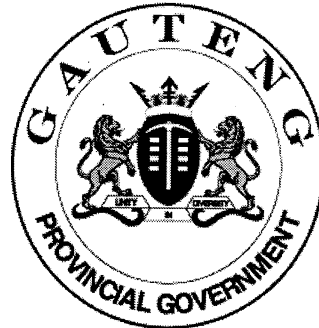# SENIOR CERTIFICATE EXAMINATION

FEBRUARY / MARCH

2006

BRICKLAYING AND PLASTERING

SG

701-2/0 E

BRICKLAYING AND PLASTERING SG
Question Paper & Drawing Answer Book

701 2 0E   SG

X05

6 pages

GAUTENG DEPARTMENT OF EDUCATION
SENIOR CERTIFICATE EXAMINATION

BRICKLAYING AND PLASTERING SG

TIME: 3 hours

MARKS: 300

REQUIREMENTS:

- Answer Book
- Drawing Answer Book (701-2/X)
- Calculators may be used.

INSTRUCTIONS:

- Answer ALL questions.
- Use both sides of the drawing paper in the drawing answer book.
- All drawings must be done in the drawing answer book and in pencil.
- Assume the dimensions of a brick to be:

  Length : 220 mm
  Width   : 110 mm
  Height   : 75 mm

QUESTION 1

1.1	Name FIVE advantages of a cavity wall.	(10)
1.2	Name THREE different types of material used for a damp-proof course.	(6)
1.3	What is the difference between **precast** piles and **cast in-situ** piles?	(6)
1.4	**Set** is a term commonly used in piling. Briefly explain what this term means.	(3)
1.5	What is the difference between **slump test** and **cube test**?	(6)
1.6	Mention FOUR components of concrete.	(4)
1.7	Name FIVE factors that cause chimneys to smoke.	(10)
1.8	List TEN pieces of important information usually shown on a drawing plan.	(10)
1.9	State FIVE main phases in the manufacturing of Portland cement.	(10)

[65]

QUESTION 2

2.1 You are appointed as a new site manager for a construction company. One of your tasks is to ensure safety practice on a building site. Describe in detail SIX checks you would carry out to ensure that it is safe in all respects. (12)

2.2 Draw a putlog scaffold and show the following parts:

Guard rail
Wall under construction
Putlog
Base plate
Sole plate
Toe board
Standard
Secured ladder
Ledger
Double coupler
Working platform
Putlog clip (20)

[32]

QUESTION 3

3.1 Briefly describe the following:

3.1.1 How to mix mortar by hand (6)

3.1.2 The procedure followed to plaster a blank wall to a steel float finish (7)

3.2 Draw neat sketches of the following types of jointing and pointing:

3.2.1 Flush pointing (3)

3.2.2 Weather jointing (3)

3.2.3 Half-round recessed jointing (3)

3.2.4 Square recessed jointing (3)

[25]

QUESTION 4

4.1   Illustrate how brickforce should be used to reinforce a corner built in English bond. The wall must be 220 mm wide and five courses high. Draw your answer in isometric view, using a scale of 1:10.   (23)

4.2   Define the term **centre**.   (3)

4.3   Name THREE different types of arches in common use on construction sites.   (6)

4.4   Name the different parts of the arch illustrated in **Figure 1**. Write down the numbers 1 – 10 with the correct answer next to the number in your answer book.   (10)
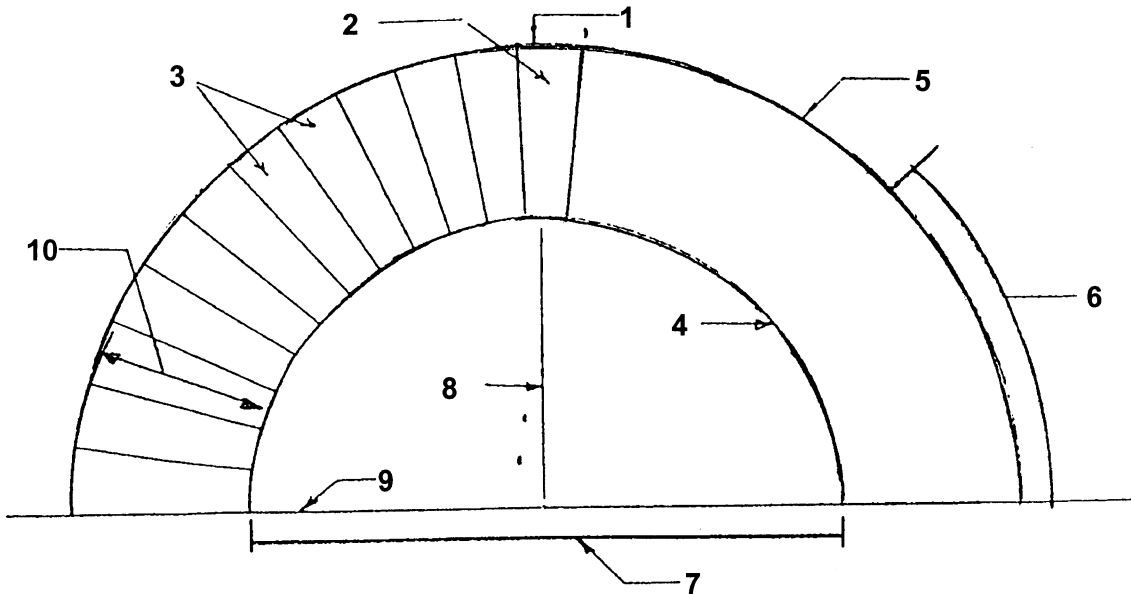
[42]

Figure 1

QUESTION 5

5.1   Give the standard abbreviations for the following components on a sewage plan:

5.1.1	Gulley	(2)
5.1.2	Inspection Eye	(2)
5.1.3	Ventilation Pipe	(2)
5.1.4	Wastewater Pipe	(2)
5.1.5	Soilwater Pipe	(2)

5.2   You have been appointed to construct a septic tank on a farm. By means of a neat sketch in sectional side view, show how you would design such a tank. NOTE: It is not necessary to show measurements, but you must label your sketch.   (20)

5.3   Name EIGHT regulations regarding drains.   (16)

[46]

P.T.O.

QUESTION 6

Draw to a scale of 1:10 a vertical section through the roof eaves and ceiling of a building using the following specifications:

Roof pitch:	30 degrees
Roof truss:	South African roof truss
Roof covering:	Galvanised corrugated iron sheeting membrane
Roof purlins:	76 mm x 50 mm
Eaves overhang:	300 mm
Eaves covering:	3 mm asbestos cement fibre board
Ceiling cover:	10 mm rhino board
Ceiling brandering:	38 mm x 38 mm at 400 mm centres
Cove Cornice:	75 mm
Fascia board:	228 mm x 38 mm
Gutter	100 mm PVC
Downpipe and offset:	75 mm
External wall:	270 mm cavity wall
Plaster:	19 mm internal only

The drawing should include the following:

- Part of the roof with roof covering
- Part of external wall
- Rainwater goods
- Part of ceiling
- Fully covered roof truss

No details of the ridge are required. **[40]**

QUESTION 7

A garage with attached servant's quarters must be built according to the given plan. Study the plan in **Figure 2** and calculate:

7.1   The number of bricks required

7.2   The quantity of sand (in m^3) required

7.3   The number of pockets of cement required

Use the following information:

All standard doors:	0,850 m x 2,0 m
Tip-up door (front):	2,5 m x 2,1 m
Windows A and B:	1,5 x 1,0 m
Window C:	1,0 m x 1,0 m
Window D:	3,0 x 1,0 m
Height of the wall:	2,8 m
Width of external walls:	220 mm
Width of internal walls:	110 mm

Sand required: 0,54 m^3 per 1 000 bricks
Cement required: 1 pocket per 200 bricks
Bricks required: 110/m^2 per one-brick wall
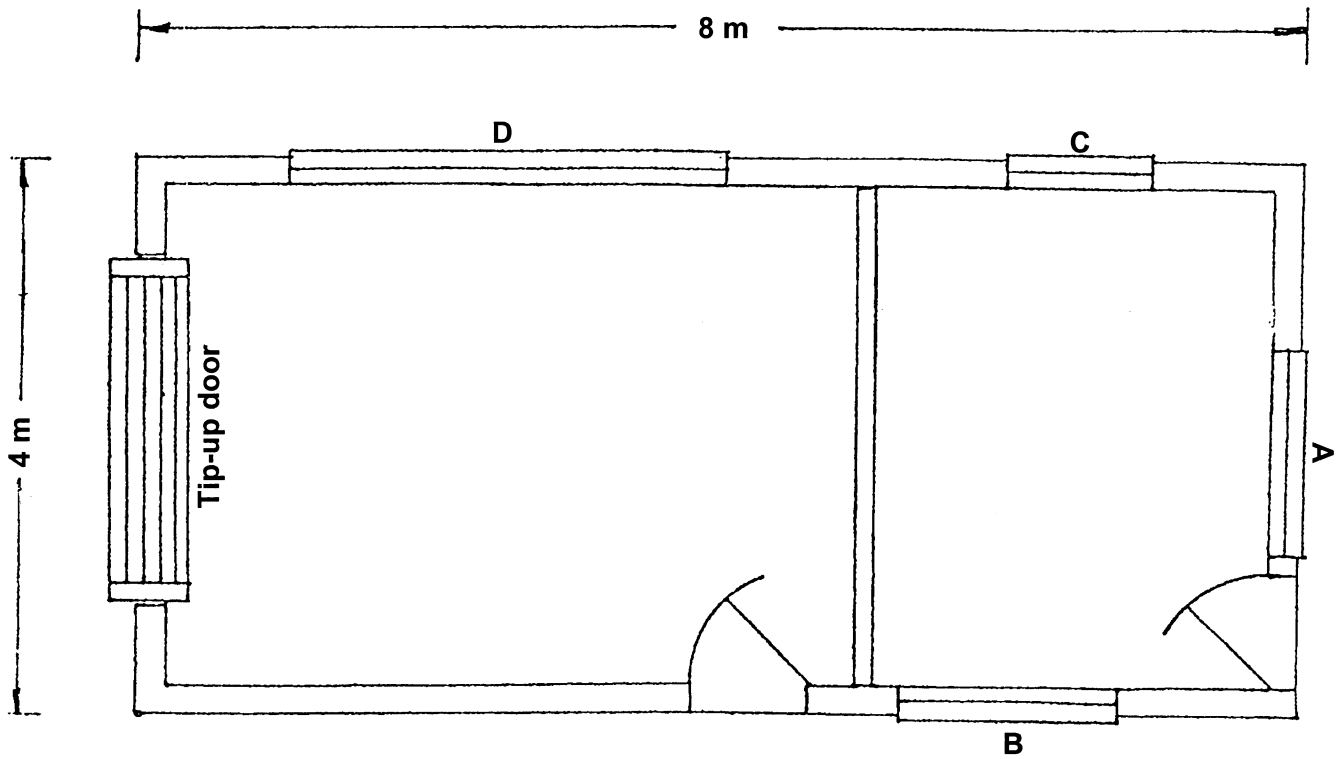   55/m^2 per half-brick wall   **[50]**

Figure 2

TOTAL: **300**

END