NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF THE BUILT ENVIRONMENT

DEPARTMENT OF QUANTITY SURVEYING

THEORY & PRACTICE OF QUANTITY SURVEYING II

BQS 2201

Supplementary Examination Paper

August 2024

This examination paper consists of four (4) pages.

Time Allowed: **3 hours**

Total Marks: **100**

Special Requirements: **None**

Examiner's Name: **Mr. T DZIMIRI**

INSTRUCTIONS

1. Answer all questions in section A and any two in section B
2. Use of calculators is permissible

MARK ALLOCATION

QUESTION	MARKS
1.	25
2.	25
3.	25
4.	25
5.	25
TOTAL	**100**

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SECTION A: Answer all questions

Question One

a) You are a contractor's quantity surveyor working on a construction project for the construction of 8 housing units with a construction period of 8 months. After month 1, only one unit had been completed and after month 2, 3 units had been completed. The cost of each unit is as follows for month 1 and 2;

Table 1: Measured works for 1 unit

Item	Description	Work done in month 1	Work done in month 2
1	Foundations	$11,800.00	$14,750.00
2	Concrete, Formwork & Reinforcement	$5,146.00	$6,200.00
3	Brickwork	$18,000.00	$22,500.00
4	Roof coverings	$5,840.00	$7,300.00
5	Carpentry, Joinery & Iron Mongery	$13,200.00	$16,500.00
6	Metalwork	$2,200.00	$2,750.00
7	Plastering & Paving	$14,500.00	$18,200.00
8	Glazing	$0.00	$500.00
9	Plumbing & drainage	$5,200.00	$10,100.00
10	Painting	$3,500.00	$8,100.00

The contractor was also given an advance payment of $20,000.00 which is to be recovered over 4 months at 25% per month. Preliminaries & generals for the project at month 1 were $3,000.00 and retention is 10% on every certificate.

You are required to prepare interim valuation number 1 [10 marks]

b) **<u>Additional information for month 6</u>**

- The total P&G expended to date is $8,500.00 for the entire project.
- Prime cost sum expenditure for electrical works and cupboards for each unit is $35,000.00 and $12,500.00 respectively. Profit and attendance for Prime cost sums is 5% and 2.5% respectively.
- Material and compaction tests for the entire project have a provisional sum of $60,000.00. The actual cost to date for materials and compaction tests is currently at $8,500.00 for the entire project.
- You have insufficiently protected materials on site with a value of $10,000.00.

- The supplier of doors was paid $30,000.00 for doors. These doors are yet to be manufactured and delivered to site.
- Total labour fluctuations on the project is $650.00 and there are no materials price fluctuations that have been recorded.
- No variations have been recorded to date.

Prepare interim valuation number 6 for the project.

[15 marks]
[25 marks]

Question Two

a) Distinguish between the traditional and the formulae method of calculating fluctuations. [5 marks]

b) Calculate the overtime costs and the labour fluctuations using the tables attached in **appendix A**. [20 marks]

[25 marks]

SECTION B: Answer any two questions

Question Three

Mzwandile construction was awarded a tender for the construction of a cancer clinic for a contract sum of $2,750,000.00 including a 10% contingency amount. However, the contract duration has lapsed and the final account has been prepared, the final cost of construction cost is found to have exceeded the initial estimated cost by $250,000.00. Change has been cited as one of the major reasons for this cost overrun.

a) Outline the factors that could have brought about this change on this construction project. [5 marks]

b) Discuss the various ways in which change could have been valued on this project. [15marks]

c) Outline the procedure for issuing verbal site instructions on a project. [5 marks]

[25 marks]

Question Four

a) State and explain the key documents that make up a contract. [10 marks]

b) Giving examples, explain the different types of contractual claims and the contractual provisions governing them. [15 marks]

[25 marks]

Question Five

a) Define the following terms as used in construction contracts.

i. Contingency [2 marks]

ii. Retention [3 marks]

b) Discuss the typical components that you would include in a claim for an interim payment application for a project operating in a hyperinflationary environment. [20 marks]

[25 marks]

END OF EXAMINATION