



**WJEC Level 1/2 Awards in Constructing the
Built Environment**

**Unit 1: Safety and Security in Construction
External Assessment**

60 Marks

Mark Scheme

SUMMER 2015

Question	Answer	Marks
1. (a) AC1.3	<p>1 mark for correct answer</p> <p>Answer:</p> <p>Dry Powder or Co2</p>	1
1. (b) AC1.3	<p>1 mark for correct answer</p> <p>Answer: (1 of 3)</p> <p>Water/Foam/or Wet Chemical</p>	1
2. (a) AC3.1	<p>1 mark for correct answer</p> <p>Answer:</p> <p>A lockable isolated store</p>	1
2. (b) AC3.1	<p>Up to 2 marks available</p> <p>1 mark for basic reason</p> <p>2 marks for detailed reasoning with clear link to reducing risk of injury</p> <p>If the learner has given an incorrect answer for (a) no marks can be awarded</p> <p>Indicative content</p> <p>If flammable materials are kept in the lockable cupboard then staff are less likely to have any contact with the boxes. Therefore, there is less likelihood of a fire starting. Candidates could note the factors that could cause injury – Illegal smoking or electrical faults could be cited.</p> <p>The locked cupboard also provides a barrier between the flammable materials and potential sources of fire such as electrical items.</p> <p>Reference can also be made to severity of injury and likelihood when explaining how risk is minimised.</p> <p>Any other appropriate response.</p> <p>Example 2 mark answer:</p> <p>When the flammable materials are locked in the cupboard they are less likely to come into contact with potential sources of fire such as electrical cables and therefore less likely to cause injury (2).</p>	2

Question	Answer	Marks
3. AC4.2	<p>Up to 2 x 2 marks available</p> <p>For each control measure:</p> <p>1 mark for identifying an appropriate control measure</p> <p>2 marks with description of appropriate reason</p> <p>Indicative content</p> <ul style="list-style-type: none"> • Security cameras / CCTV • Security staff • Alarm system • Perimeter fence / Hoarding • Any other appropriate response <p>Example 2 mark answer:</p> <p>A security fence could be put up around the perimeter of the site (1) this would make it difficult for unauthorised people to access the site (1).</p>	4
4. (a) AC1.1	<p>Up to 3 marks available</p> <p><i>One mark for identifying each appropriate employer responsibility (examples given below – not exhaustive):</i></p> <ul style="list-style-type: none"> • provide suitable personal protective equipment • provide up to date information that is easy to understand and follow • consult with all employees, in good time, on health and safety matters • provide clear instructions so every employee knows what they are expected to do • provide free tailored health and safety training that is up to date, relevant and effective • provide an appropriate level of supervision, especially for new, inexperienced and young workers • carry out regular health and safety risk assessments • have a health and safety policy in place • display relevant health and safety law posters • Any suitable employer responsibility from the HASAWA Act 	3

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4. (b) AC1.1	<p>Up to 3 marks available</p> <p>One mark for identifying each appropriate employee responsibility (examples given below – not exhaustive):</p> <ul style="list-style-type: none"> • take care of their own health and safety and that of others • co-operate with employer to help comply with health and safety legislation • follow any instructions or health and safety training provided • inform employer about any work situations that present a serious and imminent risk • inform employer about any other failings identified in health and safety arrangements • Any suitable employee responsibility from the HASAWA Act 	3												
5. AC4.1 AC4.2	<p>Up to 4 marks are available</p> <p>Maximum marks can be awarded for one reason explained in detail or two reasons explained</p> <p>1 mark for identifying a reason for a security risk 1 additional mark can be awarded for describing security risk in detail Additional marks for reasoning in response</p> <p>Indicative content</p> <ul style="list-style-type: none"> • Members of the public could enter the site • Injuries to unauthorised people • Equipment or materials stolen • Vandalise the buildings and equipment • Safety measures that are in place are tampered with <p>Example 4 mark answer: Members of the public could enter the site (1) by easily gaining access through the lightweight fence (1). Vandalism of other security measures such as CCTV cameras could take place (1) and this could lead to further security risks (1).</p>	4												
6 (a). AC1.2	<p>One mark for each correct match</p> <table border="1"> <thead> <tr> <th>Sign</th> <th>Sign type</th> </tr> </thead> <tbody> <tr> <td>Triangle sign – crane overhead</td> <td>Warning (beware or Caution)</td> </tr> <tr> <td>Circular sign with safety boot</td> <td>Mandatory (must do)</td> </tr> <tr> <td>Circle with pedestrian</td> <td>Prohibition (do not)</td> </tr> <tr> <td>Fire extinguisher</td> <td>Fire sign (fire equipment)</td> </tr> <tr> <td>Fire Exit sign</td> <td>Safe condition (the safe way)</td> </tr> </tbody> </table>	Sign	Sign type	Triangle sign – crane overhead	Warning (beware or Caution)	Circular sign with safety boot	Mandatory (must do)	Circle with pedestrian	Prohibition (do not)	Fire extinguisher	Fire sign (fire equipment)	Fire Exit sign	Safe condition (the safe way)	5
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Fire Exit sign	Safe condition (the safe way)													
6 (b) AC1.2	Mandatory sign – staff and visitors must wear protective footwear on site.	2												

Question	Answer	Marks
7 AC3.1	<p>Up to 8 marks available 4 x 2</p> <p>Correctly identify one or more Control measure (1) Explanation of why it is they are required (2)</p> <p>Indicative Content</p> <ol style="list-style-type: none"> 1 High visibility vest - signage - routes separated - people separated, traffic lights 2 Breathing apparatus, platforms, permits to work, training, ventilation 3 Harnesses training - risk assessment people processes 4 Signage - barriers - Training - Permits to work. No material storage next to the trench. 	8
8. AC1.4	<p>Up to 3 marks available</p> <p>1 mark for stating each main power:</p> <p>Power 1 – issue an improvement notice</p> <p>Power 2 – issue a prohibition notice</p> <p>Power 3 – close a site down</p> <p>Any other reasonable response which correctly states one of the main powers of the HSE</p>	3
9. (a) AC1.1	<p>One mark for correct answer.</p> <p>To gain the mark candidates must identify a hazard (e.g. fall from height) not a risk.</p>	1
9. (b) AC1.1	<p>Up to 2 marks available</p> <p>Physical - work injury/death</p> <p>Psychological - worker and family</p> <p>Financial - loss of earnings for loss of profit for site</p>	2

Question	Answer	Marks
<p>10. AC2.1 AC2.2 AC3.2</p>	<p>Hazard 1 (identified for candidate)</p> <p>Risk(identified for candidate)</p> <p>Control measure (identified for candidate)</p> <p>Hazard 2 (identified for candidate)</p> <p>No barrier around the saw</p> <p>Risk (indicative content):</p> <p>Workers and visitors could be severely injured by the saw blade as nothing exists to prevent them from coming into contact with it</p> <p>Workers and visitors could also bump into fellow workers using the saw which could also lead to severe injury</p> <p>Control measure (indicative content):</p> <p>Create a barrier to ensure workers and visitors cannot accidentally come into contact with the blade and prevent other workers and visitors bumping into the saw operative.</p> <p>The barrier should be highly visible and no worker should use the saw unless the barrier is in place.</p> <p>A sign telling staff to only use the saw when barrier is in place should be displayed.</p> <p>Only trained and authorised employees should be allowed to use the saw.</p> <p>Hazard 3 (identified for candidate)</p> <p>Employees cutting sheet material without appropriate personal protective equipment</p> <p>Risk (indicative content):</p> <p>Workers could be in danger of eye injury as no protective glasses worn</p> <p>Workers could also face hand injuries as no gloves being worn</p> <p>Ear defenders - face damage to hearing</p> <p>Dust mask - could face respiratory injury</p>	<p>No marks</p> <p>No marks</p> <p>No marks</p> <p>No marks</p> <p>3</p> <p>3</p> <p>No marks</p> <p>3</p>

Question	Answer	Marks
	<p>Control measure (indicative content):</p> <p>Workers should be:</p> <p>Provided with PPE</p> <p>Provided with health and safety training</p> <p>Made aware of dangers through safety signs displayed appropriately</p>	3
	<p>Hazard 4 (identified by candidate)</p> <p>Likely suggestion of Hazard:</p> <p>Untidy workspace around the power saw</p>	1
	<p>Risk (indicative content):</p> <p>Unstable and dangerous</p> <p>Constitutes a tripping hazard leading to injury from fall</p> <p>Constitutes a tripping hazard leading to injury from contact with saw blade</p> <p>Wood off-cuts encroach safe working area</p>	3
	<p>Control measure (indicative content):</p> <p>Keep the workshop clean and clear at all times</p> <p>Provide policy, training and signage relating to keeping the workshop clean and clear at all times</p> <p>Provide defined waste disposal receptical(s)</p> <p>Dispose of waste materials immediately in receptical(s) provided</p>	4

Note on control measures

Identify 3 control measures

or

identify a control measure with further explanation.

One control measure and further explanation – maximum of 2 marks.

