

2019 HSC Construction Marking Guidelines

Section I

Multiple-choice Answer Key

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

Section II

Question 16 (a)

Criteria	Marks
<ul style="list-style-type: none"> • Outlines TWO methods for reducing risk from dust particles 	2
<ul style="list-style-type: none"> • Outlines ONE method • Identifies ONE methods 	1

Sample answer:

Operator could wear a dust mask or respirator so that dust is not inhaled.
 Dust extraction attached to drop saw which will limit the amount of airborne dust particles.

Question 16 (b)

Criteria	Marks
<ul style="list-style-type: none"> • Lists TWO appropriate hand tools 	2
<ul style="list-style-type: none"> • Lists ONE appropriate hand tool 	1

Sample answer:

- Tape measure
- Combination square

Answers could include:

- Four fold rule
- Try square
- Marking knife
- Speed square
- Pencil

Question 17 (a)

Criteria	Marks
<ul style="list-style-type: none"> • Correctly names all FOUR components 	3
<ul style="list-style-type: none"> • Correctly names any THREE of the components 	2
<ul style="list-style-type: none"> • Correctly names any TWO of the components 	1

Sample answer:

- Joist
- Ant cap
- Post
- Bearer

Question 17 (b)

Criteria	Marks
• Describes good housekeeping practices during the deck construction	3
• Outlines good housekeeping practices during the deck construction	2
• Provides some relevant information	1

Sample answer:

Good housekeeping practices involve keeping the site safe, organised and in a clean manner. During construction there should be appropriate disposal of all waste materials, such as nails, screws and timber cut offs to provide a safe clean environment. Materials should be located on site for ease of delivery and use.

Question 17 (c)

Criteria	Marks
• Describes a complete and logical process for preparing AND attaching the decking timber to the supporting structure	5
• Describes processes for preparing AND attaching the decking timber to the supporting structure	4
• Describes processes of preparing and/or attaching the decking timber to the supporting structure	3
• Outlines the process of preparing or attaching the decking timber to the supporting structure	2
• Provides relevant information	1

Sample answer:

Measure, mark and cut boards to length using appropriate tools and equipment. Select quantity of appropriate fasteners based on type of material, length, cost, suitability. Correctly position, clamp and mark boards for fasteners. Drill and counter sink (for screws) predrill (for nails). Secure board using fastener with adequate spacing between boards. Repeat process for consecutive boards.

Question 18 (a)

Criteria	Marks
• Correctly labels both X – Substitution and Y – Administrative control	2
• Correctly labels either X – Substitution or Y – Administrative control	1

Sample answer:

X – Substitution

Y – Administrative control

Question 18 (b)

Criteria	Marks
• Names the hazard AND outlines suitable engineering control methods	3
• Names the hazard AND outlines a suitable engineering control method	2
• Names the hazard OR outlines an engineering control method	1

Sample answer:

Electrical power tool on wet job site: hazard – electrical.

Use of a portable ELCB (earth leakage circuit breaker) which will sense an electrical fault and immediately shut down power to reduce risk of harm to the operator. Power cord stands should be utilised to elevate the power cord above ground level.

Question 18 (c)

Criteria	Marks
• Explains the roles of elimination and PPE within the hierarchy of risk control	4
• Explains the roles of elimination and PPE	3
• Outlines the roles of elimination and PPE	2
• Outlines the role of elimination or PPE	1

Sample answer:

Elimination is the removal of a hazard from the site. Eliminating a hazard at the initial stage provides the best opportunity for minimising harm and exposure to risk. Through good planning this method can be the most time and cost effective to implement.

Personal protective equipment is the last stage in the hierarchy of risk control. It allows for some protection of the individual from harm if the risk is still present. PPE will only reduce the risk to the individual user. PPE is any equipment designed to be worn or held by an individual for protection against one or more safety hazards.

Question 19

Criteria	Marks
• Provides steps to correctly calculate and/or have the cost	3
• Provides some steps to calculate the cost	2
• Provides a relevant step	1

Sample answer:

Total board width = width + gap
 = 90 mm + 5 mm
 = 95 mm

Deck width ÷ total board width
 2465 mm ÷ 95 mm
 Total = 25.9 boards
 = 26 boards

26 boards × \$24/board
 = \$624

Question 20

Criteria	Marks
• Describes in detail the benefits of a mandatory site induction	4
• Describes some benefits of the mandatory site induction	3
• Outlines some benefits of a site induction	2
• Lists a feature of a site induction	1

Sample answer:

A site induction ensures a clear and concise message is delivered to all employees, contractors and visitors to the site prior to commencing work. The site induction addresses information surrounding location of amenities, drinking water, required PPE, first aid, evacuation point, emergency procedures and identification of common workplace hazards. This ensures that employees know all the procedures and protocols in case of an emergency.

Question 21

Criteria	Marks
• Clearly describes the benefits of teamwork for BOTH individuals and the workplace	4
• Describes the benefits of teamwork for BOTH individuals and the workplace	3
• Describes a benefit of teamwork for either individuals or the workplace	2
• Outlines a benefit of teamwork	1

Sample answer:

Effective teamwork benefits the individual through the formation of positive work relationships and worker morale. This in turn can promote greater job satisfaction with increased opportunity and added responsibility within a team environment. A shared workload will provide equity within a working team.

Additionally, the workplace benefits through increased efficiency, reduced costs and productivity in workflow which provides a financial benefit to the employer. This in turn can provide greater job security and the potential for increased scope of works.

Section III

Question 22

Criteria	Marks
<ul style="list-style-type: none"> Shows an extensive knowledge and understanding of the importance of using environmentally sustainable and recycled construction materials Uses TWO examples from the question Uses precise industry terminology in a logical and cohesive response 	13–15
<ul style="list-style-type: none"> Shows a thorough knowledge and understanding of the importance of using environmentally sustainable and recycled construction materials Uses TWO examples from the question Uses appropriate industry terminology 	10–12
<ul style="list-style-type: none"> Shows sound understanding of the importance of using environmentally sustainable and/or recycled construction materials Uses example(s) Uses appropriate industry terminology 	7–9
<ul style="list-style-type: none"> Shows an understanding of environmentally sustainable and/or recycled construction materials Uses generic industry terminology 	4–6
<ul style="list-style-type: none"> Provides an awareness of environmentally sustainable or recycled construction materials Provides some relevant information 	1–3

Answers could include:

Recycled materials: concrete, bricks, tiles, timber, steel, glass, plastic.

Environmentally sustainable materials: plantation timbers, manufactured boards, straw bale house, rammed earth.

- Minimisation of waste and use of landfill for disposal
- Reduced impact on native flora and fauna and damage to ecosystems
- Reduced impact on the water cycle
- Manufactured products can be designed to give greater qualities in terms of strength, durability or appearance
- The reuse and recyclability of existing products and materials
- Reduction in the use of raw materials

Radiata pine sourced from plantation forests that are planted on a rotational basis and harvested for timber use. This practice does not require the acquisition of new land thus minimising impact on existing old growth forests and ecosystems.

Manufactured timber products such as particleboard and plywood are manufactured from plantation timbers as well as utilising waste materials from the harvesting process.

Section IV

Question 23 (a)

Criteria	Marks
<ul style="list-style-type: none"> Provides clear links between the work schedule and how it's used in planning and sequencing of trade work in a large-scale construction project Identifies the document/describes the document Uses examples from the table 	6
<ul style="list-style-type: none"> Provides links between the work schedule and how it's used in planning and/or sequencing of trade work in a large-scale construction project Identifies the document/describes the document 	5
<ul style="list-style-type: none"> Describes how it's used in planning and sequencing of trade work in a large-scale construction project Identifies the document/describes the document 	4
<ul style="list-style-type: none"> Describes how it's used in planning and/or sequencing of trade work in a large-scale construction project Identifies the document/describes the document 	3
<ul style="list-style-type: none"> Outlines how it's used in planning and/or sequencing of trade work in a large-scale construction project 	2
<ul style="list-style-type: none"> Provides some relevant information 	1

Sample answer:

The table shows the construction work schedule. A project manager would use this chart to plan the sequence of trade work so that they use space and time in order to complete the job. Other workers would also use this chart to know when materials will be needed on site, when each trade is expected, when to do workplace induction and WHS site inspection. During the project when specific trade work is not complete on time, the flow-on effect can be easily seen at a glance and changes can be made to the work schedule accordingly.

Question 23 (b)

Criteria	Marks
<ul style="list-style-type: none"> Shows a comprehensive understanding of the importance of different types of communication between trades in completing the construction Uses examples from the table to support answer 	9
<ul style="list-style-type: none"> Shows a substantial understanding of the importance of different types of communication between trades in completing the construction Uses examples from the table to support answer 	7–8
<ul style="list-style-type: none"> Shows a substantial understanding of the importance of different types of communication between trades in completing the construction Provides an example 	5–6
<ul style="list-style-type: none"> Shows some understanding of the importance of communication 	3–4
<ul style="list-style-type: none"> Provides some relevant information 	1–2

Sample answer:

The type of communication that is suitable is governed by the sequencing document, type of project and the type of work being carried out.

For example, the use of hand gestures as a form of communication would be suitable for use between an excavator and a concreter as they could have visual contact and they are both present on the site at the same time. They would also be able to use mobile phone/two way radio.

Trades that are not present on the site concurrently would not be able to use hand signals but could make use of text message, email, facsimile, eg excavator/landscaper.

These communication options allow trades to access relevant or important information and to enable them to work in a more efficient and timely manner. This in turn will allow for modification to the planning schedule if needed due to unforeseen circumstances.

Written communication such as work schedules or safe work method statements provide a clear guideline for all trades to follow such as the landscaper confirming when exterior works will be completed. This will allow for quality work and understanding of required tasks to be completed in a safe manner.

The type of communication method chosen will need to consider factors such as who are the sender, receiver; level of detail/information; outside factors such as noise or distance between people; as well as the suitability to the level of work occurring.

2019 HSC Construction Mapping Grid

Section I

Question	Marks	Unit of competency / element of competency	Employability skills (Please put an X where appropriate)							
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology
1	1	CPCCCM2005B Use construction tools and equipment — element 2 – page 69–70			X				X	
2	1	CPCCWHS1001 Prepare to work safely in the construction industry — element 3 Safety — HSC requirements and advice – WHS compliance – page 2	X		X					
3	1	CPCCWHS1001 Prepare to work safely in the construction industry — element 3 Safety — HSC requirements and advice – risk management – page 3	X							X
4	1	CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry — element 1 Safety — HSC requirements and advice — risk management – pages 3–4							X	
5	1	CPCCCM2005B Use construction tools and equipment — element 2 – page 70			X					X
6	1	CPCCCM1014A Conduct workplace communication — element 1 – page 38–42	X	X				X		
7	1	CPCCCM2005B Use construction tools and equipment — element 2 – page 70			X		X			X
8	1	CPCCCM2001A Read and interpret plans and specifications — element 3 – page 60	X						X	
9	1	CPCCCM1015A Carry out measurements and calculations — element 2 – page 52			X		X			
10	1	CPCCCM2005B Use construction tools and equipment — element 2 – page 70		X	X					
11	1	CPCCCM1015A Carry out measurements and calculations — element 1 – page 51							X	
12	1	CPCCCM1012A Work effectively and sustainably in the construction industry — element 1 – page 14	X							
13	1	CPCCCM2001A Read and interpret plans and specifications — element 1 – page 58							X	
14	1	CPCCCM2005B Use construction tools and equipment — element 2 – page 70			X		X			
15	1	CPCCCM1015A Carry out measurements and calculations — element 3 – page 52			X			X		

Section II

Question	Marks	Unit of competency / element of competency	Employability skills (Please put an X where appropriate)							
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology
16 (a)	2	CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry — element 1 Safety — HSC requirements and advice – risk management – page 3			X			X		
16 (b)	2	CPCCCM2005B Use construction tools and equipment — element 2 – page 70	X						X	
17 (a)	3	CPCCCM2001A Read and interpret plans and specifications — element 1 – page 58	X				X			
17 (b)	3	CPCCOHS1001A Work safely in the construction industry — element 1 – page 81	X				X			
17 (c)	5	CPCCCM2005B Use construction tools and equipment — element 2 – page 70		X	X			X		
18 (a)	2	CPCCWHS1001 Prepare to work safely in the construction industry — element 2 Safety — HSC requirements and advice – risk management – page 3	X					X	X	
18 (b)	3	CPCCWHS1001 Prepare to work safely in the construction industry — element 2 Safety — HSC requirements and advice – risk management – page 3	X		X					
18 (c)	4	CPCCWHS1001 Prepare to work safely in the construction industry — element 2 Safety — HSC requirements and advice – risk management – page 3	X							
19	3	CPCCCM1015A Carry out measurements and calculations — element 2 – page 52	X		X		X			
20	4	CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry — element 1 – page 92–98 Safety — HSC requirements and advice – safe work procedures and practices – page 4	X		X		X			
21	4	CPCCCM1012A Work effectively and sustainably in the construction industry — element 3 – page 19	X		X		X			

Section III

Question	Marks	Unit of competency / element of competency	Employability skills (Please put an X where appropriate)								
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology	
22	15	CPCCCM1012A Work effectively and sustainably in the construction industry — element 5 – page 22–27 CPCCCM1013A Plan and organise work — element 2 – page 31–33	X	X	X				X	X	

Section IV

Question	Marks	Unit of competency / element of competency	Employability skills (Please put an X where appropriate)								
			Communication	Teamwork	Problem-solving	Initiative and enterprise	Planning and organising	Self-management	Learning	Technology	
23 (a)	6	CPCCCM1013A Plan and organise work — element 3 – page 33–34 CPCCCM1013A Plan and organise work — element 1 – page 31 CPCCCM2001A Read and interpret plans and specifications — element 2 – page 59–60	X	X		X				X	
23 (b)	9	CPCCCM1013A Plan and organise work — element 1 – page 31 CPCCCM1014A Conduct workplace communication — element 2 – page 42 CPCCCM1014A Conduct workplace communication — element 4 – page 46	X		X		X	X			