FINAL

ALTERNATIVE ASSESSMENT
Examination Paper

(COVER PAGE)

Session	:	**August 2020**
Programme	:	Diploma In Quantity Surveying (DQS)
Course	:	**EGK2116 : Estimating**
Date of Examination	:	December 16, 2020 (Wednesday)
Time	:	12.00pm – 2.30pm Reading Time : Nil
Duration	:	2 Hours : 30 Minutes

Note: 30 minutes is added into the duration of the examination to factor in any connectivity matters and for you to scan and upload your scripts.

Special Instructions :

This paper consists of **FOUR (4)** questions. Answer **ALL** the questions. **Write ALL your answers** in the foolscap papers.

Materials permitted :
Calculator

Materials provided :
Nil

Examiner(s)	:	**Ahmad Mustaqim Ahmad Anwar Merican** & Azila Adros
Chief Moderator	:	Ms Farah Nasiha Suhaili

*This paper consists of **4** printed pages, including the cover page*

DIPLOMA IN QUANTITY SURVEYING PROGRAMME (DQS)
EGK2116 : ESTIMATING
FINAL ALTERNATIVE ASSESSMENT: AUGUST 2020 SESSION

Instructions: This paper consists of **FOUR (4)** questions. Answer all **FOUR (4)** and all questions carry equal marks.

Question 1 (25 marks)

(a) As a Quantity Surveyor (QS), when preparing almost all tender and contract documents for construction works, the first section of the bills of quantities or schedule of rates that you will come across is a section labelled as 'Preliminaries'. The preliminaries section in bill of quantities (BQ) is one of the most important sections that require being priced. Described **TEN (10)** preliminaries items that can be found in the BQ.

(20 marks)

(b) List **FIVE (5)** requirements the contractor must fulfil for general site provisions before the demolition process will be taken. .

(5 marks)

Question 2 (25 marks)

(a) Build-up a unit rate in square metre of half brick thick internal wall in 65 mm common bricks. The brickwall is constructed with wire mesh at every four courses, jointed with a 10 mm thick cement and sand (1:3) mortar and laid in Stretcher Bond.

Assumptions:

Cost of common brick	RM 0.45 per piece
Cost of cement and sand (1:3) mortar	RM 268.00 per m3
Cost of 3" x 200' Exmet wire mesh	RM 12.00 per roll
Mortar required per m2	0.025 m3
Wire mesh required (inclusive laps and wastage)	3.5 m per m2
Labour gang (1:1)	1 bricklayer and 1 labourer
Wage of bricklayer	RM 60.00 per day
Wage of general worker	RM 40.00 per day
Output of bricklayer	1 hour per m2
Output of general worker	0.35 hour per m2
Working hour	8 hours per day
Materials waste	5%
Profit and overhead	10%
Conversion Factor	1 foot equals to 0.3048 meter

(13 marks)

(b) Build-up a unit rate in square metre of one brick thick wall in 65 mm facing bricks laid in English bond. The bricks jointed with 10 mm cement lime mortar (1:2:9) mix and pointed with a neat flush joint as work proceeds.

Assumptions:

Cost of 215 x 102.5 x 65 mm facing brick	RM 1,200.00 per 1000 pieces
Cost of cement lime mortar (1:2:9) mix	RM 248.00 per m3
Crane off-loading	RM 66.00 per 1000 pieces
Allowance of one labourer for crane off-loading	1 hour per 1000 pieces
Number of facing bricks	89 pieces per m2
Mortar with one frog required	0.07 m3 per m2
Labour gang (2:1)	2 bricklayers and 1 labourer
Output of a bricklayer	40 bricks per hour
Output of general worker	0.35 hour per m2
Wage of a bricklayer	RM 70.00 per day
Wage of a labourer	RM 40.00 per day
Working hour	8 hours per day
Waste on materials	12%
Profit and overhead	10%

(12 marks)

Question 3 (25 marks)

(a) Estimating requires a talent to predict or avoid the unexpected. A good estimator usually understands construction materials, methods and systems, as well as the labour and equipment required to complete all tasks in their correct sequence, on time and on budget. Estimator is deemed as one of the important parties in construction project. Discuss the roles of the estimator.

(15 marks)

(b) Identify the advantages and disadvantages of approximate quantities estimating method.

(6 marks)

(c) List **FOUR (4)** machineries required to carry out works at the construction site.

(4 marks)

Question 4 (25 marks)

(a) Calculate the unit rate in square metre for painting works with one primer coat, one undercoat, and one finishing coat of gloss paint to internal plastered wall.

Assumptions:

Cost and coverage of primer	=	8.6 m^2 per litre at RM 4.20 per litre
Cost and coverage of undercoat	=	10 m^2 per litre at RM 5.50 per litre
Cost of finishing coat	=	10 m^2 per litre at RM 13.50 per litre
Wage of a painter	=	RM 60.00 per day
Working hour	=	8 hours per day
Allow for preparation and brushes	=	5 % cost of labour
Residue waste on paint	=	10 %
Profit and overhead	=	10 %

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Assume the following time analysis for labourer per 100 m^2 of painting works

1. Priming including preparing	=	6.0 hours
2. Undercoat	=	5.5 hours
3. Finishing coat	=	5.5 hours
Total		17.0 hours

(13 marks)

(b) Estimate the unit rate per square metre of 300 mm x 300 mm x 7 mm thick homogeneous tile paving in cement mortar (1:3) and with 3 mm wide joints pointed in white cement mortar on screeded bed (measured separately). Three tilers will be supplied with materials by one labourer, who will unload the materials. One tiler will take 0.90 hours to bed and lay one

square metre of homogeneous tiles (using a 3:1 gang).

Assumptions:

Cost of 300 mm x 300 mm x 7 mm homogeneous tiles	=	RM 2.30 per piece
Cost of cement mortar (1:3)	=	RM 268.00 per m^3
Cost of colour cement pointing (inclusive waste)	=	RM 0.80 per m^2
One labour off-loading and stacking of tiles	=	3 minutes per m^2
Cement mortar required	=	0.015 m^3 per m^2
Wage of a labourer for pointing	=	RM 3.00 per m^2
Wage of a tiler	=	RM 90.00 per day
Wage of a labourer	=	RM 40.00 per day
Working hour	=	8 hours per day
Waste on materials	=	5 %
Profit and overhead	=	10 %

(12 marks)

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