.3	Explain the importance of GSM and mobile phone scraps to technician/customer.										
	2.4	Explain the importance of GSM and mobile phone scraps technician/ customer.										
LO 3: Replace new or fairly used GSM and mobile phone spare parts.	3.1	Explain GSM and mobile phone spare part.										
	3.2	State the techniques of fixing GSM and mobile phone spare part. E.g. LCD (touch screen), flex, etc.										
	3.3	Match the correct GSM and mobile spare parts.										

Unit 6: OPERATE GSM AND MOBILE PHONE WORKSHOP BUSINESS

Unit Reference Number: ICT/GRM/006/LI

QCF Level: 1

Credit Value: 3

Guided Learning Hours: 30

Unit Purpose: *This Unit is aimed at equipping the learner with the basic knowledge required to set up a GSM and mobile phone workshop business.*

Unit assessment requirements/evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out. ***Simulation is/or is not allowed*** in this unit and level.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)

2. Question and Answer (QA)

3. Witness Testimony (WT)

4. Assignment (ASS)

UNIT 06: OPERATE GSM AND MOBILE PHONE WORKSHOP BUSINESS

LEARNING OBJECTIVE (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.				
LO 1: Demonstrate knowledge of GSM and mobile phone workshop business	1.1	Identify a workshop for GSM and mobile phone business.										
	1.2	Explain various features that make up a GSM and mobile phone workshop business.										
	1.3	State the importance of GSM and mobile phone workshop business.										
	1.4	State the qualities of a GSM and mobile phone workshop business.										
	1.5	State the functions of a GSM and mobile phone workshop business.										
LO 2: Implement a GSM and mobile phone business project.	2.1	Select a GSM and mobile phone business.										
	2.2	Explain how to prepare a business plan for GSM and mobile phone business.										
	2.3	Explain how to implement the GSM and mobile phone business project.										
	2.4	Explain how to evaluate a GSM and mobile phone business project.										
	2.5	Source fund for a mobile phone business										
	2.6	Identify appropriate prerequisite knowledge for mobile phone sales.										
LO 3: Demonstrate knowledge of GSM and mobile phone software specifications	3.1	State categories of GSM and mobile phone software specifications, eg. • Android • Windows • Macintosh • Java • Simbian										
	3.2	Define GSM and mobile phone software terms and acronyms.										
	3.3	Explain how to carryout installation of software in GSM and mobile phones.										
LO 4: Demonstrate knowledge of GSM and mobile phone software benefits.	4.1	Explain the economic importance of GSM and mobile phone software.										
	4.2	Explain the social importance of GSM and Mobile phone software.										
	4.3	Explain the security issues of GSM and mobile phone software.										