

**RAMOTSHERE MOILOA SUB-DISTRICT**

**TECHNOLOGY**

**TERM 2 MEMORANDUM**

**JUNE 2019**

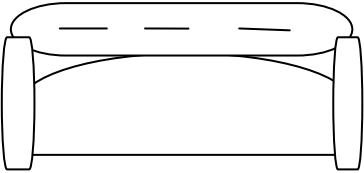
**GRADE 8**

Marks : 100

**All alternative relevant answers should be credited**

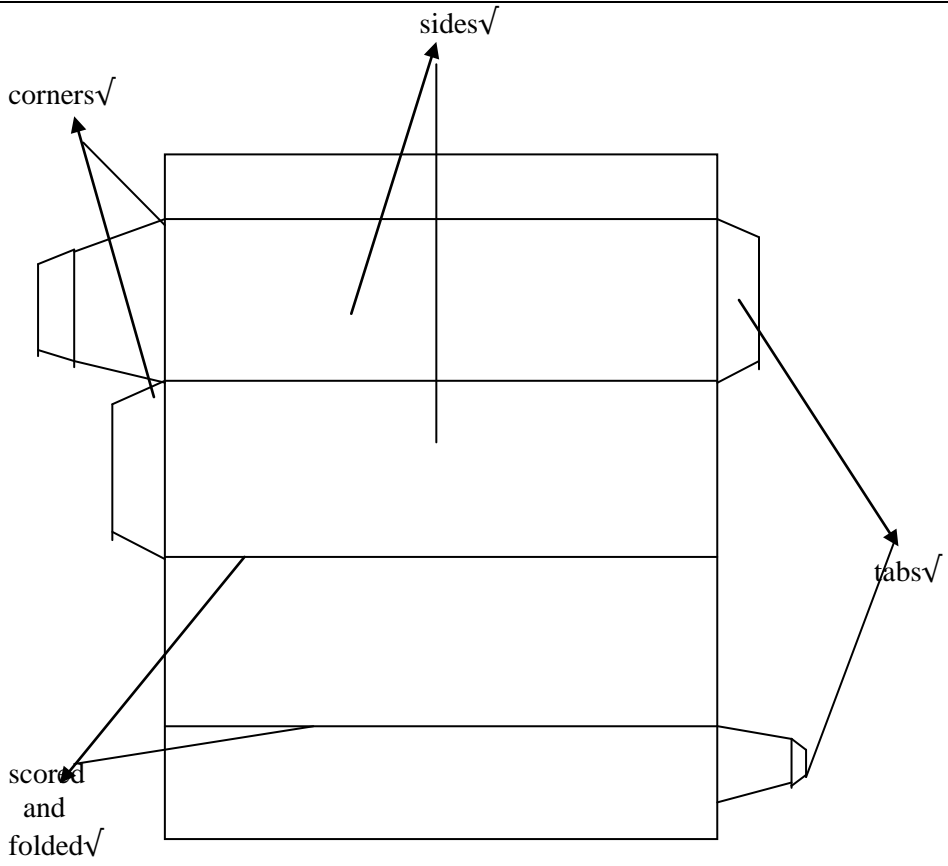
**This memorandum consists of 4 pages**

<b>1</b>	<b>Question</b>	<b>Answer</b>	<b>Marks</b>
	1.1	A✓	1
	1.2	A✓	1
	1.3	D✓	1
	1.4	B✓	1
	1.5	A✓	1
			<b>5</b>
1.2	1.2.1	True✓	1
	1.2.2	False✓	1
	1.2.3	True✓	1
	1.2.4	True✓	1
	1.2.5	False✓	1
			<b>5</b>
	1.3	COLUMN B	
		D✓	1
		C✓	1
		B✓	1
		A✓	1
			<b>4</b>

<b>2</b>	2.1.1	A Rafter✓	1
		B –K post ✓	1
		C Queen post✓	1
		D Strut✓	1
		E Tie beam✓	1
			<b>5</b>
	2.1.2	Pitched roof✓	1
	2.1.3	The roof will bend or break✓✓	2
	2.1.4	a) Fracture✓	1
		b) Bend ✓	1
		c) Topple over✓	1
			<b>11</b>
<b>3</b>	3.1	A design cause the bridge to collapse✓✓	2
	3.1.1		
	3.1.2	Compression /bending force✓	1
	3.1.3	Weight of cars✓	1
	3.1.4	<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">COLUMNS STRUCTURE</div>  <div style="margin-left: 20px;">2 MARKS FOR RIGID 2 MARKS FOR ARCH</div> </div>	4

3.1.5	a) Cantilever bridge ✓	
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		b) Truss bridge✓	1																		
		c) Cable stayed bridge✓	1																		
			<b>11</b>																		
<b>4</b>	4.1	<table border="1"> <thead> <tr> <th>Line convention</th> <th>Name of line / Type</th> <th>Property</th> </tr> </thead> <tbody> <tr> <td>Eg. _____</td> <td>Construction line</td> <td>Very thin and continuous</td> </tr> <tr> <td>_____</td> <td>Outline</td> <td>Thick And Continuous</td> </tr> <tr> <td>-----</td> <td>Dotted Line</td> <td>Thin And Interrupted</td> </tr> <tr> <td>↔</td> <td>Limit/Dimension Line</td> <td>Thin And Continuous</td> </tr> <tr> <td>-----</td> <td>Centre Line</td> <td>Dashed and dot line</td> </tr> </tbody> </table>	Line convention	Name of line / Type	Property	Eg. _____	Construction line	Very thin and continuous	_____	Outline	Thick And Continuous	-----	Dotted Line	Thin And Interrupted	↔	Limit/Dimension Line	Thin And Continuous	-----	Centre Line	Dashed and dot line	8
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			<b>8</b>																		
<b>5</b>	5.1		15																		
			<b>16</b>																		
<b>6</b>	6.1	Driver✓, idler and driven gear	3																		
	6.1.1	Changes the rotation of the two gears in the same direction✓✓	2																		
	6.1.2	a) Clockwise ✓	1																		
	6.1.3	b) anti-clockwise✓	1																		
	6.1.4	c) Clockwise ✓	1																		
	6.1.5	$\text{Gear ratio} = \frac{\text{output gear}}{\text{input gear}} \checkmark$ $= \frac{10}{20} \checkmark$ $= 2:1 \checkmark$	4																		
	6.1.5	Slow✓	1																		

	6.1.6	Change rotary movement into reciprocating movement √√	2
	6.1.7	Wheel with an axle that is off-centre√√	2
	6.1.8	Car jack/meat mincer/wind pumps√	1
			<b>18</b>
<b>7</b>	7.1.1	It gets soggy and falls apart√√	2
	7.1.2	It gets wet but nothing happens to it√√	2
	7.1.3	a) Pollute the environment√√	2
		b) Release toxic chemical in the environment √√	2
	7.1.4	Materials which can be broken down by micro-organisms and absorbed by the earth√ Examples: a) paper √ b) wood√	1 1 1
			<b>11</b>
<b>8</b>	8.1.1	To re-manufacture waste materials into new products√√	2
	8.1.2	Plastic –re-use it by making plastic products like hats, mats etc. √√ Paper –re-use it by making paper dowels to build watch tower√√	2 2
	8.1.2		4
	8.1.3	It protects the product/provides information/makes transportation an shelf packing easier√√	2
			<b>12</b>
			<b>100</b>

	TOTAL	
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