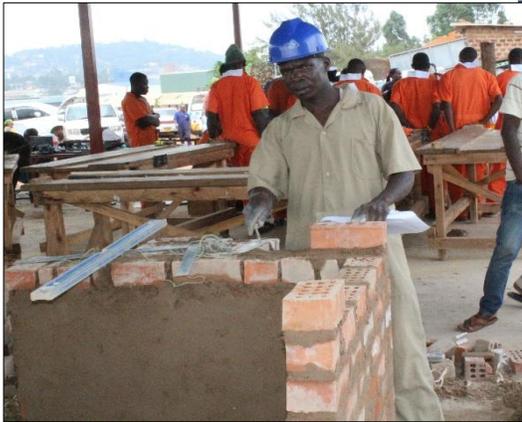




THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training



**Assessment and Training
Package**

**For a
BUILDER**

Qualification Level: 1

Occupational Cluster: Technology and Design

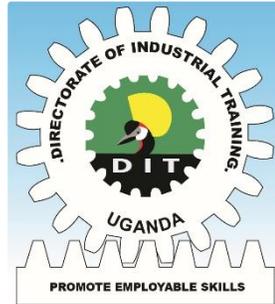
September 2020

Reviewed by:

**Directorate of Industrial Training
Qualifications Standards Department**

Supported by:

Government of Uganda



Assessment and Training Package

**For a
BUILDER**

Qualification Level: 1

Occupational Cluster: Technology and Design

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Under BTVET Act, 2008, the functions of the Directorate of Industrial Training are:

- (a) To identify the needs of the labour market for occupational competencies that fall under the UVQF.
- (b) To regulate apprenticeship schemes.
- (c) To foster and promote entrepreneurial values and skills, as an integral part of the UVQF.
- (d) To secure adequate and sustainable financing for the efficient operations of the Directorate.
- (e) To accredit training institutions or companies as assessment centres.
- (f) To determine fees payable under the Act.
- (g) To develop, apply, expand and improve the purposeful application of Uganda vocational qualifications defined in the UVQF.
- (h) To assess and award Uganda Vocational Qualifications.
- (i) To promote on-the-job training in industry for apprenticeship, traineeship and indenture training and for other training such as further skills training and upgrading.
- (j) To prescribe the procedure for the making of training schemes.

Further to the above provisions, there is an established Uganda Vocational Qualifications Framework (UVQF), under part V of the BTVET Act, 2008. It is stated that:

The purpose of the UVQF is to;

- (a) Define occupational standards in the world of work.
- (b) Define assessment standards.
- (c) Award vocational qualifications of learners who meet the set standards of different studies.
- (d) Provide guidelines for modular training.

The UVQF shall follow principles of Competence Based Education and Training (CBET) which include:

- (a) Flexible training or learning modules.
- (b) Positive assessment and certification.
- (c) Assessment of prior learning.
- (d) Recognition of formal and non-formal training.
- (e) Self-paced or individual learning.
- (f) Work place learning.

For award and recognition of certificates, the BVET Act, 2008 provides that:

- (1) The Directorate and other examination boards established under the Act shall award certificates and diplomas for Business, Technical or Vocational Education and Training under the UVQF.
- (2) The Certificates and Diplomas to be awarded shall be in the form prescribed by the Minister on the recommendation of the Industrial Training Council.
- (3) The Certificates and Diplomas awarded under the Act shall be recognised in the Uganda education system and by the labour market.

Under the TVET Implementation Standards 2020, the proposed new mandate of the Directorate of Industrial Training shall be restricted to promoting the highest standards in the quality and efficiency of industrial training in the country and ensuring an adequate supply of properly trained manpower at all levels in the industry and the world of work.

The functions shall include:

- (a) Regulating Industrial Training and Trainers.
- (b) Developing Industrial Training Curricula.
- (c) Harmonising Curricula and Certificates of competence.
- (d) Assessing Industrial Training.
- (e) Development of Occupational Standards and Assessment and Training Packages (ATPs) for Trade Testing for the industry and world of work.
- (f) Awarding certificates in that respect.

At operational level in the Directorate, the Qualification Standards Department performs development tasks related to concepts, procedures and instruments for establishment of the UVQF in close collaboration with both public and private stakeholders in vocational training.

In particular, the Department organises and coordinates the development of Assessment and Training Packages for use in competence-based vocational training as well as standards-based assessment and certification.

The Directorate has therefore produced this Assessment and Training Package for use in implementing Competence-Based Education and Training mechanisms.

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Word from Permanent Secretary

The Kajubi Report (1989) and the Uganda Government White Paper on Education Review (1992) emphasised that the Uganda Secondary School Education should be vocationalised.

The World Bank Report on education in Uganda 2007 observed that although Uganda was experiencing steady economic growth on one hand, the secondary education curriculum was inadequately addressing the social and economic needs of the country on the other. The Report further noted that it is not the very top academic cadres that contribute most to the growth of the GDP but rather the competent middle level technicians that are flexible and technologically literate that the economy needs in the labour market at all levels.

Correspondingly, the NDP III 2020/21- 2024/5 highlights (i) low labour productivity (ii) high youth unemployment (38%) (iii) low transition rates from training to employment (35%) as some of the key challenges to Human Capital Development in Uganda.

In order to overcome these challenges, NDP III 2020/21- 2024/5, under objective 2 peaks the need to train the learners for the urgently needed skills and mainstream a dual education and training system. This paved way for the development of the lower secondary school vocational curriculum which supports both academic and vocational training.

The afore is in line with the Uganda Vision 2040. Under section 261, it emphasises that learners will be accorded opportunities to excel in the skills areas they are placed into. These will range from sports and cut to technical and vocational training. Hitherto, section 262 clearly states that the entire education system will be changed to emphasise practical skills, attitude and moral values.

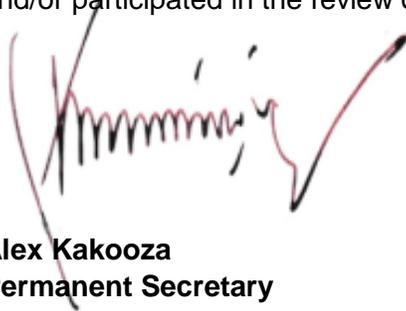
Government of Uganda through the Ministry of Education and Sports rolled out the New Lower Secondary Curriculum in secondary schools countrywide during the first term of the academic year 2020. The overall goal of this curriculum is to produce graduates with employable skills and who are competitive in the labour market. It should be emphasised that vocational training will produce graduates who are employable. In the New curriculum, emphasis will be on equipping learners with employable skills and competencies. This will enable learners perform the requisite duties of the specified occupations. This is the reason why the lower secondary school vocational curriculum was tailored to the assessment requirements of the world of work.

Reading from the Curriculum Framework page 12, it is stated that the learners will be assessed by DIT. Upon assessment and certification, the graduates will be employable and competitive in the labour market. It's against this background that DIT, within its mandate vested in the BTVET Act, 2008 comes on board to take the lead in the development of the requisite Assessment and Training Packages (ATPs) for the various occupations that will be assessed under the Lower Secondary Curriculum.

The ATPs can be used by any training provider and/or those who wish to present themselves for Occupational Assessment and Certification.

Herewith, the Directorate of Industrial Training presents the Assessment and Training Package for training, assessment and certification of a **BUILDER QUALIFICATION LEVEL 1**.

Finally, I thank all individuals, organisations and review partners who have contributed and/or participated in the review of this noble document.



Alex Kakooza
Permanent Secretary

Executive Summary

This Assessment and Training Package is a Competence-Based Education and Training (CBET) tool and consists of three major parts:

- 0.1 **PART I: The Occupational Profile (OP) of a BUILDER.** This Occupational Profile which was reviewed by Builders practicing in the world of work mirrors the duties and tasks that Builders are expected to perform.
- 0.2 **PART II: Training Modules** in the form of guidelines to train Builders both on the job as well as in training centres (or combinations of both venues of learning). The Training Modules herein have been reviewed basing on the Occupational Profile and hence are directly relevant for employment.
- 0.3 **PART III: Assessment Instruments** in the form of performance (Practical) and written (theory) test items that can and should be used to assess whether a person complies with the requirements of employment as a BUILDER. These assessment instruments were reviewed jointly by job practitioners (Builders) and instructors based on the occupational profile and training modules.
- 0.4 While the Occupational Profile (OP) contained in PART I of this document provides the information on **WHAT a person is expected to do** competently in the world of work, the test items, - including performance criteria- of PART III qualify the **HOW and/or HOW WELL a person must do the job.**
- 0.5 The modular format of the curriculum (PART II) allows learners to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration allowing flexibility for learners to move directly into an entry level job, go for further modules or advance to higher levels of training. Modular courses allow more learners to access the training system because training centres as well as companies can accommodate more learners in a given period of time.
- 0.6 In addition to improved access, equity and relevance of BTVET, the UVQF will also enable people who are convinced to have acquired competencies laid down in this ATP through prior training and on-the-job experience to access assessment and certification directly; be it on the basis of a single module, a group of modules or all modules pertaining to the occupation at once. This achievement will facilitate Recognition of Prior Learning (RPL).

0.7 The parts of this Assessment and Training Package were sequentially reviewed as follows:

- i Part 1: Occupational Profile: **August 2020**
- ii Part 2: Training Modules: **August 2020**
- iii Part 3: Assessment Instruments (initial bank): **August 2020**

This ATP (or parts of it) may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

DIT takes responsibility of any shortcomings that might be identified in this publication and welcomes suggestions for effectively addressing the inadequacies. The suggestion can be communicated to DIT through P.O. Box 20050, Kampala or through email uvaf.dit@gmail.com.



Patrick Byakatonda
Ag Director

Acknowledgement

The Qualifications Standards Department of DIT wishes to sincerely acknowledge the valuable contributions to the review of this Assessment and Training Package by the following persons, Institutions and organisations:

- Members of the DIT Industrial Training Council,
- The Director and staff of DIT,
- Ministry of Education and Sports,
- The practitioners from the world of work,
- Teachers of Bricklaying and Technical Drawing from various Secondary Schools,
- Builder Curriculum Specialists from NCDC,
- Examination Specialists from UNEB,
- The facilitators involved in guiding the review panel in their activities,
- The Government of Uganda for financing the review of this ATP.

Abbreviations and Acronyms

A&C	Assessment and Certification
ATP	Assessment and Training Packages
CBET	Competency Based Education and Training
DIT	Directorate of Industrial Training
ITC	Industrial Training Council
GoU	Government of Uganda
LWA	Learning-Working Assignment
MC	Modular Curriculum
MoES	Ministry of Education and Sports
OP	Occupational Profile
PEX	Practical Exercise
PTI	Performance (Practical) Test Item
QS	Qualification Standards
RPL	Recognition of Prior Learning
TIB	Test Item Bank
TVET	Technical, Vocational, Education and Training
UVQ	Uganda Vocational Qualification
UVQF	Uganda Vocational Qualifications Framework
WTI	Written (Theory) Test Item
PPE	Personnel Protective Equipment

Key Definitions

Assessment	Assessment is the means by which evidence is gathered and judged to decide if an individual has met the stipulated assessment standards or not. Testing is a form of formal assessment.
Certification	Certification is a formal procedure to issue a certificate (qualification) to an individual that has demonstrated during formal assessment that he/she is competent to perform the tasks specified in the occupational profile.
Competence	Integration of skills, knowledge, attitudes, attributes and expertise in doing /performing tasks in the world of work to a set standard.
Competency	(Occupational) competence is understood as the ability to perform tasks common to an occupation at an acceptable level.
CBET	Competence-based education and training means that programs: <ol style="list-style-type: none">1. have content directly related to work2. focus is on 'doing something well'3. assessment is based upon industry work standards, and4. curricula are developed in modular form
Duty	A Duty describes a large area of work in performance terms. A duty serves as a title for a cluster of related Tasks (see also: TASK).
Learning-Working Assignment (LWA)	LWA are simulated or real job situations / assignments that are suitable for learning in a training environment (e.g. "small projects"). In a working environment LWAs are real work situations /assignments.
Modules	Modules are part(s) of a curriculum. Modules can be considered as "self-contained" partial qualifications which are described by learning outcomes or competencies and which can be assessed and certified individually.
Occupational Profile (OP)	<p>An Occupational Profile is an overview of the duties and tasks a job incumbent is expected to perform competently in employment.</p> <p>Occupational Profiles developed by practitioners from the world of work enhance the relevance of training and learning to the requirements of the world of work.</p>

Occupational Profiles define what a person is supposed to do in performance terms. It also contains generic information regarding related knowledge and skills, attitudes/behavior, tools, materials and equipment required to perform as well as trends/ concerns in the occupation.

Occupational profiles are the reference points for developing modular curricular and assessment standards

Qualification A qualification is a formal recognition for demonstrating competence, based on formal assessment against set standards. A qualification is provided to the individual in form of a certificate specifying the nature of the competence.

Task Job tasks represent the smallest unit of job activities with a meaningful outcome. Tasks result in a product, service, or decision. They represent an assignable unit of work and have a definite beginning and ending point. Tasks can be observed and measured. (*Also see: Duty*)

1.0 ATP-PART I

Occupational Profile for a BUILDER

- 1.1 The OCCUPATIONAL PROFILE (OP) for “Builder” below defines the **Duties** and **Tasks** a competent Builder is expected to perform in the world of work (on the job) in Uganda and the East African region today.
- 1.2 Since it reflects the skill requirements of work life, the Occupational Profile is the reference document for the subsequent development of training modules and assessment instruments (test items) which are directly relevant to employment in Ugandan and the East African businesses and industries.
- 1.3 To ensure that the Occupational Profile is relevant for employment in Uganda and East Africa, the DIT used the method of “occupational/job profiling.”¹

This approach involves the brainstorming of a panel of 8 to 12 competent job practitioners guided by trained and experienced facilitators. During a two-day workshop the panelists defined the duties and tasks performed in employment, as well as the prerequisite skills, knowledge, attitudes, tools and equipment, and the future trends and concerns in the occupation/job.

- 1.4 The panelists, facilitators and coordinators who participated in developing this Occupational Profile are listed on the following page.

Job Expert Panel

Tusasiire Mark

Arch Forum LTD

Balikoowa Robert

Kiira College Butiki

Epiat Denis

Ndejje S.S.S

Semuwemba Siraje

Eskorn

Kavuma Abubaker

NCDC/ Kibuli S.S

Guma Lawrence

Seeta High School

Rutaro Nicholas

Lugogo VTI

Ssendawula Martin

King's College Buddo Wakiso

Mpaata Keziron

Infra Build

Nahabwe Elisa

Ntinda Vocational Training Institute

Facilitators

Ahimbisibwe Judith

Directorate of Industrial Training

Mwesigwa Isaac

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Kirabo Thomas Mugenyi

Directorate of Industrial Training

Coordinator

Mukyala Ruth

Directorate of Industrial Training

Funded by

The Government of Uganda



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training

Occupational Profile
For a
"A Builder"

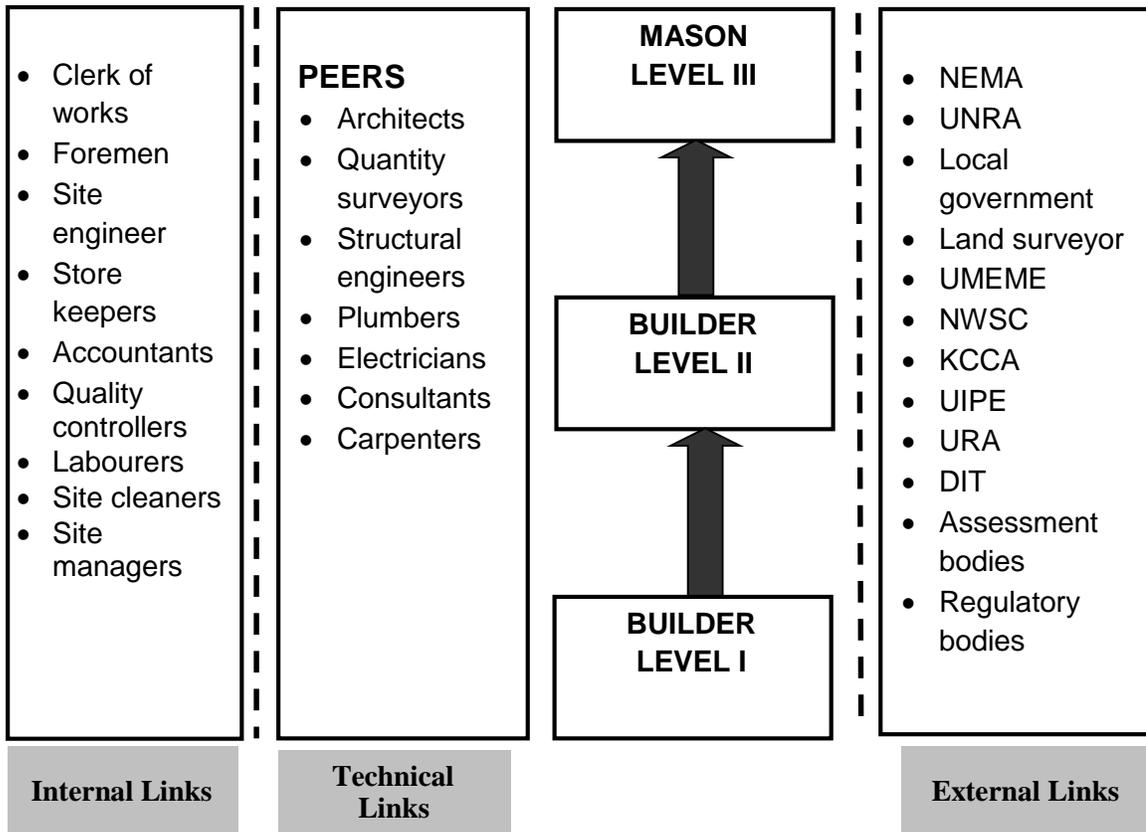
Reviewed by: Qualifications Standards
Department of Directorate of Industrial
Training

Dates of workshop: 14th- 18th September 2020

NOMENCLATURE FOR THE OCCUPATION OF BUILDER

Definition: A Builder is a person who is able to construct, demolish, and repair a building structure.

JOB ORGANISATION CHART FOR A BUILDER



Descriptions for the levels in the occupation of "Builder"

A Builder Level I: Is a person who can set-up simple structures up to 10m long. He/she is also able to construct sub structures on strip foundations and also construct super structures by using header and stretcher bonds.

A Builder Level II: Is a person who can set up both square-conered and multi angled bungalow structures. This person is able to construct sub structures on strip, stepped and foundations. She/he can construct walls up to 3-block thick, cavity and parapet walls as well as thresholds. She/he is also able to construct arches (semi-circular and segmental) as well as apply various finishes including tiles, pavers, cornice and coping.

A Mason Level III: Is one who is a highly skilled implementer.

Duties and Tasks

A. PLAN WORK	A1. Conduct a site survey	A2. Prepare working drawings	A3. Calculate building cost
	A4. Prepare work contracts	A5. Select tools, equipment and materials	A6. Mobilise resources
B. PREPARE SET OUT	B1. Clear the site	B2. Demarcate work area	B3. Determine levels
	B4. Interpret drawings	B5. Set profiles	B6. Mark trenches
C. ERECT SUB STRUCTURE	C1. Excavate trenches	C2. Cast concrete foundation	C3. Erect plinth walls
	C4. Backfill trenches	C5. Compact the back fill	C6. Hardcore filling
	C7. Sand blinding	C8. Lay DPM	C9. Cast over site concrete
D. ERECT SUPER STRUCTURE	D1. Set out	D2. Lay DPC	D3. Build walls
	D4. Cast ring beams/lintel	D5. Check finished work	D6. Clean tools and equipment
E. PERFORM CONCRETE WORK	E1. Mix concrete	E2. Transport concrete	E3. Cast concrete in form work
	E4. Compact concrete	E5. Cure concrete	E6. Remove shattering
F. MODIFY STRUCTURES	F1. Identify defects in structures	F2. Alter designs	F3. Determine method of work
	F4. Demolish structures	F5. Build components	F6. Perform finishing work

G. MAINTAIN RECORDS	G1. Record data	G2. Open files	G3. File records
	G4. Classify records	G5. Store records	G6. Refer to records
	G7. Update records		

H. OBSERVE HEALTH AND SAFETY	H1. Site hoarding	H2. Provide sanitary facilities	H3. Provide first aid facilities
	H4. Wear protective equipment	H5. Maintain cleanliness of workplace	H6. Display safety signs
	H7. Sensitise workers on communicable diseases	H8. Manage waste	

I. PERFORM ADMINISTRATIVE TASKS	I1. Consult superiors	I2. Orient and induct workers	I3. Enforce sign language usage
	I4. Recommend disciplinary action for workers	I5. Train workers	I6. Attend workshops and seminars
	I7. Prepare reports	I8. Advertise work	I9. Recruit workers
	I10. Appraise and terminate workers	I11. Guide and counsel workers	I12. Supervise workers
	I13. Remunerate workers		

Additional Information

<p>Generic Knowledge & Skills</p> <ol style="list-style-type: none"> 1. Communication 2. Setting out 3. Planning 4. Supervising 5. Mixing materials 6. Plumbing & fitting 7. Elementary carpentry 8. Steel bending 	<ol style="list-style-type: none"> 9. Sharpening tools 10. Compacting skills 11. Moulding bricks 12. Operating machines 13. Interpret drawing sketches 14. Safety and health precaution 15. Building finishes 16. Taking measurements
<p>Tools, Equipment and Material</p> <ol style="list-style-type: none"> 1. Trowel 2. Building line 3. Plumb bob 4. Square 5. Spirit level 6. Water level 7. Spade 8. Hoe 9. Wheelbarrow 10. Tape measure 11. Hammer 12. Straight edge 13. Mixer 14. Booster 15. bricks 	<ol style="list-style-type: none"> 16. Bow saw 17. Hack saw 18. Axe 19. Vibrator 20. Chisel 21. Panga 22. Concrete mixer 23. Sand 24. Cement 25. Aggregates 26. Hard core 27. Sand blinder 28. DPC 29. DPM 30. Steel bars 31. Timber
<p>Trends and Concerns</p> <ol style="list-style-type: none"> 1. Use of computers 2. Use of digital tools 3. Use of light materials 4. Improved designs 5. Change in government policies 	<p>Attitude / Traits / Behaviour</p> <ol style="list-style-type: none"> 1. Punctual 2. Respectful 3. Hardworking 4. Honest 5. Organised 6. Responsible 7. Ability to work in a team 8. Duty consciousness 9. Disciplined 10. Safety conscious 11. Innovative 12. Care for company property 13. Good morals 14. Smart

2.0 ATP – PART II

Training Modules for a Builder

- 2.1 A curriculum is a “guide /plan for teaching and learning” which provides a guide to teachers, instructors and learners. In the envisaged system of competence-based or outcome-oriented education and training (CBET), Curricula are no longer the benchmark against which assessment is conducted. It is rather the Occupational Profile that provides the benchmark for Curriculum development as well as assessment.
- 2.2 This modular format of the curriculum allows learners of BUILDER to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration allowing learners to move directly into an entry level job, do further modules and advance to higher levels of training. Modular courses allow more learners to access the training system because training centres, as well as companies can accommodate more learners in a given period of time.
- 2.3 The modules were reviewed jointly by both instructors and job practitioners. They were reviewed using the Occupational Profile as a reference point and taking into account the specifications of training and learning outcomes.
- 2.4 The modules contain “Learning-Working Assignments” (LWAs) and related “Practical Exercises” (PEXs) as key elements.
- LWAs are simulated or real job situations/assignments that are suitable for learning in a training environment (e.g. “small projects”). In a working environment, LWAs are real work situations.
- PEXs are therefore sub-sets of a LWA.
- 2.5 In principle, and following the philosophy of Competence-Based Education and Training (CBET), the modules can be used as a guide for learning in a training Centre, at the workplace; or a combination of both.

WHO IS A BUILDER QUALIFICATION LEVEL 1?

A **Builder Level 1**: Is a person who can set-up simple structures up to 10m long. He/she is also able to construct sub structures on strip foundations and also construct super structures by using header and stretcher bonds.

TRAINING MODULES FOR A BUILDER UVQ LEVEL 1

Code	Module Title	Average duration	
		Contact hours	Weeks
UE/BL/M1.1	Erect a Sub-structure with Right Angles	160	4
UE/BL/M1.2	Build a Super Structure with Right Angles and Perform Beam Filling	120	3
UE/BL/M1.3	Carryout Basic Bridging Woks	40	1
UE/BL/M1.4	Carryout Basic Finishes	120	3
UE/BL/M1.5	Carryout Entrepreneurship Skills	40	1
Summary	5 Training Modules	480 hours	12 Weeks

Note: Average duration is contact time but NOT calendar duration

It is assumed that:

- 1 day is equivalent to 8 hours of nominal learning and
- 1 month is equivalent to 160hours of nominal learning

Information given on the average duration of training should be understood as a guideline. Quick learners may need less time than indicated or vice versa.

At completion of a module, the learner should be able to satisfactorily perform the included Learning Working Assignments, their Practical exercises and attached theoretical instructions, as the minimum exposure.

Prior to summative assessment by recognized Agencies, the users of these Modules Guides are encouraged to carefully consider continuous assessment using samples of (or similar) performance (practical) and written test items available in part 3 of this ATP.

Code	UE/BL/M1.1
Module title	M1.1: Erect a Substructure with Right Angles
Related Qualification	Part of Uganda Vocational Qualification (Builder UVQ1)
Qualification Level	1
Module purpose	After completion of this module, a trainee shall be able to construct a building up to floor slab level.
Learning-Working Assignments (LWAs)	<p>LWA 1/1: Set out Building</p> <p>LWA 1/2: Construct Foundation Base</p> <p>LWA 1/3: Build Plinth Wall</p> <p>LWA 1/4: Fill Hardcore</p> <p>LWA 1/5: Cast over Site Concrete</p> <p>LWA 1/6: Observe Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> <i>The learning exercises may be repeated until the trainee acquires targeted competence;</i> <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 1/1: Set out Building</p> <p>PEX 1.1: Interpret working drawings</p> <p>PEX 1.2: Fix site datum and mark different levels</p> <p>PEX 1.3: Establish building square</p> <p>PEX 1.4: Fix pegs and profiles</p> <p>PEX 1.5: Demarcate excavation trenches</p> <hr/> <p>LWA 1/2: Construct Foundation Base</p> <p>PEX 2.1: Excavate trenches</p> <p>PEX 2.2: Mix concrete</p> <p>PEX 2.3: Transport concrete</p> <p>PEX 2.4: Cast concrete</p> <p>PEX 2.5: Compact concrete</p> <hr/> <p>LWA 1/3: Build Plinth Wall</p> <p>PEX 3.1: Mix mortar</p> <p>PEX 3.2: Transport mortar</p> <p>PEX 3.3: Build walls</p>

	<p>LWA 1/4: Fill Hardcore PEX 4.1: Fill marram PEX 4.2: Compact marram PEX 4.3: Apply hardcore PEX 4.4: Apply sand blinding</p> <p>LWA 1/5: Cast Oversite Concrete PEX 5.1: Mix concrete PEX 5.2: Transport concrete PEX 5.3: Place concrete PEX 5.4: Compact concrete PEX 5.5: Cure concrete</p> <p>LWA 1/6: Observe Occupational Health, Safety and Environmental Protection Practices PEX 6.1: Manage waste PEX 6.2: Build hoarding PEX 6.3: Display safety signs PEX 6.4: Wear protective gear PEX 6.5: Practice firefighting PEX 6.6: Practice work moral ethics PEX 6.7: Conduct tool box meeting PEX 6.8: Administer first aid PEX 6.9: Maintain personal hygiene PEX 6.10: Carryout timbering to trenches</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
Pre-requisite modules	None
Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Identify tools and equipment • Define a datum peg and state its function and importance • Differentiate between a frontage line and the subsidiary line • State different method of setting right angled corners as well as checking for diagonals • Define profile boards and state their purpose • The handling, care and storage of materials • Proportioning, practice in mixing until proficient

	<ul style="list-style-type: none"> • Compaction • Methods of transporting concrete • Definition of concrete • Characteristics of concrete • Methods of curing concrete • Definition of setting out • Methods of setting out • Definition of a sub-structure • Features of a sub-structure • Procedure of casting over site concrete • Definition of form work • Procedure of making formwork • Definition of plinth walls • Dimensions of a plinth wall • Definition of stripped foundation • Knowledge on safety and hygiene
Average duration of learning	<p>160 hours (20 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • <i>5 days of occupational theory and</i> • <i>15 days of occupational practice</i>
Suggestions on organisation of learning	<p>The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.</p>
Assessment	<p>Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.</p>
Minimum required tools/ equipment/ implements or equivalent	<p>Straight edges, hammers (including sledge hammers and lump hammer), hand saws, marking equipment, spirit level, spade, hoe, wheel barrow, plumb bob, builder's square, steel square, trowel, water level, tape measure, building line, chisel, pick axe, hoe</p>
Minimum required materials and consumables or equivalent	<p>Nails, timber, pegs, dump proof membrane, water, hardcore, cement, bricks, sand, aggregate.</p>
Special notes	

Code	UE/BL/M1.2
Module title	M1.2: Build a super structure with right angles and perform beam filling
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (Builder UVQ1)
Qualification Level	1
Module purpose	After completion of this module, the trainee shall be able to dump proof and build walls up to the roof.
Learning-Working Assignments (LWAs)	<p>LWA 2/1: Set out Super Structure LWA 2/2: Build Solid Wall Using Header or Stretcher Bonds LWA 2/3: Cast Ring Beam LWA 2/4: Build Walls Above Wall Plate LWA 2/5: Observe Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The learning exercises may be repeated until the trainee acquires targeted competence; 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.
Related Practical Exercises (PEXs)	<p>LWA 2/1: Set out Super Structure PEX 1.1: Interpret working drawings PEX 1.2: Take measurements PEX 1.3: Mark wall positions</p>
	<p>LWA 2/2: Build Solid Wall Using Header or Stretcher Bonds PEX 2.1: Lay DPC PEX 2.2: Mix mortar PEX 2.3: Transport mortar PEX 2.4: Build walls</p>
	<p>LWA 2/3: Cast Ring Beam PEX 3.1: Batch materials PEX 3.2: Mix concrete PEX 3.3: Transport concrete PEX 3.4: Cast concrete in formwork PEX 3.5: Compact concrete PEX 3.6: Cure concrete</p>

	<p>LWA 2/4: Build Walls Above Wall Plate PEX 4.1: Batch materials PEX 4.2: Mix materials PEX 4.3: Prepare scaffold PEX 4.4: Lay bricks and level</p> <p>LWA 2/5: Observe Occupational Health, Safety and Environmental Protection Practices PEX 5.1: Manage waste PEX 5.2: Build hoarding PEX 5.3: Display safety signs PEX 5.4: Use protective gear PEX 5.5: Practice firefighting PEX 5.6: Practice work moral ethics PEX 5.7: Conduct tool box meeting PEX 5.8: Administer first aid PEX 5.9: Maintain person hygiene PEX 5.10: Carryout timbering to trenches</p>
Occupational health and safety	<p>Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs</p>
Pre-requisite modules	<p>None</p>
Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Define form work • State purpose of form work • Define dump proofing • State the purpose of using damp proofing • Types of dump proof • Define block and brick • Differentiate blocks and bricks • State application areas of blocks and bricks • Define bonding • Differentiate between stretcher and header bonding • Advantages and disadvantages of the different types of bonds • Define scaffolding • State purposes of scaffolding • Knowledge on health and safety • Interpret working drawings

Average duration of learning	120 hours (15 days) of nominal learning suggested to include: <ul style="list-style-type: none"> • 3 days of occupational theory and • 12 days of occupational practice
Suggestions on organisation of learning	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.
Minimum required tools/ equipment/ implements or equivalent	hammers (including sledge hammers and lump hammer), hand saws, marking equipment, spirit level, spade, hoe, wheel barrow, plumb bob, builder's square, trowel, water level, tape measure, building line, chisel, hoe, trowel.
Minimum required materials and consumables or equivalent	nails, timber, dump proof course, water, cement, bricks, sand, aggregate.
Special notes	

Code	UE/BL/M1.3
Module title	M1.3: Carryout Basic Bridging Woks
Related Qualification	Part of: Uganda Vocational Qualification (Builder UVQ 1)
Qualification Level	1
Module purpose	After completion of this module, a trainee shall be able to prepare pre-cast and cast-in-situ lintels over a straight opening
Learning-Working Assignments (LWAs)	<p>LWA 3/1: Prepare a Pre-Cast Reinforced Concrete Lintel LWA 3/2: Prepare a Cast-in-Situ Lintel LWA 3/3: Prepare a Wooden Lintel LWA 3/4: Observe Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> <i>The learning exercises may be repeated until the trainee acquires targeted competence;</i> <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 3/1: Prepare a Pre-Cast Reinforced Concrete Lintel PEX 1.1: Prepare formwork for precast lintel PEX 1.2: Prepare and place reinforcement in formwork for pre-cast lintel PEX 1.3: Cast and compact concrete in pre-cast lintel PEX 1.4: Position pre-cast lintel over straight opening</p> <p>LWA 3/2: Prepare a Cast-in-Situ Lintel PEX 2.1: Prepare formwork PEX 2.2: Prepare and place reinforcement and position into formwork PEX 2.3: Cast concrete in formwork PEX 2.4: Cure concrete</p> <p>LWA 3/3: Prepare a Wooden Lintel PEX 3.1: Measure and cut wood to the required length PEX 3.2: Lay mortar on the abutments and position wooden lintel to level</p>

	<p>LWA 3/4: Observe Occupational Health, Safety and Environmental Protection Practices</p> <p>PEX 4.1: Administer first aid PEX 4.2: Wear personnel protective gear PEX 4.3: Maintain personal hygiene PEX 4.4: Practice communicable and non-communicable disease prevention PEX 4.5: Manage wastes PEX 4.6: Clean tools and equipment PEX 4.7: Clean surrounding environment PEX 4.8: Use firefighting equipment</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs.
Pre-requisite modules	None
Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Define lintels • State types of lintels • Discuss advantages and disadvantages of the different types of lintels • Differentiate the types of lintels • State area of application of different types of lintels • Formwork • Procedure of placing lintels • Process of preparing lintels • Procedure of curing concrete • Define curing • Health, safety and environmental knowledge
Average duration of learning	<p>40 hours (5 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 1 days of occupational theory and • 4 days of occupational practice
Suggestions on organisation of learning	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.

Assessment	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank
Minimum required tools/ equipment/ implements or equivalent	measure tapes and rules, shovels, wheel barrow, chutes, edging tools, trowel machine, hand float, bu floats, stipple plumb rules, jointing tools, hammers, bolster, shovels, spirit levels, dumpy levels, mortar, boards, straight edges, profiles lines, pointing/ranking tools.
Minimum required materials and consumables or equivalent	bar chairs, branching peg spacers, edge form/boards, fabric sheets, cement, sand, water.
Special notes	The bridging work will be limited to straight openings

Code	UE/BL/M 1.4
Module title	M1.4 Carryout Basic Finishes
Related Qualification	Part of Uganda Vocational Qualification (Builder UVQ1)
Qualification Level	1
Module purpose	After completion of this module, a trainee shall be able to plaster, render and screed effectively.
Learning-Working Assignments (LWAs)	<p>LWA 4/1: Plaster Walls LWA 4/2: Render Walls LWA 4/3: Apply Cement Sand Screed LWA 4/4: Build Splash Apron LWA 4/5: Observe Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. <i>The learning exercises may be repeated until the trainee acquires targeted competence;</i> 2. <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i>
Related Practical Exercises (PEXs)	<p>LWA 4/1: Plaster Walls</p> <p>PEX 1.1: Prepare surface PEX 1.2: Batch materials PEX 1.3: Mix materials PEX 1.4: Set plaster gauge PEX 1.5: Apply mortar on prepared surface PEX 1.6: Level using a straight edge PEX 1.7: Perform wood floating PEX 1.8: Perform steel floating</p>
	<p>LWA 4/2: Render Walls</p> <p>PEX 2.1: Prepare surface PEX 2.2: Batch materials PEX 2.3: Mix materials PEX 2.4: Set render gauge PEX 2.5: Apply mortar on prepared surface PEX 2.6: Level using a straight edge PEX 2.7: Perform wood floating</p>

	<p>LWA 4/3: Apply Cement Sand Screed</p> <p>PEX 3.1: Prepare surface PEX 3.2: Apply floor gauge PEX 3.3: Batch materials PEX 3.4: Mix materials PEX 3.5: Ram mortar PEX 3.6: Place mixed mortar and trim off excess mortar PEX 3.7: Perform wooden floating PEX 3.8: Perform steel floating PEX 3.9: Cure floor</p> <p>LWA 4/4: Build Splash Apron</p> <p>PEX 4.1: Setout splash apron PEX 4.2: Demarcate trench PEX 4.3: Excavate trench PEX 4.4: Cast concrete layer PEX 4.5: Build brick walls to a required height PEX 4.6: Back fill and compact masonry PEX 4.7: Cast concrete in splash open formwork PEX 4.8: Render wall surface PEX 4.9: Apply cement screed PEX 4.10: Cure floor area</p> <p>LWA 4/5: Observe Occupational Health, Safety and Environmental Protection Practices</p> <p>PEX 5.1: Administer first aid PEX 5.2: Wear personal protective gear PEX 5.3: Maintain personal hygiene PEX 5.4: Practice communicable and non-communicable disease prevention PEX 5.5: Manage wastes PEX 5.6: Clean tools and equipment PEX 5.7: Clean surrounding environment PEX 5.8: Use firefighting equipment</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
Pre-requisite modules	None

<p>Related knowledge/ theory</p>	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Define plastering, rendering as finishing techniques • Differentiate between plastering and rendering • State advantages and disadvantages of plastering and rendering as finishing techniques. • Describe the process of plastering and rendering • Describe screed finish • Describe the process of curing out a screed finish • Define curing • State the advantages and disadvantages of using screed finish as a finishing technique • Define skirting as applied to building • Describe the process of constructing a splash apron • State the purpose of construction a splash apron and a screed. • State the defects observe on a skirting, splash apron and screed and recommended remedies. • Health, safety and environmental knowledge
<p>Average duration of learning</p>	<p>120 hours (15 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 4 days of occupational theory and • 11 days of occupational practice
<p>Suggestions on organisation of learning</p>	<p>The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.</p>
<p>Assessment</p>	<p>Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.</p>
<p>Minimum required tools/ equipment/ implements or equivalent</p>	<p>tape measure, shovels, wheelbarrow, edging tools, brick trowel, plumb bob, hammers, bolster, shovels, spirit levels, dumpy levels, mortar, boards, straight edges, profiles lines, wooden float, rammer.</p>
<p>Minimum required materials and consumables or equivalent</p>	<p>bricks, wire nails, aggregate, timber, cement, sand, water.</p>
<p>Special notes</p>	

Code	UE/BL/M 1.5
Module title	M 1.5: Carryout Entrepreneurship
Related Qualification	Part of Uganda Vocational Qualification (Builder UVQ1)
Qualification Level	1
Module purpose	After completion of this module, a trainee shall be able to perform basic book keeping, market builders, services and do basic pricing
Learning-Working Assignments (LWAs)	<p>LWA 5/1: Market Builders' Services LWA 5/2: Carryout Basic Book Keeping LWA 5/2: Perform Basic Pricing</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The learning exercises may be repeated until the trainee acquires targeted competence; 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.
Related Practical Exercises (PEXs)	<p>LWA 5/1: Market Builders' Services PEX 1.1: Advertise builders' services PEX 1.2: Provide good customer care PEX 1.3: Communicate effectively</p> <p>LWA 5/2: Carryout Basic Book Keeping PEX 2.1: Record material in and out flows PEX 2.2: Record work progress. PEX 2.3: Record workers' attendance</p> <p>LWA 5/3: Perform Basic Pricing PEX 3.1: Establish cost of materials PEX 3.2: Establish cost of tools and equipment PEX 3.3: Establish cost of labor</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
Pre-requisite modules	None
Related knowledge/ theory	<i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i>

	<ul style="list-style-type: none"> • Types of records used by builder • Definition of the different types of documents used by builder • Starting a builder business • Components of different types of documents used by builder • Methods of marketing builder products • Explain marketing • Definition of information, communication and technology • Types of communications and technologies • Benefits of communication and technology
Average duration of learning	<p>40 hours (5 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • <i>2 days of occupational theory and</i> • <i>3 days of occupational practice</i>
Suggestions on organisation of learning	<p>The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.</p>
Assessment	<p>Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.</p>
Minimum required tools/ equipment/ implements or equivalent	<p>calculator, telephone set/mobile phone, electrical tool and equipment</p>
Minimum required materials and consumables or equivalent	<p>pens, pencil, paper, rubbers, rulers, reference text books.</p>
Special notes	

3.0 ATP- PART III

Assessment Instruments for a Builder

- 3.1 Assessment of occupational competence is the procedure by which evidence is gathered and judged to decide if an individual (candidate) has met the stipulated assessment standards.
- 3.2 Assessment of occupational competence should comprise of both practical (performance) testing and written (theory/knowledge) testing.
- 3.3 Based on the Occupational Profile and Training Modules, a combined panel of job practitioners and Instructors reviewed a substantial number of test items for assessing (practical) performance as well as items for assessing occupational knowledge (theory) all stored in an electronic Test Item Bank (TIB) at the Directorate of Industrial Training.
- 3.4 Performance (Practical) Test Items (PTI) are closely related to typical work situations in Ugandan business enterprises. They comprise of a test assignment for candidates and assessment criteria and/or scoring guides for assessors' use.
- 3.5 Written Test items (WTI) for written testing of occupational theory, (knowledge) are presented in different forms which include:
- Short answer test items.
 - Multiple choice test items
 - Matching test items,
- These WTIs herein focus on functional understanding as well as trouble-shooting typically synonymous with the world of work.
- 3.6 Composition of assessment/test papers will always require good choices of different types of WTI in order to ensure the assessment of relevant occupational knowledge required of candidates to exhibit competence.
- 3.7 The test items contained in the Test Item Bank may be used for continuous/formative assessment during the process of training as well as for summative assessment of candidates who have acquired their competences non-formally or informally.
- 3.8 In this document, samples of test items for assessing both performance (practical) and occupational knowledge (theory) of a **BUILDER** are included.

3.9 Overview of Test Item Samples Included

No	Type of test Items	Numbers included
1	Written (theory) - short answer	2
2.	Written (theory) - multiple choice	2
3.	Written (Theory)- matching with generic	1
4	Written (Theory)- matching with work sequence	1
5.	Performance (Practical) test items	1
Total		07

WRITTEN TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Written (Theory) Test Item- No. 1			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer	√		
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	September 2020			
Related modules:	M1.2			
Time allocation:	3 minutes			

Test Item	List any two methods of curing concrete			
Answer spaces	(i)			
	(ii)			
Expected key (answers)	(i) Water spraying			
	(ii) Matting or socking			
	(iii) Sand laying			
	(iv) Polythene sheet			
	(v) Curing additives			

DIT/ QS	Test Item Database Written (Theory) Test Item- No. 2			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer	√		
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C2			
Date of OP:	September 2020			
Related modules:	M1.1, M1.2			
Time allocation:	3 minutes			

Test Item	List any three (3) tools used by a builder to erect a wall
Answer spaces	(i) (ii) (iii)
Expected key (answers)	(i) Trowel (ii) Plumb bob (iii) Spirit level (iv) Builder square (v) Lines and pins (vi) Tape measure (vii) Water level

DIT/ QS	Test Item Database Written (Theory) Test Item- No. 3			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	√		
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C1			
Date of OP:	September 2020			
Related modules:	M1.1			
Time allocation:	2 minutes			

Test Item	Which tool is best used for setting and testing walls at right angles?
Distracters and correct answer	A. Plumb bob B. Builders' square C. Spirit level D. Tape measure

Key (answer)	B
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DIT/ QS	Test Item Database Written (Theory) Test Item- No.4			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	√		
	Matching item	Generic	Cause- Effect	Work-sequence
Complexity level:	C1			
Date of OP:	September 2020			
Related modules:	M1.1			
Time allocation:	2 minutes			

Test Item	Why is it necessary to se DPC in walling?
Distracters and correct answer	<p>A. To make the wall strong</p> <p>B. To beautify the wall</p> <p>C. To prevent moisture from rising up the wall</p> <p>D. To prevent cracks in the wall</p>

Key (answer)	C
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DIT/QS	Test Item Database Written (Theory) Test Item- no. 5			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
		√		
Complexity level:	C2			
Date of OP:	September 2020			
Related Modules:	M1.1, M1.2			
Time allocation:	3 minutes			

Test Item	Match the following tools with building operations at the site
------------------	--

Column A (Tools)	
1	Trowel
2	Hoe and spade
3	Plumb bob
4	Spirit level

Column B (Building operations)	
A	Excavation
B	Building wall
C	Vertical straightness
D	Transport mortar
E	Setting out
F	Same plane

Key (answer)	1: B, 2: A, 3: C, 4: F
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 6			
Occupational Title:	Builder			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause-Effect	Work-sequence
				√
Complexity level:	C2			
Date of OP:	July 2020			
Related module:	M1.1M1.2			
Time allocation:	4 minutes			

Test Item	Rearrange the following Procedures involved in casting a floor slab
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Column A (chronology)	Column B (work steps) in wrong chronological order	
1 st	A	Cure Concrete
2 nd	B	Transport Concrete
3 rd	C	Batch Materials
4 th	D	Mix Materials
5 th	E	Compact Material
6 th	F	Place Materials

Key (answer)	1-C, 2-D, 3-B, 4-F, 5-E, 6-A
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PERFORMANCE TEST ITEMS (Samples)

DIT/ QS	Test Item Database Performance Test Item- no. 7
Occupational Title:	Builder
Competence level:	Level 1
Code no.	
Test Item:	Set out a one roomed house 3000 mm x 3000 mm
Complexity level:	P 2
Date of OP:	September 2020
Related module:	M1.1
Related skills and knowledge:	Knowledge of interpret drawings and sketches, knowledge of safety precautions, levelling skills, taking measurements, elementary carpentry, setting squares.
Required tools, Materials and Equipment:	Steel tapes, spirit level, water level, plumb bob, building square pencil, wooden pegs, profile boards, assorted nails, sledge hammer, claw bar, claw hammer, bow saw, hand saw, panga strings
Time allocation:	4 hours
Preferred venue:	Site
Remarks for candidates	<ul style="list-style-type: none"> ◆ Observe safety, health and environmental precautions
Remarks for assessors	<ul style="list-style-type: none"> ◆ Provide tools and materials ◆ Prepare work area

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
1	Preparations for a task	<u>Wore protective gear</u> Overall, helmet, safety shoes, gloves, face masks,		
		<u>Cleaned work place</u> Identify/select and assemble tools		
2	Selected tools and materials	Sawing-handling rules for saw	1	
		Length of profile pegs 100 mm x 75 mm x 1 m ± 5 mm		2
		Profile board 150 mm x 50 mm x 1.5 m,		1

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Nails -2", 2 1/2", 3"	1	
		Checked tools and instruments	3	
3	Levelled site	Reduced to a common surface +2m - all around structure	3	
		Levelled ground	2	
		Cleared excess cut soil 5m away	2	
5	Interpreted working drawings	Set out building	3	
		Corrected orientation and size	3	
		Set out building according to the working drawing observed		3
6	Establish datum or reference level	Location; safe distance from setting works 2m	3	
		Peg; measured off-set from edge of structure 2m ± 5mm.	2	
		Marked and excavated peg 300 ± 10mm	2	
7	Set building line	From existing buildings, provided by designer or local authority	4	
		Measured and marked off set	3	
8	Set front of building	Measured and marked centre of building along the ranging line		4
		Measured overall length and marked with pegs 3m ± 5mm.	4	
9	Set corner	Placed square at one of the pegs and one line along the building line	4	
		Stretched a line from this corner peg and parallel to the second side of the square	3	
		Measured with 3m ± 2mm, marked third peg.	2	
10	Transferred the buildings square to third peg	Repeated operation in step 8	1	
		Measured and marked the length and width of third and fourth sides respectively.	2	
11	Measured diagonal	Stretched building lines around pegs	1	
		Measured diagonals to ± 10mm.	2	
		Made correction or adjustment where necessary	2	
12	Set profile pegs	Measured and marked for profiles 2m ± 15mm from lines	3	

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Profiles erected		2
		Plumbed, levelled and cut to 900mm height	2	
13	Set profile boards	Set with water level	3	
		Nailed on profile pegs		1
14	Transferred lines to profile boards	Stretched all lines beyond proof		4
		Transferred lines with plumb bob to profile boards	2	
		Marked and fixed nails on boards	2	
		Fixed and stretched string lines	1	
15	Measured wall thickness and foundation over laps	Measured from centre and marked for wall thickness $150 \pm 2\text{mm}$	3	
		Marked for foundation $600\text{mm} \pm 10\text{mm}$		3
16	Transferred foundation lines to the ground	Marked by dropping lines with plumb bob		4
17	Erected barrier ground works	High light lines with sand, chalk line or paint		2
		Use warning tape	3	
	TOTAL		72	26
	Maximum score (Y)	$\frac{X}{Y} \times 100$	98	

4.0 ATP- PART IV

INFORMATION ON REVIEW PROCESS

4.1 Occupational Profile Review (September 2020)

The Occupational Profile was exclusively reviewed by job practitioners who were working in the Builder occupation. The job expert panel, guided by DIT Facilitators defined duties and tasks performed and provided additional generic information regarding the occupation.

4.2 Training Module Review (September 2020)

Based on the Occupational Profile for Builder of September 2020, Training Modules were reviewed by job practitioners, guided by DIT Facilitators.

4.3 Test Item Review (September 2020)

Based on the Occupational Profile for Builder of September 2020, and Training Modules, Test Items were reviewed by combined panels of instructors and job practitioners, guided by DIT Facilitators.

4.4 Methodology

The rationale for the Assessment and Training Package development was to link Vocational Education and Training to the real world of work by bridging Occupational Standards to Training Standards through industry-led Standards-Based Assessment.

Active participation of both instructors and job practitioners' panels consolidated the development philosophy.

The panelists worked as teams in workshop settings complemented by off-workshop field research and literature review activities including international benchmarking.

4.5 Review Panel

The participating panels of Job Practitioners required at different stages were constituted by members from the following organisations:

No	Name	Institution/ Organisation
1.	Tusasiire Mark	Archforum LTD
2.	Balikoowa Robert	Kiira Collage Butiki
3.	Epiat Denis	Ndejje S.S.S
4.	Semuwemba Siraje	Eskorn
5.	Kavuma Abubaker	NCDC/ Kibuli S.S
6.	Guma Lawrence	Seeta High School
7.	Rutaro Nicholas	Lugogo VTI
8.	Ssendawula Martin	King's Collage Buddo Wakiso
9.	Mpaata Keziron	Infra Build
10.	Nahabwe Elisa	Ntinda Vocational Training Institute

4.6 Facilitator team

This Assessment and Training Package was reviewed by a Facilitator team listed below:

1. **Team Leader:** Ms Mukyala Ruth Ag. Deputy Director/QS Dept, DIT
2. **Facilitators:** Ms. Ahimbisibwe Judith, DIT; and Mr. Mwesigwa Isaac, DIT, Mr. Kirabo Thomus Mugenyi, DIT
3. **Data Entrants:** Ms. Atukwase Esther, Data Entrant DIT, Mr. Tumusiime Edward, Data Entrant DIT.
4. **Compiled by:** Mr. Tumusiime Edward, Data Entrant DIT.
5. **Edited by:** Ms Mukyala Ruth Ag. Deputy Director\QS DIT.
6. **Coordinated by:** Mr. Byakatonda Patrick, Ag. Director, DIT;

4.7 Reference:

The Assessment and Training Package was revised in September 2020 and may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

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