NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT

DEPARTMENT OF LAND AND SPATIAL SCIENCES

QUALIFICATION(S): BACHELOR OF PROPERTY STUDIES DIPLOMA IN PROPERTY STUDIES	
QUALIFICATION(S) CODE: 08BOPS 06DIPS	**NQF LEVEL:** 5
COURSE CODE: BCS512S	**COURSE NAME:** BUILDING CONSTRUCTION
EXAMS SESSION: NOVEMBER 2025	**PAPER:** THEORY
DURATION: 3 HOURS	**MARKS:** 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	MS ELINA TEODOL
MODERATOR:	VERINJAERAKO KANGOTUE

INSTRUCTIONS

1. Read the entire question paper before answering the Questions.
2. Please write clearly and legibly!
3. The question paper contains a total of **4** questions.
4. You must answer **ALL QUESTIONS.**
5. Detach Appendix A after completing it and submit it with the Examination Booklet(s).
6. Make sure your Student Number is on the EXAMINATION BOOK(S).

PERMISSIBLE MATERIALS

1. Non-programmable Scientific Calculator

THIS QUESTION PAPER CONSISTS OF 8 PAGES (Including this front page)

Question 1

For each of the following statements indicate whether it is *'TRUE'* or *'FALSE'*. Each correct answer carries 1 mark.

1.1 A raft foundation distributes loads over a large area, making it suitable for weak soils.

1.2 In Namibia, damp proof membranes (DPM) are unnecessary because the climate is dry.

1.3 Architects are primarily responsible for structural calculations.

1.4 A Building Compliance Certificate is required before legal occupation of a property.

1.5 Hollow block bricks are stronger than super bricks.

1.6 Strip footing foundations are common in residential construction.

1.7 Windhoek's climate requires high thermal mass materials.

1.8 Kevlin Lynch defined site planning as "arranging structures on the land and shaping spaces between them."

1.9 Electrical layouts are optional in municipal building plans.

1.10 Network analysis techniques are used in construction planning.

1.11 In coastal Namibia, galvanised corrugated sheets are unsuitable.

1.12 Elevations show the external view of buildings.

1.13 A superstructure is below ground level.

1.14 Rationalised building seeks to replace in-situ work with prefabricated units.

1.15 All construction projects require soil testing before foundation work.

1.16 Floor slabs are typically 500mm thick.

1.17 System building refers to factory-produced components assembled on-site.

1.18 Building sketches are not legally acceptable for municipal approval.

1.19 Thermal comfort in Namibia is achieved through thick walls and natural ventilation.

1.20 A roof plan shows the foundation details of the building.

[20]

Question 2

Provide brief answers to the following questions:

2.1 Define a Building Compliance Certificate. (2)

2.2 List three stages of building construction (2)

2.3 Give two (2) differences between strip and pile foundations. (2)

2.4 Why is soil testing necessary before construction: (2)

2.5 Mention two planning techniques in construction. (2)

2.6 Define "superstructure." (2)

2.7 Name two types of architectural drawings. (2)

2.8 Mention two (2) roles of a Quantity Surveyor. (3)

2.9 Name two (2) types of architectural drawings. (2)

2.10 State two (2) advantages of rationalised building methods. (2)

2.11 Explain in brief the term 'Slenderness Ratio' in structural strength and stability of a building. (2)

2.12 Identify the six (6) methods in which buildings were produced in terms of time. (6)

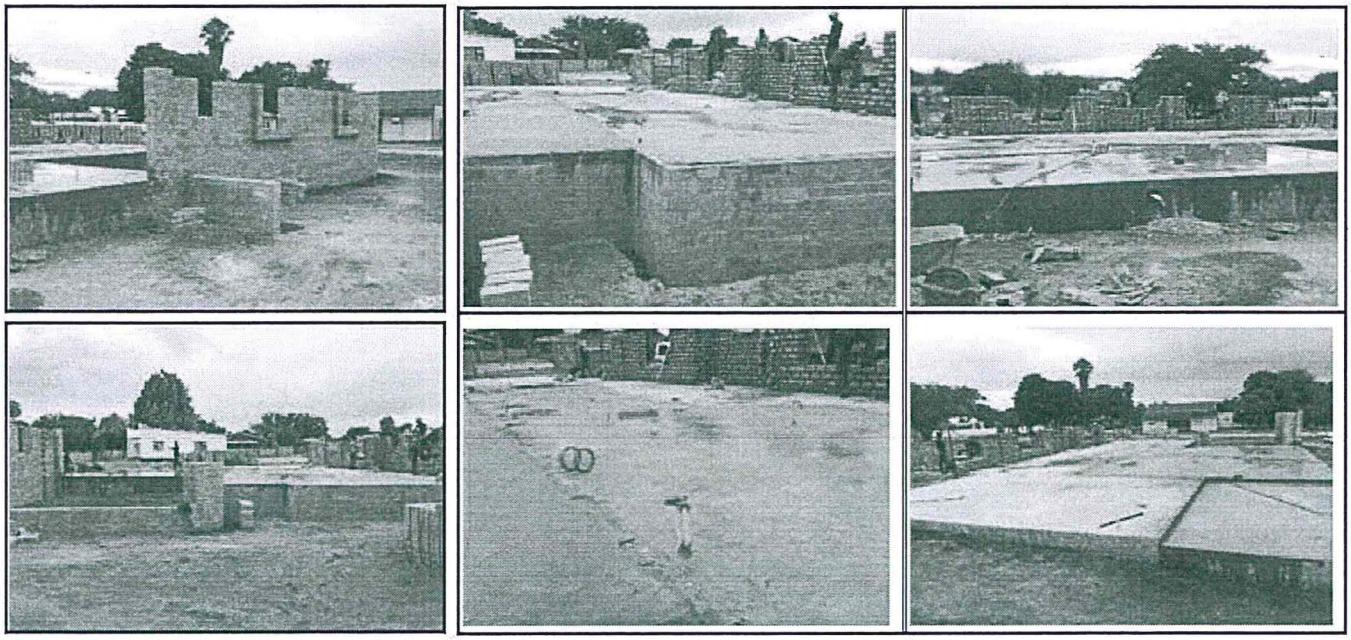
2.13 Mention five (5) constraints on building construction in terms of performance requirements of Buildings (5)

2.14 Differentiate between *"Damp proof Course"* and *"Damp proof membrane"* as used in the construction industry (3)

[37]

Question 3

Erf 865 was inspected by a property valuer on the 02nd October 2025. Below are the images taken during the initial physical inspection. All the work seems to be progressing well and meet the bank's minimum requirements in terms of workmanship. (16)



The initial inspection was done at 15% and the payment due to the Contractor is N$100 747.42, while the

retention amount is N$570 902.03.

Complete the table attached as Appendix A by calculating the progress payment amount due to progress the contractor at the following stages of the construction work:

i) 50%

ii) 75%

iii) 85%

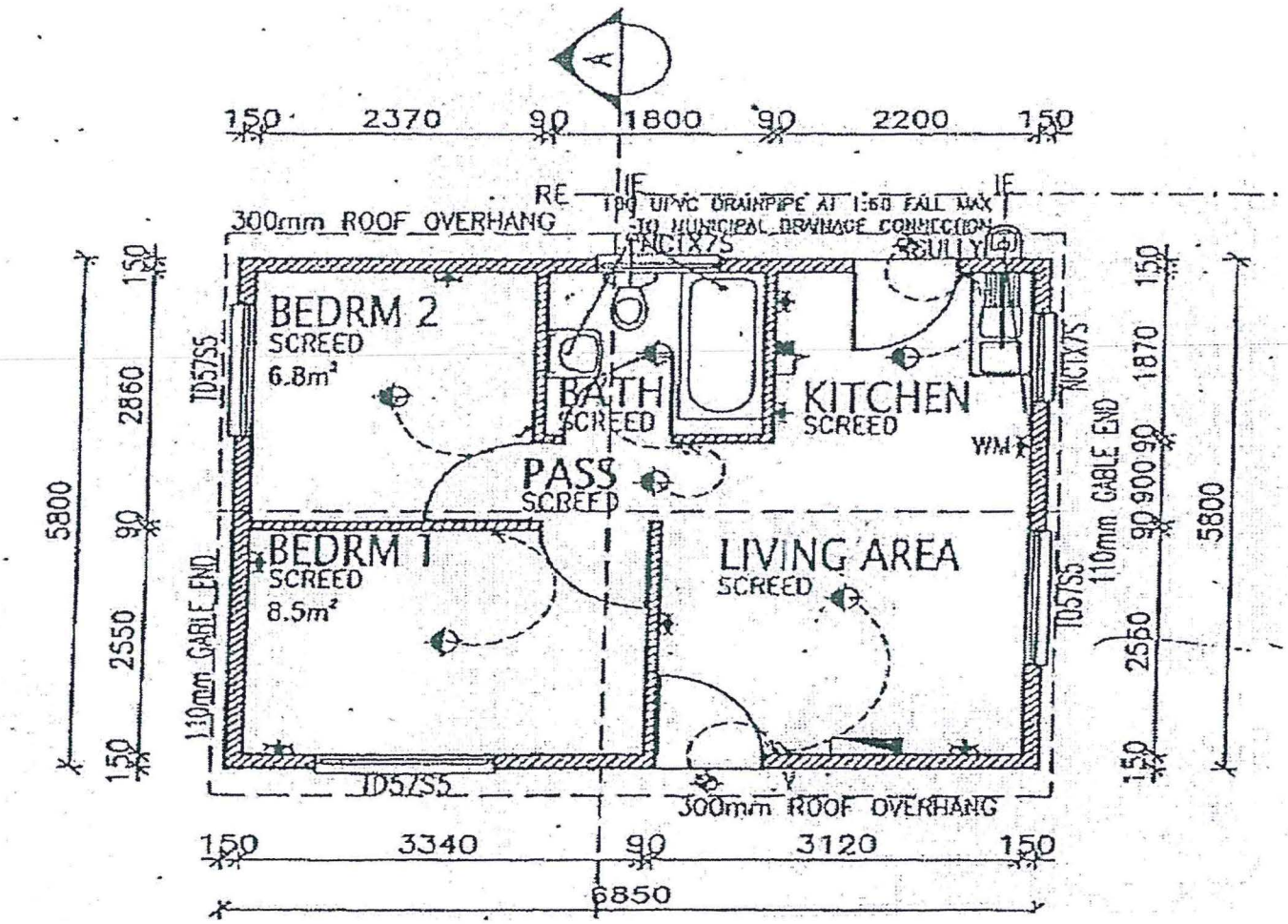
iv) 95%

TOTAL % OF WORK	100.00%	15.00%	(A) 50.0%	(B) 75.0%	(C) 85.0%	(D) 95.0%
DATE OF INSPECTION		02nd October 2025				
CONTRACT PRICE	N$	671,649.45				
WORK DONE	N$	100,747.42				
TO COMPLETE	N$	570,902.03				
PROGRESS PAYMENT AMOUNT	N$	100,747.42				

[16]

Question 4

You are provided with the attached residential floor plan of an outbuilding located on Erf 5241, Khomasdal. Using the information shown on the drawing, answer the following questions:



4.1 **Gross External Area (GEA)**

4.1.1 Define Gross External Area (GEA) according to RICS/IVS standards. (3)

4.1.2 Using the given dimensions, calculate the total GEA of the subject property. Show your workings. (4)

4.2 **Gross Internal Area (GIA)**

4.2.1 Define Gross Internal Area (GIA) and explain its difference from GEA. (3)

4.2.2 Calculate the GIA of the property by deducting the external wall thickness. Provide detailed workings. (5)

4.3 **Accommodation Schedule**

Identify all the accommodation details and list each space in the property with its respective area (sqm), based on the floor plan provided. (5)

4.4 **Construction Details**

4.4.1 Identify and outline the thickness of the external walls and internal walls as shown on the plan. (3)

4.4.2 Briefly explain how wall thickness affects differences between GEA, GIA, and NIA in professional measurement practice. (4)

[27]

APPENDIX A

NOTE - Please detach this sheet after completion and insert it inside the last page of the examination answer booklet for submission.

STUDENT NUMBER:.....

Use this table to answer Question 3.

TOTAL % OF WORK	**100.0%**	**15.0%**	**i) 50.0%**	**ii) 75.0%**	**iii) 85.0%**	**iv) 95.0%**
DATE OF INSPECTION		**02nd October 2025**				
CONTRACT PRICE	**N$**	**671,649.45**				
WORK DONE	**N$**	**100,747.42**				
TO COMPLETE	**N$**	**570,902.03**				
PROGRESS PAYMENT AMOUNT	**N$**	**100,747.42**				

[16]