higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

BRICKLAYING AND PLASTERING THEORY N1

31 JULY 2018

This marking guideline consists of 5 pages.

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QUESTION 1

1.1
1.1.1 True
1.1.2 True
1.1.3 False
1.1.4 False
1.1.5 True
1.1.6 True
1.1.7 False
1.1.8 False
1.1.9 False
1.1.10 False

(10 × 1) (10)

1.2
- Brick hammer.
- Club hammer.
- Scutch Comb hammer.
- Brick bolster.
- Cold chisel. (5)

1.3 From the bricks that is going to be used take any six bricks and place them on top of each other.✓ Measure the overall height of the six bricks✓ and then divide the measurement you get by six to determine the average height of a brick.✓ To the average height of a brick add the thickness of the mortar bed and that will give you the height of each course.✓ Get a straight piece of timber and mark off that gauge on the timber which will be used to transfer to the profiles.✓ (5)

[20]

QUESTION 2

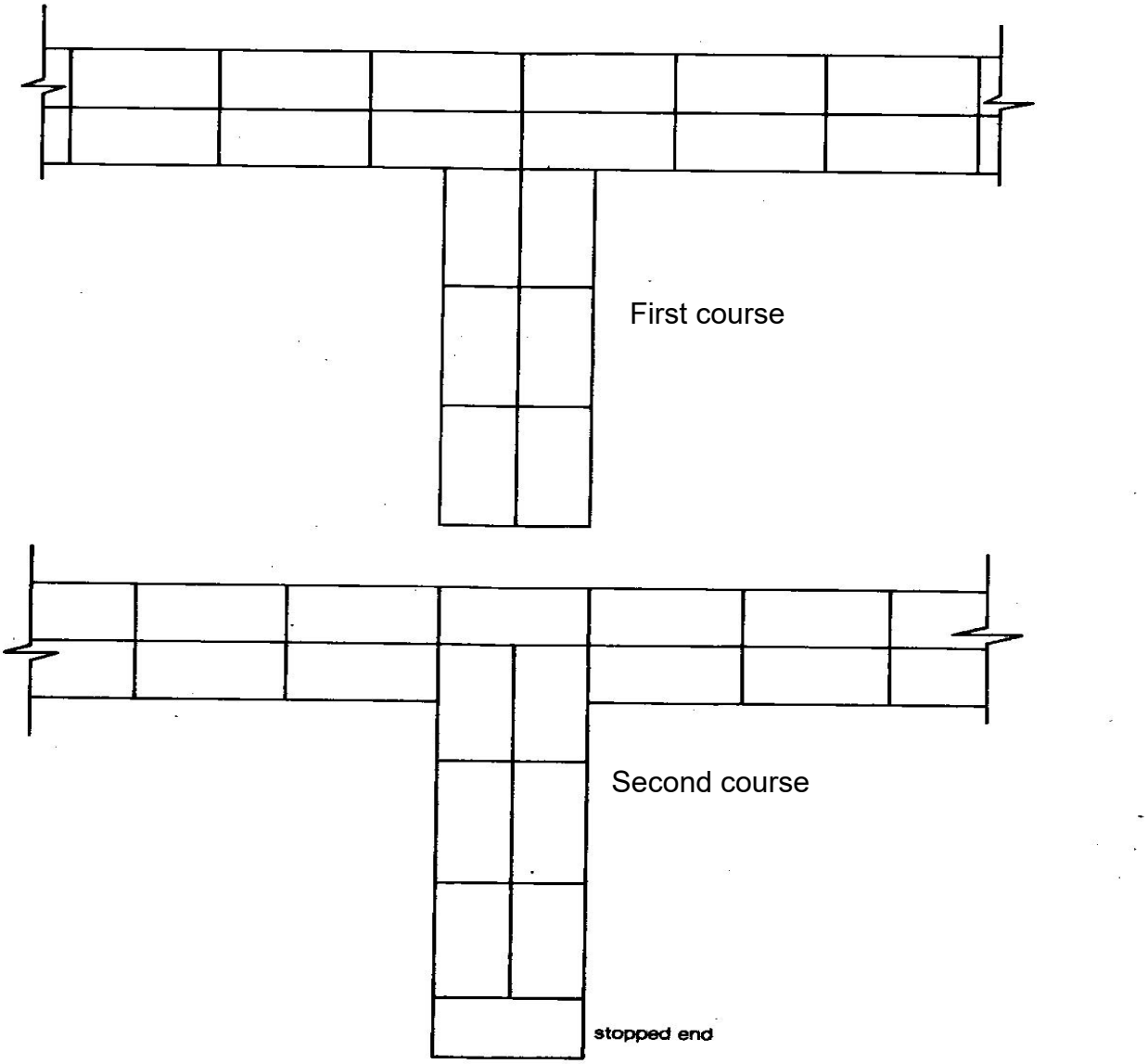
2.1 Check that the moulds are clean.✓
Smear release oil on the inside faces of the moulds.✓
Mix the concrete.✓
Fill the moulds with concrete in 50 mm layers.✓
Tamp each layer at least 38 times.✓
The last layer should more than fill the mould.✓
Prepare one label of each cube with the company's name,✓ contract number✓ and date on which the cube was made.✓
Cover the cubes with damp sacking✓ followed by a sheet of plastic.✓
Loosen all bolts on the moulds and gently remove the moulds.✓
Put the test cubes into water.✓
Leave the cubes covered with water until they are taken to the testing laboratory.✓ (14)

2.2 Admixtures are a chemical substance✓ that is added to the concrete in the mixing stage to allow for the properties that it lacks.✓ These admixtures may be classified in terms of their function.✓ (3)

2.3
- Retarders
- Accelerators
- Air entraining agents
- Superplasticisers
- Water-reducers or platicisers (Any relevent answer accepted) (3)

[20]

QUESTION 3



SCALE 1 : 10

ALTERNATE PLAN COURSE OF A ONE BRICK T- JUNCTION IN STRETCHER BOND.

Drawing – 6 marks
Title – 1 mark
Scale – 1 mark
Detail – 2 marks

(10 × 2) **[20]**

QUESTION 4

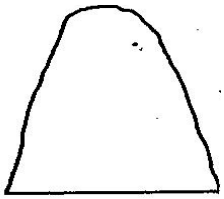
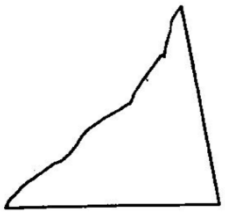
4.1
- Pre-cast concrete is manufactured away in a factory and brought to the site where is needed✓ it is concrete that is cured or in a solid form before being used for example pre-cast lintels.✓
- In-situ concrete is a concrete made in site.✓ It is the concrete that is poured in a liquid or plastic form and left to cure for example beams, columns et cetera✓ (2 × 2) (4)

4.2
- A gauged or axed arch the voussoirs are marked on the extrados.
- a rough arch the voussoirs are marked on the intrados.
- In ringed arches the voussoirs are laid as a brick-on-edge course.
- All the bed joints radiate to the centre or striking point.
- The key brick or stone is always in the centre of the arch.
- Each ring is treated as a separate arch.
- Voissoirs of the same ring must be equal in size.

(Any of the above answers is acceptable) (4)

4.3
- Rough Arches
- Axed Arches
- Gauged arches (3)

4.3

COLLAPSED SLUMP	TRUE SLUMP	SHEAR SLUMP
		
Title – ONE mark Drawing – TWO marks	Title – ONE mark Drawing – TWO marks	Title – ONE mark Drawing – TWO marks

(9)
[20]

QUESTION 5

5.1
- Lime stone✓ and shale are mixed together.✓
- Mixture fired at high temperature where clinkers are formed.
- The clinkers are ground to a fine powder. (4)

5.2
- White cement.
- Portland blast furnace cement.
- High alumina cement.
- Ordinary Portland cement.
- Rapid hardening cement.
- Sulphate resistant cement. (6)

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5.3
- Fillet
- Astragal
- Cavetto
- Scotia
- Ovollo
- Cyma recta
- Cyma reversa
- Torus (8)

5.4 H – 75 mm H&W = 1 mark
W – 110 mm L = 1 mark
L – 165 mm (2)
[20]

TOTAL: 100

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