

# NATIONAL SKILLS QUALIFICATIONS

# LEVEL: 1

# TITTLE: MOBILE PHONE REPAIRS AND MAINTENANCE

**YEAR:** 

#### NATIONAL VOCATIONAL

#### **QUALIFICATION QCF LEVEL 1-GSM**

#### MAINTENANCE ASSISTANT

#### **GENERAL INFORMATION**

#### QUALIFICATION PURPOSE

The National Vocational Qualification in Mobile 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 phonebusiness.

#### **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	Referenc e Number	NOS Title	Credi t Valu e	Guided Learning Hours	Remark
1	ICT/GRM/001/L1	Occupational Health and Safety	2	20	Level 1
2	ICT/GRM/002/L1	Communication in GSM and Mobile Phones Workshop	2	20	Level 1
3	ICT/GRM/003/L1	Introduction to GSM and Mobile Phones Hardware Faults	3	30	Level 1
4	ICT/GRM/004/L1	Introduction to GSM and Mobile Phones Software	6	60	Level 1
5	ICT/GRM/005/L1	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
		TOTAL	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 foreach Credit will then be a minimum of 15 hours.

#### **National Vocational Qualification**

#### LEVEL 1 GSM REPAIRS AND MENTAINANCE ASSISTANT

Unit 001: OCCUPATIONAL HEALTH AND SAFETY

**Unit Reference Number: ICT/GRM/001/L1** 

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 001: OCCUPATIONAL HEALTH AND SAFETY

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA		vide `ype		Ev:	ider f.	ice Pag	
` ,						eN	0.	1 ag	ļ
The learner will:	1.1	The learner can:					I	Т	
LO 1: Apply	1.1	Explain safety procedure in GSM mobile workshop.							
appropriate safety in GSM and	1.2	Use appropriate safety needed in a GSM							
mobile phone		workshop							
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	2.1	Identify the basic safety equipment in a GSM and mobile phone workshop.							
anderstanding of safety equipment	2.2	Use hardware safety equipment in a GSM and mobile phone workshop.							
in GSM and	2.3	State importance of using the appropriate safety							
mobile phone		equipment in a GSM and mobile phone workshop.							
workshop.									
LO 3:	3.1	Identify preventive/corrective steps for a safety							
Adhere to		equipment in a GSM and mobile phone workshop.							
adequate safety	3.2	Explain how to maintain hygienic, safe and							
precautions in using GSM and	3.2	secure workplace.							
mobile phone	3.3	Explain the uses of safety equipment in a GSM							
equipment.		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	4.1	Explain the basic precaution on working on GSM and mobile phones.							
precautions while working on a	4.2	State the precautions to be observed when dismantling GSM and mobile phones.							
GSMand mobile	4.3	List the correct procedures when coupling GSM							
phones		and mobile phone that are uncoupled.							
LO 5: Apply	5.1	State own responsibility under health and safety.							
personnel health and hygiene rules	5.2	State general rules on hygiene that must be followed.							
in GSM and mobile phone	5.3	State correct clothing, footwear, and head wear that should be worn in workshop.							
work shop.	5.4	Describe how to deal with cuts, grazes, and							
I saumania Ciamata		wounds.	D 4						_
Learner's Signat	ure		Dat	e:					
Assessor's Signat	ure		Dat	æ:					
IQA's Signature			Dat	æ:					
<b>EQA's Signature</b>			Dat	æ:					

Unit 002: COMMUNICATION IN GSM AND MOBILE PHONES

Unit Reference Number: ICT/GRM/002/L1

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

effectivelycommunicate 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 002: COMMUNICATION IN GSM AND MOBILE PHONES

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA		Evidenc eType		Re	vide ef. No.	nce Pa	
The learner will:		The learner can:							
LO 1:	1.1	State the appropriate terms to use on GSM and							
Demonstrate	1.2	mobile phone.							-
knowledge on GSM mobile	1.2	Identify A-Z GSM and mobile phone terms giving their definition.							
phones terms and terminologies.	1.3	State the steps involved when using GSM and mobile terminology. (E.g. SMS, MMS, etc.)							
LO 2: Apply theappropriate	2.1	State the correct meaning for the GSM and mobile phone acronyms (e.g. mic, bb. etc.)							
mobile phone acronyms used by	2.2	Interpret GSM and mobile phone number prefixes (e.g. 01, 062, 064, 0803, 0802, 0907etc.)							
mobile phone technicians.	2.3	Mention GSM and mobile phone acronyms.							
LO 3: Use GSM and	3.1	Select the appropriate application to be used in GSM and mobile phones.							
mobile phone applications.eg	3.2	Describe how to run an application in a GSM and mobile phone.							
timing, navigation, sensor log etc.	3.3	State the disadvantages of using a wrong application in a GSM and mobile phone.							
LO 4: Know the	4.1	State the economic importance of GSM and mobile phone over analogue.							
importance of digital phones and	4.2	State the social medias used for GSM and mobile communication.							
the implications of social media use.	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.							
Learner's Signatu	re		Dat	e:					
Assessor's Signatu	re		Dat	e:					
IQA's Signature			Dat	e:					
EQA's Signature			Dat	e:					

Unit 003: INTRODUCTION TO GSM AND MOBILE PHONE HARDWARE

**FAULTS** 

Unit Reference Number: ICT/GRM/003/L1

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 003:** INTRODUCTION TO MOBILE PHONE HARDWARE FAULTS

LEARNING OBJECTIVE		PERFORMANCE CRITERIA		vide Type		Ev Re	vide ef.	nce
(LO)						eN	lo.	Pag
The learner will:	1.1	The learner can:		I			l I	
LO 1:	1.1	Explain mobile phone hardware.			_			
Demonstrate	1.2	Identify common hardware faults in GSM and						
knowledge of hardware faults	1.3	mobile phone.  State the differences between hardware and						
and tools used in	1.3	software fault.						
GSM and mobile	1.4	Identify common hardware tools used in GSM			+			
phone repairs.	1.7	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:	2.1	Identify common hardware faults in GSM and						
Demonstrate		mobile phone						
knowledge on	2.2	State the components required in hardware fault						
identification of		diagnosis.						
faults in GSM	2.3	Explain the replacement procedure of GSM and						
andmobile phone hardware		mobile phone hardware component.						
component								
	2.1							
LO 3:	3.1	Explain how to carry out trouble shooting, tapping and testing in GSM and mobile phone						
Diagnose and		repairs.						
repair GSM and	3.2	Explain the process involved of tracing and						
mobile phones.	3.2	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.						
Learner's Signatu	re		Da	te:				
Assessor's Signatu	re		Da	te:				
IQA's Signature			Da	te:				
EQA's Signature			Da	te:				

Unit 004: INTRODUCTION TO GSM AND MOBILE PHONES SOFTWARE

**Unit Reference Number:** 

ICT/GRM/001/LILevel: 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 004:** INTRODUCTION TO GSM AND MOBILE PHONES SOFTWARE

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA	Evide eType				ef.	ence Page		
The learner will:		The learner can:								
LO 1:	1.1	Explain mobile phone software.								٦
Demonstrate	1.2	Identify various mobile phone software.								
knowledge of	1.3	Explain mobile phone software terms.								
GSMand mobile	1.4	Explain how to install a mobile phone								
phone software		software.								
specifications.	1.5	State economic importance of mobile								
		phone software.								
	1.6	State the social importance of Mobile								
	1.7	phone software.								
	1./	State security issues on mobile phone software.								
LO 2:	2.1	State the various operating systems used in mobile								$\dashv$
Update and	2.1	phones.								
upgrade GSM and	2.2	Mention the steps in updating software in a mobile								_
mobile phone		phone.								
operating system.	2.3	Mention the steps in upgrading software in a mobile								
		phone.								
LO 3:	3.1	State the appropriate software applications to be								
Demonstrate		used in mobile phone.								
knowledge of	3.2	Explain how to run an application in a mobile								
software	3.3	phone.  State the implications of not using appropriate								
applications in GSM and mobile	3.3	software applications in a mobile phone.								
phone		bottomate approximate in a mostre price.								
LO 4:	4.1	Identify the steps involved in formatting/wiping								_
Format/wipe GSM		GSM and mobile phone memory.								
and mobile phone	4.2	State the importance of formatting/wiping GSM								
memory.		and mobile phone memory.								
	4.3	State the implications of sudden								
		formatting/wiping mobile phone memory.								
105	5.1	State the procedures of configuring GSM and								
LO 5:	3.1	mobile phones, eg:								
Configure GSMand		□ APN,								
mobile phones.		□ WAP etc.								
1										
	5.2	Mention the requirements for configuring GSM								_
		and mobile phones.								
	5.3	Explain the importance of appropriate	[							
		configuration of mobile phone.								

	5.4	Explain the use of test point on mobile phone while flashing.				
	5.5	Explain the use of test mode while flashing.				
	5.6	Explain the use of firmware during flashing.				
LO 6:	6.1	Identify the various types of flashing boxes used				
Use various		in rectifying GSM and mobile phone faults.				
flashing boxes	6.2	Explain the implications of using a wrong flashing				
inGSM and		box on a mobile phone.				
mobilephone 6.3		Explain the uses of flashing boxes to flash				
software.		mobile phones.				
LO 7:	7.1	Identify the various types of USB cables.				
Apply various	7.2	Explain the functions of USB cables.				
flashing USB	7.3	Explain the use of USB cables during flashing.				
cables used in GSM and						
mobile phone						
software.						
LO 8:	8.1	Explain the following:			$\dashv$	
Demonstrate		a) dongle				
knowledge of						
dongle/wi-		b) wi-fi				
fi/modem/		a) 1				
accessories in		c) modem				
GSM and	8.2	Identify the differences among all the items listed				
mobilephone software.	0.2	above.				
software.	8.3	List various software accessories and their uses.				
LO 9:	9.1	Explain causes of tripping off in mobile				
	7.1	phones.				
Demonstrate knowledge of	9.2	Explain how to perform rebooting of mobile				
tripping off /		phones.				
rebooting of GSM	9.3	Explain how to diagnose and rectify the faults of				
and mobile phone.		tripping off and rebooting of mobile				
		phones.				
LO 10:	10.1	Explain the causes of blinking in mobile				
Demonstrate		phones.				
knowledge of	10.2	Explain the causes of hanging in mobile				
blinking/ hanging	10.5	phones.				
in GSM and	10.3	Explain how to diagnose and rectify the fault of				
mobile phones.		blinking and hanging				
LO 11:	11.1	Explain the causes of start-up in mobile				
Resolve start-up/	11.0	phones.			_	
power problems in	11.2	Explain the causes of power problems in mobile				
		phones				

GSM and mobile	11.3	Explain how to identify and repair start-up and					
phones.		power problems in mobile phone					
LO 12:	12.1	Explain the use of codes and decoding in mobile					
Demonstrate		phones.					
knowledge of	12.2	Classify various type of codes used in mobile					
coding/decoding		phones.					
in GSM and	12.3	Identify various function of codes used in					
mobile phones.		mobile phones, eg. *#06#,*#0000# ,*2767*2878#, etc.					
	12.4	Explain how to carryout decoding of mobile					
	10.1	phone with a forgotten code.					
LO 13:	13.1	Draw various security patterns used in GSM and					
Apply security	13.2	mobile phones.					
patterns in a GSM and mobile phone.	13.2	Explain the benefits of security patterns to GSM and mobile phone user					
	13.3	Explain the implications of using mobile phone					
		security patterns.					
LO 14:	14.1	Identify various GSM and mobile phone network					
Demonstrate		provider in Nigeria.					
knowledge of	14.2	Identify various categories of turbo SIM.					
network turbo SIM.	14.3	Use a turbo SIM on GSM and mobile phone.					
SIIVI.							
Learner's Signatu	re		Da	te:			
Assessor's Signatu	re		Da	te:			
IQA's Signature			Da	te:			
EQA's Signature			Da	te:			

Unit 005: OPERATE GSM AND MOBILE PHONE SPARE PARTS BUSINESS

**Unit Reference Number: ICT/GRM/005/L1** 

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 005:** OPERATE GSM AND MOBILE PHONE SPARE PARTS BUSINESS

LEARNING OBJECTIVE		PERFORMANCE CRITERIA		iden ype	ıc			vide ef.	nce	
(LO)		CRITERIA						No.	Pag	5
The learner will:		The learner can:								
LO 1:	1.1	State sources of GSM and mobile phone spare								
Demonstrate	1.2	parts.								
knowledge on locations of GSM	1.2	State GSM and mobile phone spare parts manufacturers.								
and mobile phone spare parts manufacturer.	1.3	Identify quality GSM and mobile phone spare parts manufacturers.								
LO 2:	2.1	Explain GSM and mobile phone spare parts.								
Demonstrate	2.2	Identify various GSM and mobile phone scraps.								
knowledge of GSM and	2.3	Explain the importance of GSM and mobile phone scraps to technician/customer.								
mobilephone scraps.	2.4	Explain the importance of GSM and mobile phone scraps technician/ customer.								
LO 3:	3.1	Explain GSM and mobile phone spare part.								
Replace new or fairly used GSM and mobile phone	3.2	State the techniques of fixing GSM and mobile phone spare part. E.g. LCD (touch screen), flex, etc.								
spare parts.	3.3	Match the correct GSM and mobile spare parts.								
Learner's Signatu	Learner's Signature Date:									
Assessor's Signature Date:										
IQA's Signature			Dat	e:						
EQA's Signature			Dat	e:						

Unit 006: OPERATE GSM AND MOBILE PHONE WORKSHOP BUSINESS

Unit Reference Number: ICT/GRM/006/L1

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 006: OPERATE GSM AND MOBILE PHONE WORKSHOP BUSINESS

LEARNING OBJECTIVE (LO)		PERFORMANCE CRITERIA		vide Sype				Ev Re	vide ef.	nce Pa	
, ,								eN	o.		9
The learner will:		The learner can:		ı	ı						
LO 1:	1.1	Identify a workshop for GSM and mobile phone								1	
Demonstrate	1.2	business.									
knowledge of	1.2	Explain various features that make up a GSM and mobile phone workshop business.								i	
GSM and mobile	1.3	State the importance of GSM and mobile phone									
phone workshop business	1.5	workshop business.								ı	1
business	1.4	State the qualities of a GSM and mobile phone									
		workshop business.								i	
	1.5	State the functions of a GSM and mobile phone									
		workshop business.								i	
LO 2:	2.1	Select a GSM and mobile phone business.									
Implement a GSM	2.2	Explain how to prepare a business plan for GSM									
and mobile phone		and mobile phone business.									
business project.	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:	3.1	State categories of GSM and mobile phone									
Demonstrate		software specifications, eg.								i	
knowledge of		Android								i	
GSM and mobile		• Windows								i	
phone software specifications		Macintosh								i	
specifications		• Java								i	
		• Simbian								ı	
	3.2	Define GSM and mobile phone software terms									 
		and acronyms.								i	
	3.3	Explain how to carryout installation of software									
		in GSM and mobile phones.									
LO 4:	4.1	Explain the economic importance of GSM and									
Demonstrate	1.5	mobile phone software.									
knowledge of	4.2	Explain the social importance of GSM and Mobile									
GSM and	4.3	phone software.									
mobilephone software	4.3	Explain the security issues of GSM and mobile phone software.									
benefits.		phone software.									
Learner's Signature Date:											
Assessor's Signat	Assessor's Signature Date:										
IQA's Signature			Dat								
EQA's Signature Date:											

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