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2306/305
BUILDING ECONOMICS, CONSTRUCTION LAW,
ESTIMATING AND COSTING
Oct./Nov. 2018
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN QUANTITY SURVEYING

BUILDING ECONOMICS, CONSTRUCTION LAW, ESTIMATING AND COSTING

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

- Answer booklet;*
- Scientific calculator.*

This paper consists of EIGHT questions in THREE sections; A, B and C.

Answer FIVE questions choosing TWO questions from section A, ONE question from section B and TWO questions from section C.

All questions carry equal marks.

Maximum marks for each part of a question are as indicated.

Candidates should answer the questions in English.

This paper consists of 8 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A: BUILDING ECONOMICS

Answer *TWO* questions from this section.

1. (a) Explain **two** factors of production. (4 marks)
- (b) Explain **four** methods of valuing landed property. (8 marks)
- (c) Explain **four** roles of financial controllers in the construction industry. (8 marks)

2. (a) Outline **four** characteristics of money. (6 marks)
- (b) Explain each of the following cost control techniques.
 - (i) cost analysis;
 - (ii) cost check;
 - (iii) cost plan;
 - (iv) cost study.
- (c) Outline **four** types of banks. (8 marks)

3. (a) State **four** types of firms. (6 marks)
- (b) State **four** factors affecting total market demand. (2 marks)
- (c) Outline **four** design variables that affect the cost of a building. (4 marks)
- (d) Explain **four** effects of inflation in the construction industry. (6 marks)



SECTION B: CONSTRUCTION LAW

Answer *ONE* question from this section.

4. (a) State **four** sources of law in Kenya. (2 marks)
 - (b) Explain each of the following terms:
 - (i) trespass;
 - (ii) vicarious liability;
 - (iii) negligence.
- (6 marks)

- (c) Outline four defences to a tort. (6 marks)
- (d) Explain three types of mortgages. (6 marks)
5. (a) Differentiate between freehold and leasehold land ownership. (4 marks)
- (b) Outline four remedies to land trespass. (6 marks)
- (c) Explain three defences against defamation. (6 marks)
- (d) State three advantages of arbitration. (4 marks)

SECTION C: ESTIMATING AND COSTING

Answer TWO questions from this section.



6. (a) (i) Define the term 'variations'. (6 marks)
- (ii) State four causes of variations.
- (b) Figure 1 shows the plan and section of a substructure. Using an approximate quantities method, estimate the cost of the works.

DATA

Trench excavation	Kshs. 100/m ³
Backfilling	Kshs. 75/m ³
Disposal of surplus	Kshs. 80/m ³
Timbering	Kshs. 150/m ²
Levelling and compacting	Kshs. 60/m ²
Foundation concrete	Kshs. 12 000/m ³
Foundation walling	Kshs. 1200/m ²
Hardcore	Kshs. 700/m ²
Murram blinding	Kshs. 300/m ²
Oversite concrete	Kshs. 1500/m ²
DPM	Kshs. 70/m ²

(14 marks)

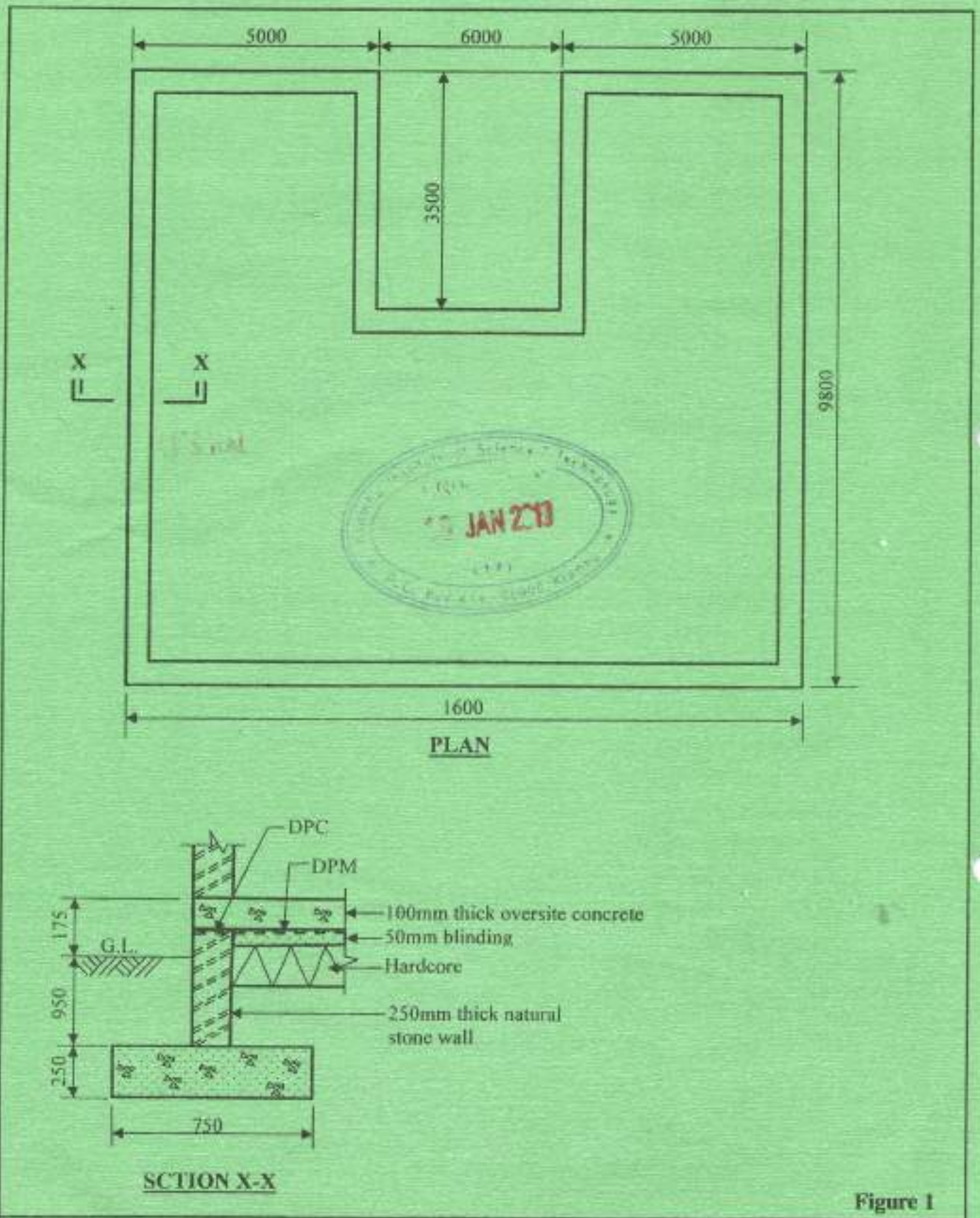


Figure 1

7. (a) Explain **four** components of a unit rate. (8 marks)

(b) **Figure 2** shows timbering in a trench. Determine the cost of the timbering using the following data.

250 x 400 mm timber	Kshs. 250/m
75 x 50 mm timber	Kshs. 175/m
50 x 50 mm timber	Kshs. 120/m
Nails	Kshs. 100 /kg
Skilled labour	Kshs. 120/hour
Unskilled labour	Kshs. 60/hour
Number of re-uses	5 No.
Waste	5%

Assume any other information not given.

(12 marks)



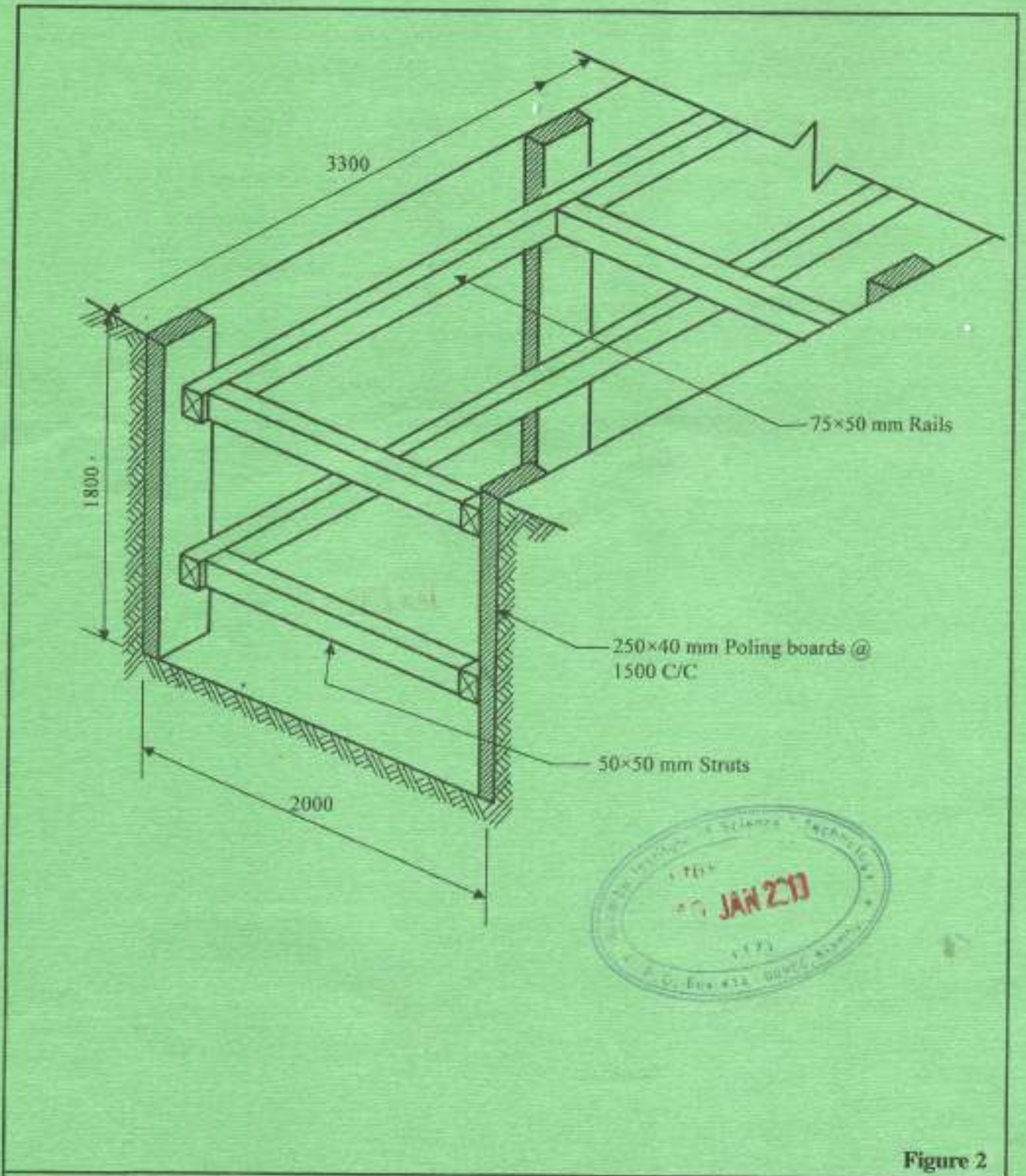


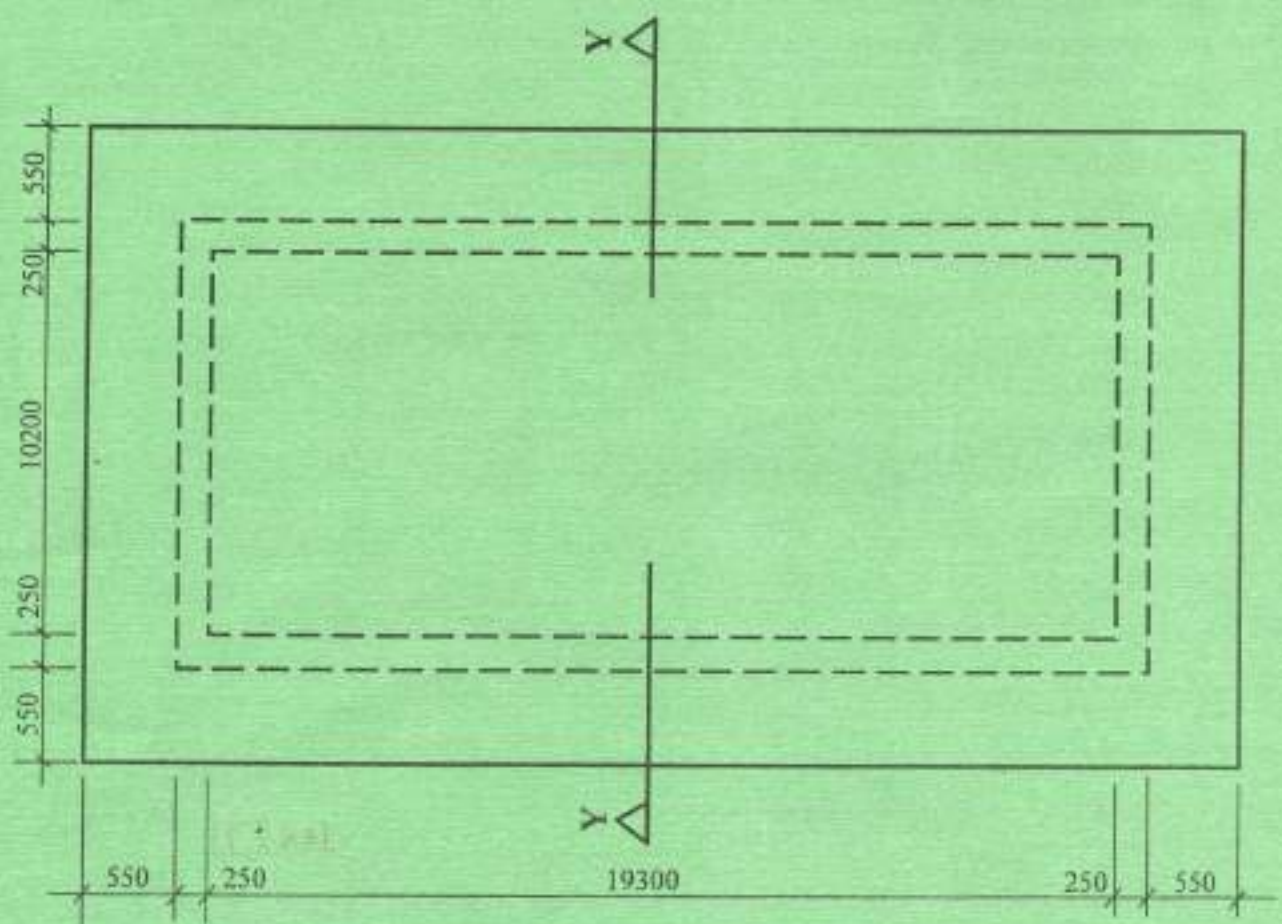
Figure 2

8. Figure 3 shows the plan and section of a building. As the contractor's quantity surveyor estimate the cost of the roof structure (including roof covering) using the following information.

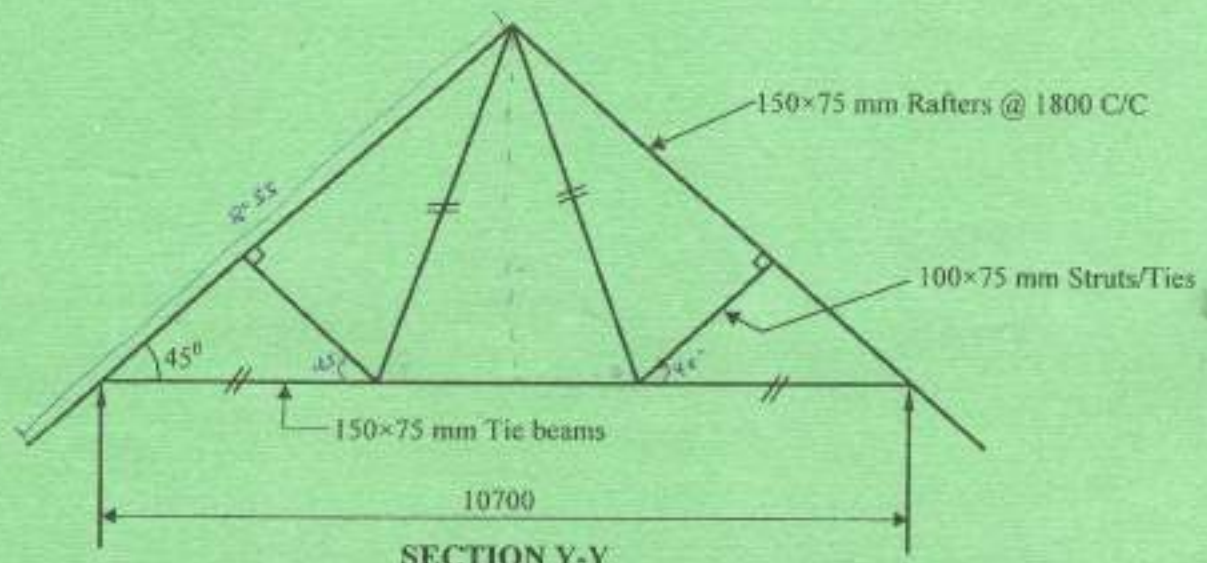
150 x 75 mm timber	Kshs. 225/m
100 x 75 mm timber	Kshs. 150/m
28 gauge box profile sheets	Kshs 1850 per 3-m long
Ordinary nails required 20 kg	@Kshs.120 /kg
Roofing nails required 13 kg	@ Kshs.200 /kg
Labour	10% of the cost of materials
Waste allowed	5%
Profits and overheads	25%

(20 marks)





PLAN



SECTION Y-Y

Figure 3

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