



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**FACULTY OF BUILT ENVIRONMENT**

**DEPARTMENT OF QUANTITY SURVEYING**

**THEORY OF PRACTICES AND QUANTITY SURVEYING AND PROJECT  
MANAGEMENT**

**AQS1201**

**Main Examination Paper**

**MAY 2016**

**Time Allowed: 3 hours**

**Total Marks: 100**

**Examiner's Name: R Mabhayila**

**INSTRUCTIONS**

1. Answer any FOUR Questions
2. Use of calculators is permissible

**MARK ALLOCATION**

<b>QUESTION</b>	<b>MARKS</b>
1.	25
2.	25
3.	25
4.	25
5.	25

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### **Question One**

- a. Explain causes of loss in construction projects (5marks)
- b. Describe any 5 contract documents (5marks)
- c. Discuss the exgratia, quantum meruit and common law claims that can be made by the contractor during project execution (15marks)

### **Question Two**

- a. Define the following-
  - i. Attendances (3marks)
  - ii. Contingency Sums (3marks)
- b. Discuss the differences of prime cost sums and provisional sums (6marks)
- c. Adjust the following prime cost and provisional sums
  - i. The tender dated 10 February 2015 submitted by Beacon Ltd, in the sum of \$15000 was accepted and the subcontractor was nominated in AI No. 1 dated 24 February 2015. Beacon account was dated 3 April 2015 and totaled \$20700, the extra on the quoted amount being for net labour costs increases. This total was accepted and set against the pc sum.
  - ii. Saniware Ltd quoted on 23 February 2015 for sanitary appliances for the sum of \$34589.00. This was accepted on 27 March 2015 as AI No. 2 dated 21 July 2015. SaniwareLtd's invoice dated \$39456.00, the extra on the quoted amount being for special packings and this was accepted by the PQS
  - iii. Provisional the sum set aside for water main connection was 3,500.00. Bulawayo City Council's dated 21 May 2016 was for 3,700.00.

Note- Allow 5% for attendance and 2, 5% for profit.

### **Question Three**

- a. Explain the three methods used to calculate preliminaries and generals items(9marks)
- b. Describe the criteria that should be met for the value of materials and goods intended for the works but not yet delivered to the site to be included in a valuation. (6marks)

- c. Using Appendix A, prepare the first interim valuation to the contractor using the following information- (10marks)

The contract period is 10months  
All earthwork is complete  
30% of the concrete work is complete  
20% of masonry is complete  
Value of material on site is 3,500.00  
Allow for 10% retention

#### **Question Four**

- a. Discuss the differences of the traditional and formulae method of calculating fluctuations (6marks)

- b. Calculate the labour, the general fund fluctuations using Appendix B

(19 marks)

#### **Question Five**

- a. Explain the procedure that should be taken if the architect verbally issues instructions (5marks)

- b. Giving examples, explain how additional expense arising from variations are dealt with (5marks)

- c. Sometimes, a rate against a measured item in bills of quantities or in a schedule of rates is inadvertently underpriced or overpriced by the contractor and the error may have escaped the notice of the Professional Quantity Surveyor when examining the tender document before the contract was let. Explain what should be done, if subsequently the item is involved in a variation (5marks)

- d. Prepare a variation account using the information given below-

##### Architect Instruction No.1

Tiling in lieu of carpeting where tiling \$500.00 and carpeting \$1,400.00

##### Architect Instruction No.2

Plaster in lieu of facings where plaster \$320.00 and facing \$450.00

##### Architect Instruction No.3

Living room windows in flats to be 1800x1500 mm \$3,673.50 in lieu of 1800x1200mm 2,079.85

##### Architect Instruction No.4

Glazed screens to balconies to be glazed with toughened clear float glass with putty

\$1,245.74 in lieu of clear float glass in beads \$1,073.80

Architect Instruction No.5

Built-in bookcase units to be added in living rooms \$3,984.30

Contingency 2,500.00

(10marks)

## **Appendix A**

### **The Department of Quantity Surveying Guest House**

#### **Bills of Quantities Summary**

	Description	Amount
1	Preliminary and Generals	125,000
2	Earthworks	99,000
3	Concrete, Formwork and Reinforcement	457,000
4	Masonry	220,000
5	Waterproofing	15,000
6	Carpentry and Joinery	65,000
7	Floor Coverings	25,000
8	Ironmongery	40,000
9	Metalwork	35,000
10	Plastering	20,000
11	Tiling	10,500
12	Plumbing and Drainage	45,000
13	Glazing	15,000
14	Painting	45,000
15	External Works	70,000

## Appendix B

Minimum wages to be paid to skilled workers, approved classes of workers and worker grades.

	All in labour rate per hour as at 01 January 2014	Pension Fund 5% per week	All in labour rate per hour as at 01 October 2014	Pension Fund 5% per week
SW1	2.81	6.18	3.23	7.11
SW2	2.60	5.72	2.99	6.58
SW3	2.42	5.32	2.78	6.12
SW4	2.22	4.88	2.55	5.61
WX	2.22	4.88	2.55	5.61
WG1	1.63	3.59	1.87	4.13
WG2	1.63	3.59	1.87	4.13
WG3	1.68	3.70	1.93	4.26
WG4	1.70	3.70	1.96	4.26

Time sheet for the fortnight ending 01 November 2014

Name	Grade	M	T	W	T	F	S	S	M	T	W	T	F	S	S
O Thabethe	WG3	9	9	9	10	10	-	-	9	9	10	10	10	-	-
D Dube	WG2	9	9	9	10	10	-	-	9	9	10	10	10	-	-
L Maplanka	WX	9	9	9	9	8	-	-	9	9	9	9	8	-	-
W Masiletha	WX	9	9	3	6	8	-	-	9	9	9	9	8	-	-
T Nyoni	SW1	9	9	9	9	8	-	-	9	9	9	9	8	-	-
K Moyo	SW1	9	9	9	9	8	-	-	9	9	9	9	8	-	-
P Mhishi	SW2	9	9	9	10	10	-	-	9	9	9	10	10	-	-
S Zinzi	SW2	9	9	9	10	10	-	-	9	9	9	10	10	-	-
T Kiwe	SW3	9	9	9	9	8	-	-	9	9	9	9	8	-	-
N Gumbo	SW4	4	7	9	9	8	-	-	9	9	9	9	8	-	-

END OF EXAMINATION