



**TOM NEWBY SCHOOL**  
**TERM 4 FORMAL ASSESSMENT**



**MEMORANDUM**

Question	Answer	Mark	Level
1	<b>Section A:</b> <b>Multiple choice:</b> Choose the correct answer from the statements below and only write down the correct letter, next to the number. 1.1. b ✓ 1.2. c ✓ 1.3. a ✓ 1.4. b ✓ 1.5. b ✓ 1.6. c ✓	6	1
2	<b>Identify the images below.</b> 2.1. A horseshoe magnet. It is used to pick up iron filings or any metal objects is attracted to it. ✓ ✓ 2.2 A crane with a moveable arm. It is used at construction sites and at buildings to lift heavy equipment or tools up. ✓ ✓ 2.3 Flag poles consist of pulleys and ropes. The ropes are to hoist the flag high. ✓ ✓ <b>Any possible answer will be accepted.</b>	6	2
3	<b>Match the columns:</b> Match Column A with the answers in Column B. 3.1. D ✓ 3.2. E ✓ 3.3. F ✓ 3.4. C ✓ 3.5. A ✓ 3.6. B ✓	6	1
4	<b>Section B:</b> True or False: 4.1. False ✓ The motor in a washing machine drives the small pulleys faster during spinning and bigger pulleys slowly during washing. ✓ . 4.2. True ✓ ✓ 4.3. False ✓ The magnetic field that the electromagnet creates is permanent only when it is switched on and the electric current flows through. ✓ 4.4. False ✓ The simplest form of electrical circuit is when an energy source (such as a battery) is connected to a light bulb. ✓ 4.5. False ✓ As much as 50% of waste in the average dustbin could be made into compost. ✓	10	1 / 2

5	<p><b>Any possible drawing of a shelter, including labels. Check the rubric. (10) ✓</b></p> <table border="1" data-bbox="344 353 1182 887"> <thead> <tr> <th data-bbox="344 353 951 432">Rubric: Sketch of a temporary shelter</th> <th data-bbox="951 353 1182 432">Possible mark (10)</th> </tr> </thead> <tbody> <tr> <td data-bbox="344 432 951 510">Wrote an interesting heading for the model shelter</td> <td data-bbox="951 432 1182 510">1 ✓</td> </tr> <tr> <td data-bbox="344 510 951 589">Started with the front / side view and added something in 3 D</td> <td data-bbox="951 510 1182 589">2 ✓ ✓</td> </tr> <tr> <td data-bbox="344 589 951 667">Indicated the real measurements and enough labels</td> <td data-bbox="951 589 1182 667">2 ✓ ✓</td> </tr> <tr> <td data-bbox="344 667 951 745">Used dark outlines and other types of lines</td> <td data-bbox="951 667 1182 745">2 ✓ ✓</td> </tr> <tr> <td data-bbox="344 745 951 824">Made use of different colours and showed the materials</td> <td data-bbox="951 745 1182 824">2 ✓ ✓</td> </tr> <tr> <td data-bbox="344 824 951 887">Neatness of drawing.</td> <td data-bbox="951 824 1182 887">1 ✓</td> </tr> </tbody> </table> <p><b>Write a design brief</b> mentioning what we are designing, specifications and constraints. (10)</p> <p>5.2.1 I must design an emergency shelter to help people who have lost their homes or who are temporary displaced. ✓ ✓</p> <p>5.2.2 a) It needs to be waterproof or rain proof. ✓  b) It must be cost-effective to make. ✓  c) It needs to be strong and sturdy. ✓  Or d) It should have at least one strengthening technique. The floor is as important as the walls and the roof. It must keep people dry inside. Any materials or tools that they want to add, will also be acceptable.</p> <p>5.2.3 a) It could fall over and not be strong enough to hold its shape. ✓  b) The materials I use might be too soft or too flimsy or not waterproof or fireproof. ✓  c) My shelter might not be dry after I have painted it. This can be any reason of what could go wrong when building the shelter ✓</p> <p>5.2.4 a) Hammer and nails ✓  b) Paint or string or scissors. Any suitable tools ✓</p>	Rubric: Sketch of a temporary shelter	Possible mark (10)	Wrote an interesting heading for the model shelter	1 ✓	Started with the front / side view and added something in 3 D	2 ✓ ✓	Indicated the real measurements and enough labels	2 ✓ ✓	Used dark outlines and other types of lines	2 ✓ ✓	Made use of different colours and showed the materials	2 ✓ ✓	Neatness of drawing.	1 ✓	20	2 / 3
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6	<p><b>Section C</b></p> <p>6.1.1 a) Neoprene ✓  b) To make neoprene a better insulator of heat, it is put through a foaming process, where tiny bubbles of gas are released into the material. ✓ ✓</p> <p>6.1.2 Rescue workers and doctors of the rescue boat will also need protection. Conditions at sea can be cold and windy, therefore they need clothing that is wind and water resistant, and that offers them some warmth. ✓ ✓</p>	12	2 / 3														

	<p>6.1.3 A material that does not allow free passage of something through it, e.g. your woollen jersey is an insulator of heat. ✓</p> <p>6.1.4 Rescue swimmers will swim out to help people, and other volunteers will assist victims after they have been recovered from sea. ✓ ✓</p> <p>6.1.5 Tent canvas Durable water repellent Polyurethane coatings or plastic Laminated flooring ✓ ✓</p> <p>6.1.6 Although emergency workers are volunteers and are not paid for their time (such as the NSRI) there are still many opportunities for paid employment in the emergency services, e.g. fire fighters. ✓ ✓</p> <p>Any possible answer is accepted.</p>		
	<b>Total: 60 marks</b>		

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