

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**FACULTY OF BUILT ENVIRONMENT**  
**DEPARTMENT OF QUANTITY SURVEYING**  
**PART II SUPPLEMENTARY EXAMINATIONS – AUGUST 2011**  
**CONSTRUCTION ESTIMATES AND PRICING – AQS2205**

Time: 3 Hours

Total Marks: 100

**Instructions**

Answer all questions

Price schedule to be provided.

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**QUESTION ONE**

Using the approximate quantities method work out the cost estimate for the superstructure of a proposed warehouse on Drawing G/01. The floor slab has already been casted and Roofing ( i.e, trusses, purlins, roofing tiles) is supplied and fixed by a specialist roofing company.

(30 marks)

**Use the following data**

Concrete grade 30

Reinforcement      90kg/m<sup>3</sup> in column bases  
                             180kg/m<sup>3</sup> in columns  
                             110kg/m<sup>3</sup> in ground floor slab  
                             200kg/m<sup>3</sup> in ground beams

You can assume prices where necessary.

## **QUESTION TWO**

a) Calculate the unit rate to prepare and apply 2 coats emulsion paint to wood float plastered walls from the following data.

Labour:- Painter Skilled Worker 1 is paid \$94,72/ 8 hour day

He applies 12m<sup>2</sup> for first coat in 1 hour

He applies 14m<sup>2</sup> for the second coat in 1 hour

Material:- Paint cost \$12,00 per 5 litre

First coat 68m<sup>2</sup> per 5 litre

Second coat 72m<sup>2</sup> per 5 litre

Use 10% waste where waste is expected and 12% of labour cost for brushes and sand paper.

(20 marks)

## **QUESTION THREE**

a) Explain the following terms

i) Actual cost (3 marks)

ii) Estimate cost (3 marks)

iii) Quotation (3 marks)

iv) Margin (3 marks)

v) All-in labour rate (3 marks)

b) Identify and explain by giving examples any two following estimating methods (10 marks)

#### **QUESTION FOUR**

a) Calculate the owning and operating cost per hour for a 3m<sup>3</sup> front end loader with pneumatic tyre it was purchased for \$85 000.00 and is expected to have a working life of 12 000 hrs (6years).

The contractor is expecting 10% interest per annum on his capital outlay and he has to pay \$600.00 per annum for taxes, \$584.00 per annum insurance, approximately \$760.00 for repairs and maintenance per annum and \$800.00 per annum for replacement of tyres . He also has to provide fuel and lubricants at a cost of \$84.00 per week. The operator for the loader is paid \$32.00 per 8 hours a day. The loader works an average of 35 hours per week.

(25 marks)