



**higher education
& training**

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE QUANTITY SURVEYING N6

20 April 2020

This marking guideline consists of 9 pages.

QUESTION 1

- 1.1 1.1.1 It is an amount of money held back✓ from interim valuations.✓
- 1.1.2 It refers to the monthly payments✓ for work completed.✓
- 1.1.3 It is a nonbiased person that both parties agreed on✓ to handle their dispute.✓
- 1.1.4 These are drawings prepared by the architect✓ for the approval of the client.✓
- 1.1.5 It is a document prepared by the quantity surveyor✓ that conveys all the detail of the architect's design.✓
- (5 × 2) (10)
- 1.2 1.2.1 (a) Prime cost
(b) Supply
- 1.2.2 (a) Nominated subcontractor
(b) Architect
- 1.2.3 (a) Changes
(b) Architect
- 1.2.4 (a) Client
(b) Site surveyor
- 1.2.5 (a) Quantity surveyor
(b) Architect
- (10 × 1) (10)
- 1.3
- Name of the contractor
 - Project name
 - Name of the client or architect
 - Tender amount
 - Method of preliminary adjustments
 - Signature and date of person who represents the contractor
 - Tender date and time of submission
- (Any 5 × 1) (5)
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QUESTION 2

	9,66 9,66	C.s. of all deb. & prep. for bldrs. wrk. ✓ $2/3,000 = 6,000$ $3/0,220 = 0,660$ $2/1,500 = \underline{3,000}$ <u>9,660 m</u> ✓		25,32 0,70 0,20 11,67 0,70 0,20	<u>Add.</u> { 15 MPa mass conc. in fdn. ftg. ✓
	25,32 0,70 0,80 11,67 0,70 0,80	Excav. in earth for s.t. n.e. 2 m dp. from g.l. ✓ $4/6,660 = 26,640$ $-4/0,330 = \underline{1,320}$ <u>25,320 m</u> ✓ $0,600 + 0,200 = \underline{0,800 m} ✓ 2/6,660 - 5/0,330 = \underline{11,670 m} ✓$	6 /	0,70 0,19 0,20	<u>Ddt.</u> { 15 MPa mass conc. a.b. for passings. ✓
✓ 6 /	0,70 0,19 0,80	<u>Ddt.</u> { Excav. a.b. for passings. ✓ $0,700 - 0,330 = 0,370 \div 2$ $= \underline{0,185 m} ✓$		25,32 <u>0,83</u> 11,67 0,83	<u>Add.</u> { 330 mm thick bk. wl. in ord. bks. in 1:3 c.m. mix ✓
2 / ✓ 2 /	25,32 0,80 11,67 0,80	<u>Add.</u> { R.o.c. to sides of s.t n.e. 1,5 m dp. ✓	2 / 2 /	25,32 0,19 <u>0,60</u> 11,76 0,19 0,60	 { B.fll. to sides of fdn. bk. wl. ✓
6 / ✓ 2 /	0,70 0,80 0,19 0,80	<u>Ddt.</u> { R.o.c. a.b. for passings. ✓	6 /	0,70 0,19 0,60	<u>Ddt.</u> { b.fll. a.b. for passings. ✓

✓ 4	35,94	Excav. mat. for fill. ✓ 11,760 – 6/0,18 = <u>10,626</u> m 25,320 + 10,626 = <u>35,946</u> m	✓ 4	6,66	D.p. sht. under conc. s.b. ✓ 15 MPa mass conc. in s.b. incl. s.o. & c. hor. top surf. ✓ E.o. ord. bkwrk. for fcgs. ✓ 0,225 + 2/75 = <u>0,375</u> m
	0,70			6,66	
	0,20			3,00	
	35,94			3,00	
	0,33			0,08	
	0,60				
	2,78	H.c. in sub-flr. ✓			
	2,78	3,000 – 2/0,110 = <u>2,780</u> m			
	0,23	825 – 600 = <u>0,225</u> m		26,64	
				0,38	

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QUESTION 3.1

	0,68 0,22	✓	25 MPa reinf. conc. in cols.		26,12 0,22		25 MPa reinf. conc. in bms.
3	3,70	0,55			2	0,30	
	0,45 0,22	✓	$2 \times 0,450 = 0,900 - 0,220 = 0,680 \text{ m}$ ✓		1,50 0,22		<u>Centre line of ring beam</u>
2	3,70	1,10			0,30	0,20	$2 \times 4,500 = 9,000$
	0,22 0,22	✓	<u>Col. heights</u> 3,100 0,600 3,700 m ✓			1,92	$2 \times 9,000 = 18,000$
	3,70	0,36					27,000
		2,01					less $4 \times 0,220 = 0,880$
3	1,34	✓	Frmwrk. to sides of cols.		26,12		<u>26,120 m</u> ✓
	3,70	14,87			2	0,22	5,75
2	0,88	6,51	$2 \times 0,450 = 0,900$ $2 \times 0,220 = 0,440$ ✓ <u>1,340 m</u> ✓		1,50 0,22	0,66	
	3,70	21,38	$4 \times 0,220 = 0,880 \text{ m}$ ✓			6,41	
2	0,90	6,66	Ditto, but to L-shape cols. $4 \times 0,450 = 0,900 \text{ m}$ ✓		26,12	7,84	Frmwrk. to sides of bms..
	3,70			2	0,30	0,90	-R.bm.
				2	0,30	30,00	-Overhang
	6,00	8,10	25 MPa. Reinf. conc. in slab incl. s.o. & c. hor. top surfaces. $4,500 + 1,500 = 6,000 \text{ m}$ ✓ $2 \times 4,500 = 9,000 \text{ m}$ ✓	2	0,15	9,00	-Slab
	9,00				0,22		-Bm. ends
	0,15				0,30	0,13	$2 \times 6,000 = 12,000$ $2 \times 9,000 = 18,000$ <u>30,000 m</u> ✓
						17,87	
	4,06	34,75	Frmwrk. to soffit of slab. Less $2 \times 0,220 = 0,440$ <u>4,060 m</u> ✓ 9,000 Less $2 \times 0,220 = 0,440$ <u>8,560 m</u> ✓	Item	Item		(Allow the prov. sum of R25,000 (Twenty Five Thousand) for steel rod reinf. cut, bent, del. to site & fixed in position.)
	8,56						&
					Item		Add for attendance.
							&
					Item		Add. for profit.
			(1)				(2)

QUESTION 3.2

<u>REINFORCED CONCRETE STRUCTURE</u>			
<u>Concrete, Formwork and Reinforcement</u>			
<u>Concrete</u>	<u>Formwork</u>	<u>M²</u>	<u>Reinforcement</u>
<u>M³</u> 25 MPa reinf. conc. In slab incl. s.o. & c. hor top surf. 8,10 <u>1</u>	<u>M²</u> Frmwrk. to soffits of slab exce. 1,5 n.e. 3,5 m high. 34,75 <u>1</u>	<u>M²</u> Frmwrk. to sides of cols. 21,38 <u>1</u> 21 M ²	<u>Item</u> Provide the prov. sum of R25000 (twenty five thousand) for stl. rod reinf. sup. cut, bent and del. to site.
<u>8 M³</u> 25 MPa reinf. conc. in bms. 1,92 <u>2</u>	<u>35 M²</u> <u>M²</u> Frmwrk. to sides of bms. 17,87 <u>2</u>	<u>M²</u> Frmwrk. to L-shaped cols. 6,66 <u>1</u> <u>7 M²</u>	<u>Item</u> Allow for att.
<u>2 M³</u> 25 MPa reinf. conc. in cols. 2,01 <u>1</u>	<u>18 M²</u> <u>M²</u> Frmwrk. to soffits of bms. 6,41 <u>2</u>		<u>Item</u> Allow for profit.
<u>2 M³</u>	<u>6 M²</u>		

QUESTION 3.3

<u>REINFORCED CONCRETE STRUCTURE</u>				
	<u>Bill no. 1</u>			
	<u>Concrete, Formwork and Reinforcement</u>			
	<u>Concrete</u>			
1.	25 MPa reinforced concrete in slab including striking off and cure horizontal top surface.	M ³		
2.	25 MPa reinforced concrete in beams.	M ³		
3.	25 MPa reinforced concrete in columns.	M ³		
	<u>Formwork</u>			
	Formwork to soffits of slab exceeding 1,5 metres not exceeding 3,5 metres high.	M ²		
4.	Formwork to sides of beams.	M ²		
5.	Formwork to soffits of beams.	M ²		
6.	Formwork to sides of columns.	M ²		
7.	Formwork to L-shaped columns.	M ²		
	<u>Reinforcement</u>			
8.	Provide the provisional amount of R25 000,00 (twenty five thousand rand) for steel rod reinforcement, supplied, cut, bent and delivered to site.		<u>Item</u>	25 000,00
9.	Allow for attendance.		<u>Item</u>	
10.	Allow for profit.		<u>Item</u>	
	Carried to summary			
			R	

Working up marks allocation

<u>Squaring</u>		
Check side casts.	2	
Check dimensioning (ticks) .	1	
Square dimensions.	1	
Check squaring answers (ticks) .	1	
Check final answers.	1	
Transfers to abstract.	1	
Check transfers.	1	(8)
<u>Abstracting</u>		
Section of work	1	
Trade	1	
Subdivisions	1	
Units	1	
Page referencing	1	
Use of columns	1	
Reducing	1	
Transfers to bill	1	(8)
<u>Billing</u>		
Section of work	1	
Bill no.	1	
Trade	1	
Subdivisions	1	
Item no.	1	
Descriptions (No abbreviations)	1	
Units	1	
Quantities	1	
Summary	1	(9)

[25]

QUESTION 4

\checkmark 2/	1	✓	<u>Door</u> 813 × 2032 mm 3-panelled Meranti tbr. dr. ✓	6,48	✓	Ditto, but twice rebated. ✓ Dr. stiles 2/2,154 = 4,308 Glazing bars 4/544 <u>2,176</u> <u>6,484 m</u>
	0,86 2,08	✓ ✓	2 Cts clr. varnish to tbr. dr. ✓ $\begin{array}{r} 0,813 \times 2,032 \\ \underline{0,044} \quad \underline{0,044} \\ \underline{0,857} \quad \underline{2,076} \end{array}$	8,71	✓	Prime backs of frame. ✓ Head 2,200 Cill 1,900 Stiles 2/2,154 4,308 Horns 2/0,150 <u>0,150</u> <u>8,708 m</u>
	1	✓	3-lever mortise lock ✓	2/	2,15	2 Cts. clr. varnish to exposed tbr. surf. ✓ <u>Stiles, cill and head</u> 2/76 + 114 = 0,266 m ✓ <u>Dr. stiles and gl. bars</u> 2/76 + 2/114 = 0,380 m ✓
	3	✓	100 × 45 mm brass butt hinge ✓	2/	0,27	
				2/	1,90	
				2/	0,27	
	4	✓		2,15	✓	
	0,38	✓		4	0,38	✓
	0,54	✓		0,54	✓	
	0,38	✓		0,38	✓	
8,41	✓	<u>Frame</u> 76 × 114 mm Meranti tbr. ✓ once rebated $\begin{array}{r} \text{Stiles } 2,032 \\ 2/61 \underline{0,122} \\ \underline{2,154} \times 2 = 4,308 \end{array}$ $\begin{array}{r} \text{Head } 1,900 \\ 2/150 \underline{0,300} \\ = 2,200 \end{array}$ $\begin{array}{r} \text{Cill} \quad \underline{1,900} \\ \underline{8,408} \text{ m } \checkmark \end{array}$	6	✓	3 mm thk. obscure glass ✓ Exce. 0,1 m ² n.e. 0,5 m ²	
0,42 0,64	✓ ✓		0,42 0,64	✓ ✓		

[25]

TOTAL: 100