



CIVIL TECHNOLOGY

ANSWER BOOKLET MARKING GUIDELINES

Time: 3 hours

200 marks

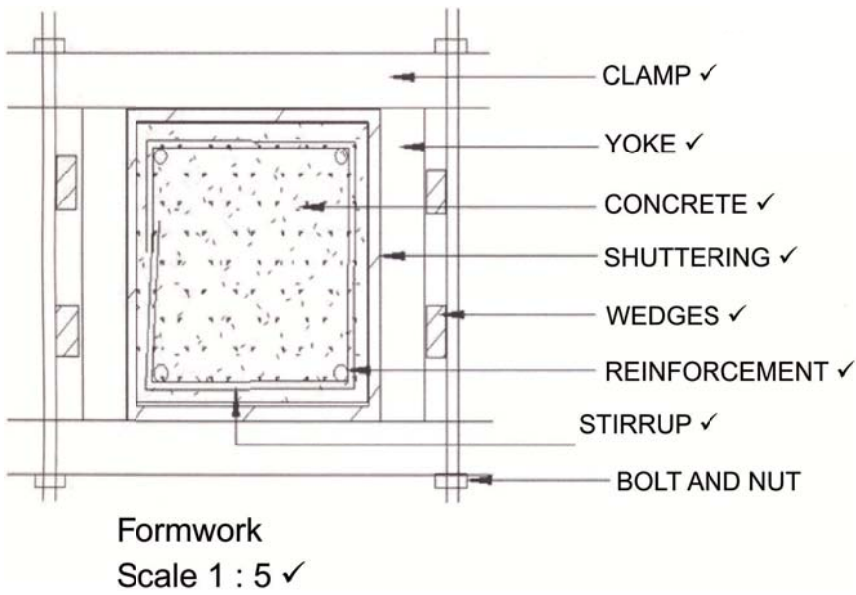
QUESTION 1.3

Column A and B

COLUMN A	COLUMN B
1.3.1	I
1.3.2	D
1.3.3	E
1.3.4	A
1.3.5	B
1.3.6	H
1.3.7	J
1.3.8	K
1.3.9	C

(9)

QUESTION 2.3 FORMWORK



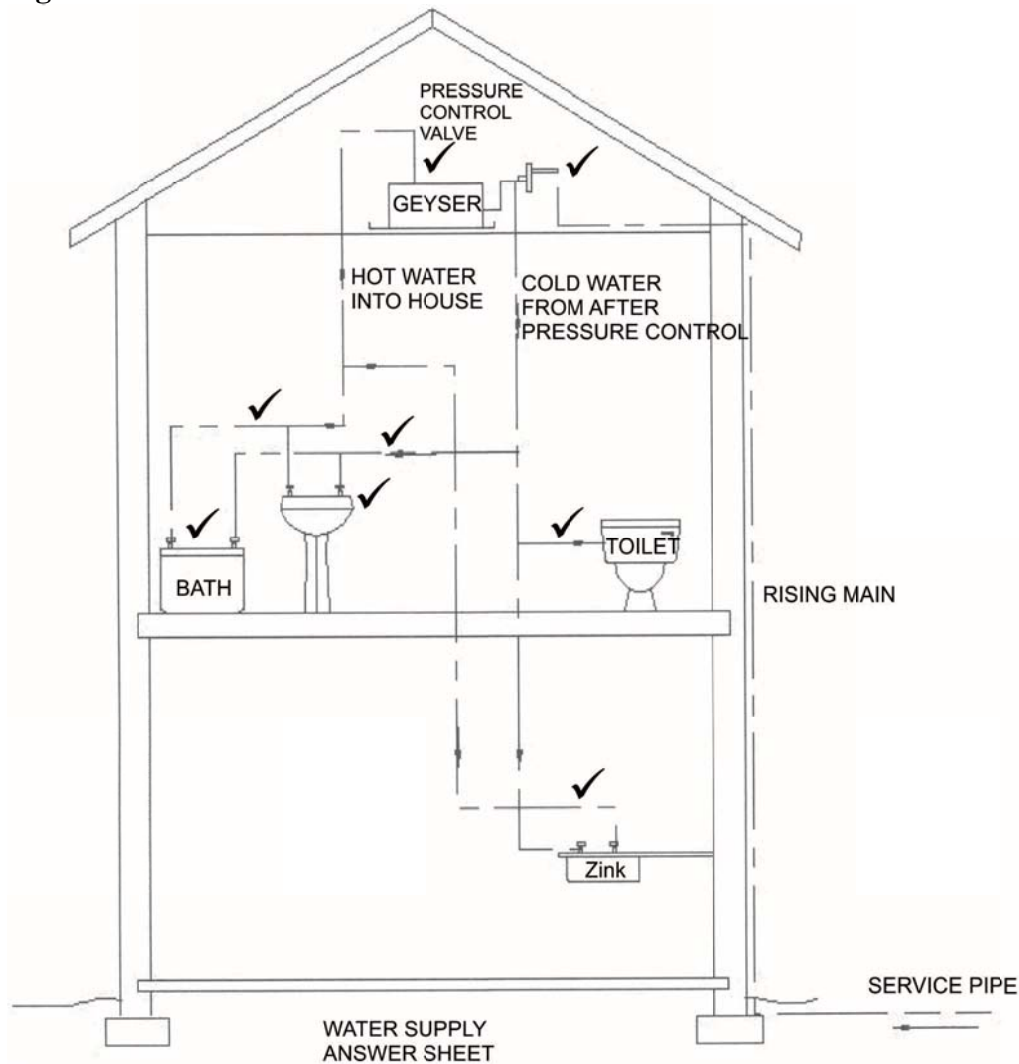
* Use a mask for marking.

Assessment Criteria	Mark
Correctness	5
Accuracy scale	2
Any THREE labels	3
Total	10

(10)

QUESTION 3.2 TYPICAL WATER INSTALLATION (HOT AND COLD WATER SUPPLY)

Figure 3.2

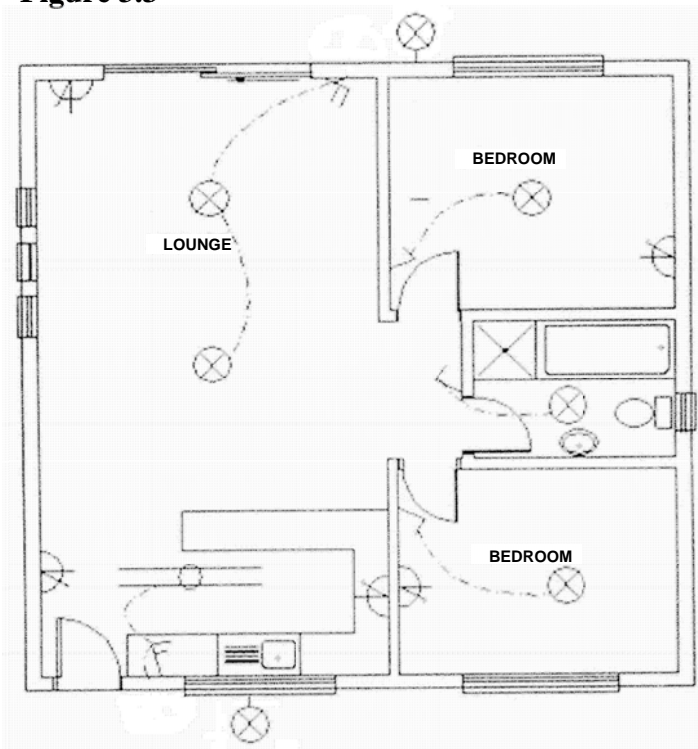


Assessment Criteria	Mark
Cold water supply from service pipe	1
Cold water supply to outlets	3
Hot water from geyser	1
Hot water to outlets	3
Total	8

QUESTION 3.3

Electrical diagram

Figure 3.3



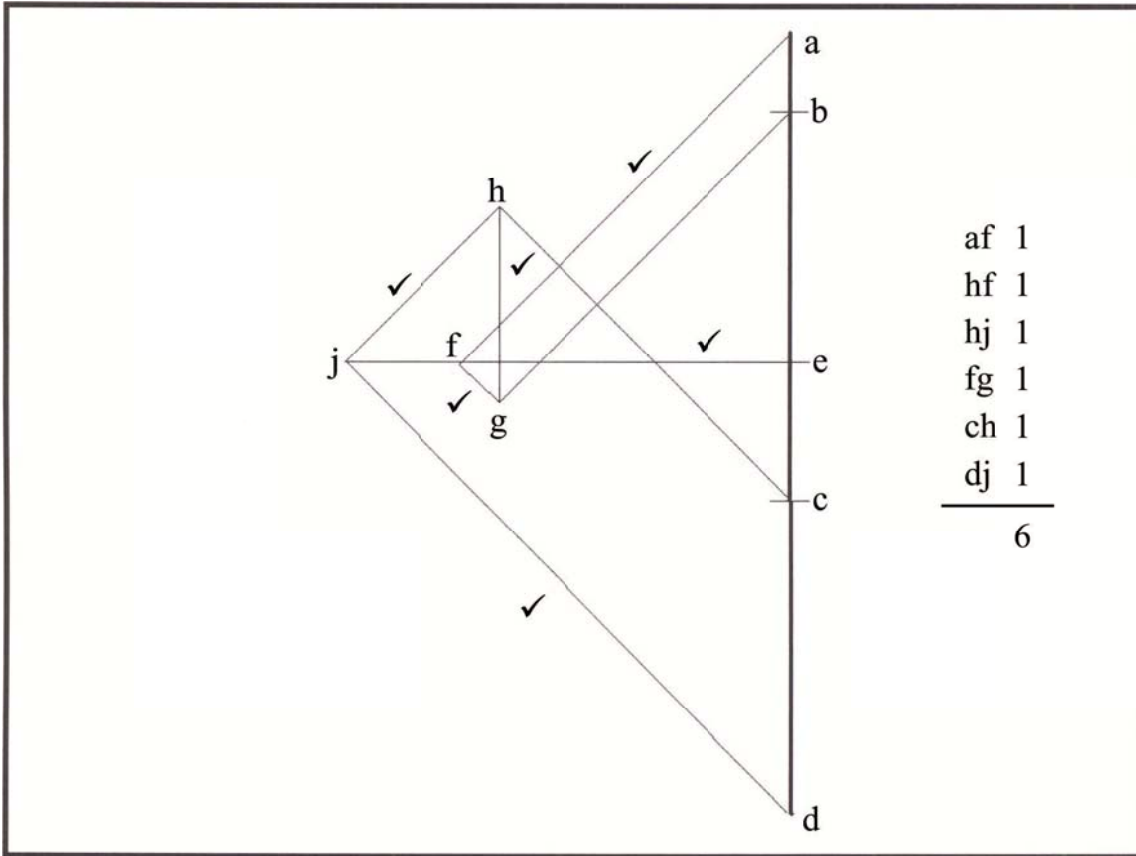
Assessment criteria	Mark
Switch socket outlet	4
Fluorescent light (double)	1
Filament lights	2
Wall mounted external	1
Single pole switch for lights	4
Wiring switches to lights	2
Total	14

QUESTION 4.6 QUANTITY SURVEYING

Item	Measurement	Result	Description
			Centre line
1/			$13 \times 2 = 26 \text{ m}$
			$11 \times 2 = 22 \text{ m}$
			$= 48 \text{ m}$
			less $4 \times 0,22 = 0,88 \text{ m}$
		$= 47,12 \text{ m}$	$= 47,12 \text{ m}$
1/	$47,12 \times 2,8$		
		$131,9 \text{ m}^2$	
2/	$131,9 \times 52$		
		13 718 bricks	Total bricks: 13 718 bricks
			Openings:
2/	$2 \times 0,9$		Doors (375 bricks)
		$3,6 \text{ m}^2$	
			Windows (1 748)
7/	$2 \times 1,2$		
		add $16,8 \text{ m}^2$	
		$= 20,4 \text{ m}^2$	
2/	$20,4 \times 52$		
		2 122 bricks	Opening bricks = 2 122
		11 596 bricks	$13 718 - 2 122$
			Breakage
1/	$11 596 \times 5\%$		
		580 bricks	580 bricks
	$11 595 + 580$		
		12 175	
			Total Bricks:
			$= 12 175 \text{ bricks}$

(12)

QUESTION 5.3

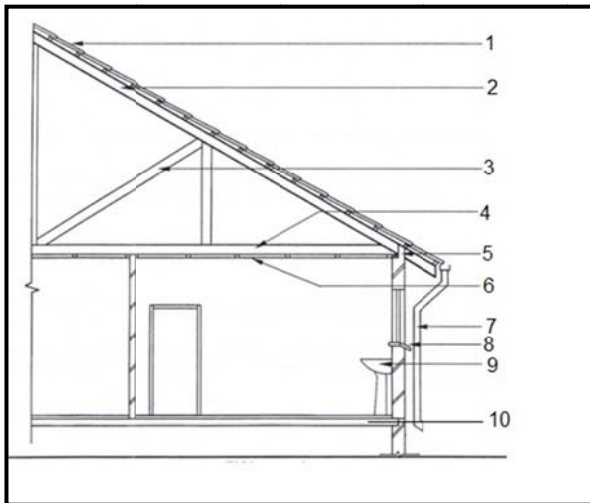


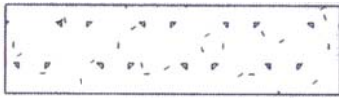
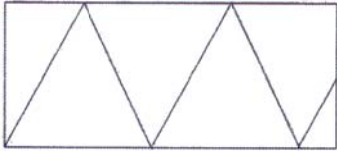
(6)


Member	Nature	Magnitude
GF	Strut	A: 6,5 kN – 7,5 kN
FE	Tie	B: 43 kN – 45 kN
GH	C: Tie	25 kN
JH	D: Strut	28 kN

(4)

QUESTION 6.1 SECTIONAL VIEW



No.	Question	Answer	Mark
6.1.1	What will be a suitable scale to draw this sectional view?	1 : 50 1 : 100 OR 1 : 200	1
6.1.2	Describe the mistake where the internal wall rests on the slab.	No foundation Wall rests directly on slab, no foundation bricks or foundation Any ONE of above	1
6.1.3	What colour is used to indicate new brick work on a plan?	RED	1
6.1.4	Draw the hatching symbol that indicate number 10.	 If not in block 1 mark	2
6.1.5	Draw the hatching symbol to indicate hardcore fill.	 Penalise rough work –1	2
6.1.6	Do you think the height of the door and window is correct? Justify your answer.	No Height of door and window must be same height	2
6.1.7	What will be a suitable height for the super structure? 2 000 m or 2 800 m	2 800 mm	1

6.1.8 (a)	Abbreviations are used to communicate information on a houseplan. What does the abbreviation NGL stand for?	Natural ground level	1
6.1.8 (b)	What does the abbreviation FFL stand for?	Finished floor level	1
6.1.9	What is the function/use for number 5 on the building and what is the terminology used for number 5?	Keep out birds and insects out of roof space Beamfill Any other acceptable answer.	2
6.1.10	Draw the symbol for number 9 that you will use on a planview of a house.		1

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QUESTION 6.2

Assessment Criteria	Mark	Mark obtained
Design of internal structure, placing of rooms and sanitary fitting	5	
External walls	2	
Internal walls	2	
Doors	2	
Windows	3	
North symbol	1	
Shower	1	
Wash Basin	1	
Water Closet	1	
Double sink	1	
Built-in-cupboard	1	
Application of scale	1	
Title and scale	2	
Neatness and line quality	2	
Total	25	

FLOOR PLAN
SCALE 1:75

*** Not all designs are the same. This is only the examiner's plan. Learners use discretion. Base plan stays the same.

N
Look at functionality of design
Room sizes
External doors, inwards
Windows used for natural light and ventilation
Regulations regarding house design