

2014 HSC Construction Marking Guidelines

Section I

Multiple-choice Answer Key

Question	Answer
1	A
2	A
3	D
4	B
5	C
6	D
7	D
8	C
9	C or D *
10	A
11	A
12	D
13	B
14	A
15	B

* Both C and D were accepted as correct.

Section II

Question 16 (a)

Criteria	Marks
• Indicates the main features of pre-operational checks and PPE	4
• Indicates some features of pre-operational checks and PPE	2–3
• Indicates a feature of pre-operational checks and/or PPE	1

Sample answer:

- Check that the lower guard is in place
- Avoid unintentional starting
- Ensure that all adjustments are tight prior to using the metre saw/drop saw
- Empty the dust bag
- Wear ear-muffs and safety glasses

Question 16 (b)

Criteria	Marks
• Provides main features of good housekeeping clean-up practices on a construction site	3
• Indicates some information on good housekeeping clean-up practices on a construction site	2
• Indicates limited information on good housekeeping clean-up practices	1

Sample answer:

- Select and safely use the correct equipment for cleaning up the work area
- Wear PPE such as a dust mask when necessary during clean-up
- Clear the work area of materials and rubbish and restore the work area to a safe and tidy condition
- Clean all tools and equipment, check and store them correctly

Question 16 (c)

Criteria	Marks
• Clearly outlines the purpose of WHS Construction Induction Training (White Card)	2
• Provides a relevant point about WHS Construction Induction Training (White Card)	1

Sample answer:

To provide construction workers with a national qualification that covers WHS legislation and prepares them to work on a construction site.

Question 17 (a)

Criteria	Marks
• Correctly identifies all labelled components	2
• Correctly identifies a component of the plane	1

Sample answer:

X — plane blade

Y — lateral adjustment lever

Z — adjusting nut/knob

Question 17 (b)

Criteria	Marks
• Clearly indicates the main features for the maintenance of the plane	3
• Demonstrates an understanding of the plane's maintenance	2
• Demonstrates limited understanding of the plane's maintenance	1

Sample answer:

- Remove the blade to sharpen. Grind blade to correct angle and hone on an oilstone. Adjust the depth of the blade and set the blade parallel to the sole of the plane
- Correctly fit plane blade to the cap iron
- Clean corrosion from plane sole
- Tighten handle and knob screws
- Correctly store plane to prevent damage or corrosion

Question 18 (a)

Criteria	Marks
<ul style="list-style-type: none"> Names the main features that indicate the position of the dwelling on the site plan 	2
<ul style="list-style-type: none"> Names some of the features that indicate the position of the dwelling on the site plan 	1

Sample answer:

The direction of North
 Site plan dimensions
 Contour lines
 Boundary distance and or reference/datum

Question 18 (b)

Criteria	Marks
<ul style="list-style-type: none"> Correctly calculates the amount of land excluding the dwelling on the site plan 	3
<ul style="list-style-type: none"> Demonstrates an understanding of the correct calculation 	2
<ul style="list-style-type: none"> Provides a limited understanding of calculation 	1

Sample answer:

Area of land, excluding the proposed dwelling:

Total area of the block	Area of the proposed dwelling
$= 24 \times 22$	$= (8 \times 10.5) + (3 \times 1.5)$
$= 528m^2$	$= (84 + 4.5)$
	$= 88.5m^2$

Area of land, excluding the proposed dwelling:

$$528m^2 - 88.5m^2 = 439.5m^2$$

Question 18 (c)

Criteria	Marks
<ul style="list-style-type: none"> Clearly outlines the importance of accurate calculations with appropriate examples 	3
<ul style="list-style-type: none"> Demonstrates some understanding of the importance of correct calculations and/or with an example 	2
<ul style="list-style-type: none"> Demonstrates a limited understanding of the importance of correct calculations 	1

Sample answer:

To prepare correct material orders. For example, a builder works within the allocated budget to order the appropriate materials using accurate calculations. This prevents over-ordering of materials.

To estimate the duration of a construction project or task. Such as, accurately calculating work schedules and Gantt charts that coordinate trades sequence and activities. Avoids trades overlapping on site.

To evaluate correct costs. For example, calculating work hours and labour costs. This ensures workers are paid correctly, boosts company morale and maintains the set budget.

Question 19

Criteria	Marks
<ul style="list-style-type: none"> Clearly demonstrates why and/or how regular on-site team meetings are of benefit in the construction industry Provides relevant industry examples to support explanation 	6
<ul style="list-style-type: none"> Demonstrates sound knowledge of the benefits related to regular on-site meetings in the construction industry 	4–5
<ul style="list-style-type: none"> Demonstrates some understanding of the benefits related to regular on-site meetings in the construction industry 	2–3
<ul style="list-style-type: none"> Shows limited understanding of on-site meetings 	1

Sample answer:

To support the construction project and all team members. To achieve set goals, to get the job done quickly, safely and as efficiently as possible. For example, team members could remind/ensure each other that all workers are using correct PPE for each stage of the project.

Develop good communication skills to discuss information and receiving memos, notes and other important documents related to construction tasks, such as an incident report that identifies risks, hazards and changed work conditions.

Question 20 (a)

Criteria	Marks
• Accurately calculates the number of sheets of plywood	2
• Demonstrates some understanding of calculations	1

Sample answer:

Area of sides: = $4.8m \times 1.8m \times 2$ = $17.28m^2$	Front & back area: = $2.4 \times 1.8 \times 2$ = $8.64m^2$	Total area: = $17.28m^2 + 8.64m^2$ = $25.92m^2$	Number of sheets of plywood: = $\frac{\text{Total Area}}{\text{Area of Sheet}}$ = $\frac{25.92m^2}{2.88m^2}$ = 9 sheets
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Question 20 (b)

Criteria	Marks
• Accurately calculates the number of roof tiles and cost	3
• Calculates the number of roof tiles and cost with some errors	2
• Demonstrates a limited understanding of calculations	1

Sample answer:

Number of tiles = $\frac{\text{Roof area}}{\text{Area of tile}}$ = $\frac{4.8m \times 1.8m \times 2}{0.2m \times 0.18m}$ = $\frac{17.28m^2}{0.036m^2}$ = 480	Cost of tiles = $480 \times \text{cost/tile}$ = $480 \times \$2.20$ = \$1056.00
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Question 20 (c)

Criteria	Marks
• Provides characteristics and features of AS compliances related to the cubby house	2
• Provides limited information on AS compliance	1

Sample answer:

- Ensure quality of work
- Provide a safe product
- Adequate for use by children and has no potential hazardous, eg sharp edges, toxic materials

Section III

Question 21

Criteria	Marks
<ul style="list-style-type: none"> Shows an extensive knowledge and understanding of the practices used to reduce hazardous threats to the environment and control of waste management Provides examples of the practices to reduce threats to the environment Use precise industry terminology in a well-reasoned response 	13–15
<ul style="list-style-type: none"> Shows a sound knowledge and understanding of the practices used to reduce hazardous threats to the environment and control of waste management Provides an example of the practices to reduce threats to the environment Uses appropriate industry terminology 	10–12
<ul style="list-style-type: none"> Shows a general understanding of the practices used to reduce hazardous threats to the environment and control of waste management Provides a general knowledge of the hazardous threats to the environment Uses appropriate industry terminology 	7–9
<ul style="list-style-type: none"> Shows a basic knowledge of the practices used to reduce hazardous threats to the environment and/or control of waste management Uses generic industry terminology 	4–6
<ul style="list-style-type: none"> Provides an awareness of environmental threats and/or waste management Uses limited industry terminology 	1–3

Answers could include:

Building sites by law should have the following measures in place to reduce hazardous threats to the environment:

- Waterways
 - Water run-off from site
 - Chemical run-off into storage unit
 - Appropriate drainage for stormwater
- Neighbouring properties
 - Noise limitations/Dust reduction/working within allocated work hours
 - Tree protection barrier
- Roads and amenities
 - Appropriate bin/skips for rubbish
 - Toilet provided for hygiene
 - Drinking water
 - Sediment traps in gutters
 - Clear access to public pathways
 - Safety signs
- Waste management controls
 - Recycle and re-use materials
 - Correct disposal of waste materials
 - Systematic storage of waste.

Section IV**Question 22 (a)**

Criteria	Marks
• Identifies a range of potential hazards	3
• Identifies some hazards	2
• Identifies a hazard	1

Answers could include:

Hazards

- Trip, slip and fall
- Dangerous scaffold erection structure
- Unsafe electrical leads
- Incorrect storage of waste
- Rubbish around site
- Poor access flow

Question 22 (b)

Criteria	Marks
<ul style="list-style-type: none"> • Demonstrates an extensive knowledge of Work Health and Safety (WHS) standards for the two identified hazards • Clearly shows actions required to comply with Work Health and Safety standards 	4
<ul style="list-style-type: none"> • Shows a good understanding of Work Health and Safety (WHS) standards for at least one identified hazard • Shows some actions required to comply with Work Health and Safety standards 	2–3
<ul style="list-style-type: none"> • Shows limited understanding of Work Health and Safety (WHS) standards and/or actions 	1

Answers could include:

Undertake a risk assessment of the site for improvement. A site meeting would be conducted to make appropriate changes for WHS compliance. This would include addressing the following:

- Eliminate trip hazards
- Systematic storage
- Elevated leads
- Safe mounting of scaffold
- Clear access
- Waste management
- Proper signage.

Question 22 (c)

Criteria	Marks
<ul style="list-style-type: none"> • Demonstrates an in-depth knowledge of WHS legislation • Uses precise industry terminology in a well-structured response 	8
<ul style="list-style-type: none"> • Demonstrates a sound knowledge of WHS legislation • Uses appropriate industry terminology 	6–7
<ul style="list-style-type: none"> • Demonstrates relevant knowledge of WHS legislation • Uses some industry terminology 	4–5
<ul style="list-style-type: none"> • Provides a limited understanding of WHS legislation • Uses limited industry terminology 	2–3
<ul style="list-style-type: none"> • Provides a related point 	1

Answers could include:

- WHS standards for safety of the workers
- Induction for site information
- Job-specific training
- Effective communication – signage, information to workers, site meetings
- Relevant PPE to eliminate injuries to workers
- Safe work practices to avoid injury
- Comply with Australian standards to maintain safe work environment
- Council regulations to comply with safety standards
- To reduce loss/stop work.

Construction

2014 HSC Examination Mapping Grid

Section I

Question	Marks	Unit of competency / Element of competency	Employability skills (Please put an X where appropriate)						Targeted performance bands	
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management		Learning
1	1	CPCCCM1003A – Plan and organise work – page 30					X			2–3
2	1	CPCCOHS2001A – Apply OHS requirements – page 96						X		2–3
3	1	CPCCCM2005A – Use construction tools and equipment – pages 69–70							X	2–3
4	1	CPCCCM1015A – Carry out measurements and calculations – page 53			X					3–4
5	1	CPCCCM2005A – Use construction tools and equipment – pages 69-70	X							3–4
6	1	CPCCCM1015A – Carry out measurements and calculations – page 52				X				3–4
7	1	CPCCOHS2001A – Apply OHS requirements – page 99	X				X	X		4–5
8	1	CPCCCM1015A – Carry out measurements and calculations – page 52			X					4–5
9	1	CPCCCM1004A – Conduct workplace communication – page 41	X							5–6
10	1	CPCCCM2005A – Use construction tools and equipment – page 70 CPCCOHS1001A – Work safely in the construction industry – page 84		X	X					2–3
11	1	CPCCCM1004A – Conduct workplace communication – page 39 CPCCOHS2001A – Apply OHS requirements – page 104	X							4–5
12	1	CPCCCM2005A – Use construction tools and equipment – page 69							X	4–5
13	1	CPCCCM2001A – Read and interpret plans and specifications – pages 58–93				X			X	5–6
14	1	CPCCCM1015A – Carry out measurements and calculations – page 51			X					3–4
15	1	CPCCCM1015A – Carry out measurements and calculations – page 52			X					5–6

Section II

Question	Marks	Unit of competency / Element of competency	Employability skills (Please put an X where appropriate)						Targeted performance bands		
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management		Learning	Technology
16 (a)	4	CPCCCM2005A – Use construction tools and equipment – page 71								X	2–4
16 (b)	3	CPCCOHS1001A – Work safely in the construction industry – page 78				X	X				2–5
16 (c)	2	CPCCOHS1001A – Work safely in the construction industry – page 78	X								2–5
17 (a)	2	CPCCCM2005A – Use construction tools and equipment – pages 64, 66								X	2–5
17 (b)	3	CPCCCM2005A – Use construction tools and equipment – pages 64, 66							X	X	2–5
18 (a)	2	CPCCCM2001A – Read and interpret plans and specifications – page 57			X		X				2–6
18 (b)	3	CPCCCM1015A – Carry out measurements and calculations – page 48			X						3–6
18 (c)	3	CPCCCM1015A – Carry out measurements and calculations – page 48							X		2–4
19	6	CPCCCM1004A – Conduct workplace communication – page 46		X							3–5
20 (a)	2	CPCCCM1015A – Carry out measurements and calculations – page 48			X						2–5
20 (b)	3	CPCCCM1015A – Carry out measurements and calculations – page 48			X						3–5
20 (c)	2	CPCCCM1015A – Carry out measurements and calculations – page 50							X		3–6

Section III

Question	Marks	Unit of competency / Element of competency	Employability skills (Please put an X where appropriate)						Targeted performance bands		
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management		Learning	Technology
21	15	CPCCOHS2001A– Apply OHS requirements – pages 76, 90 CPCCCM1002A – Work effectively and sustainably in the construction industry – pages 24 and 27 CPCCCM1003A – Plan and organise work – page 29			X		X			X	2–6

Section IV

Question	Marks	Unit of competency / Element of competency	Employability skills (Please put an X where appropriate)						Targeted performance bands		
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management		Learning	Technology
22	15	CPCCOHS2001A – Apply OHS requirements – pages 91, 92 and 98 CPCCCM1002A – Work effectively and sustainably in the construction industry – pages 15 and 24 CPCCCM1003A – Plan and organise work – pages 28 and 31 CPCCM1004A – Conducts workplace communication – page 42 CPCCsOHS1001A – Works safely in the construction industry – page 80	X	X			X	X	X		2–6