

**2002 HSC Notes from
the Marking Centre
Construction**

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2002 HSC NOTES FROM THE MARKING CENTRE

CONSTRUCTION

Introduction

This document has been produced for the teachers and candidates of the Stage 6 course in Construction. It provides comments with regard to responses to the 2002 Higher School Certificate Examination, indicating the quality of candidate responses and highlighting the relative strengths and weaknesses of the candidature in each section and each question.

It is essential for this document to be read in conjunction with the relevant syllabus, the 2002 Higher School Certificate Examination, the Marking Guidelines and other support documents which have been developed by the Board of Studies to assist in the teaching and learning of construction.

The VET Construction Curriculum Framework is designed to enable candidates to acquire a range of technical, personal and organisational skills valued both within and beyond the workplace. Candidates also acquire underpinning skills and knowledge related to functional areas within the construction industry.

General Comments

The 2002 Construction HSC examination was attempted by approximately 1145 candidates.

Teachers and candidates should be aware that examiners may ask questions that address the syllabus content in a manner that requires candidates to respond by integrating their knowledge, understanding and skills developed through studying the course.

Section I

Question	Correct Response
1	D
2	B
3	B
4	C
5	A
6	C
7	B
8	C

Question	Correct Response
9	D
10	A
11	D
12	C
13	D
14	B
15	A

Section II

General Comments

This compulsory section consists of short answer questions. Candidates were asked questions relating to levelling terms, calculations relating to building materials, application of portable equipment, workers compensation legislation, interpretation of plans and health hazards. Question 25 presented candidates with the greatest challenge as it focused both on psychological and biological hazards.

Question 16 (1 mark)

Most candidates attempted this question. Many candidates did not give a fully correct response for checking accuracy ie used the term ‘flip’ rather than turn ‘end for end’. A common response included ‘find a flat surface’.

Question 17 (1 mark)

The majority of candidates attempted this question with some overlooking the ratios as indicated in the question ie 1 : 4 was given for rise : run.

Question 18 (1 mark)

Most candidates answered this question correctly.

Question 19 (3 marks)

The majority of candidates attempted this question, giving correct responses for most components of the builder’s temporary power supply. Some candidates confused the term ‘gauge’ with ‘meter’.

Question 20 (3 marks)

Candidates who attempted this question had difficulty with the term *site datum*. Many candidates indicated ‘point of reference for all measurements’ rather than ‘levels’ or ‘line of reference’. Many candidates described ‘level’ as ‘perfectly flat’ or ‘no slope’.

Question 21 (3 marks)

The majority of candidates were able to provide the correct calculation for the number of bricks required for the wall. Some candidates displayed difficulty in converting millimetres to metres. Many candidates ignored the phrase ‘show all working’ in the question.

Question 22 (4 marks)

- (a) Candidates were unable to name both types of blades for the cutting of timber and sheet metal. The focus for the question is the association with blades for ‘portable circular saws’.
- (b) Candidates were unable to indicate three important details of tagging in this question. Several responses identified the name of the person who tagged the power tool as an important detail.

Question 23 (5 marks)

This question proved difficult for candidates as the majority struggled to give a sound description of medical and rehabilitation benefits. In most cases, candidates only mentioned one type of benefit.

Question 24 (6 marks)

Candidates were able to give an appropriate response for parts (a) – (c) of this question. In part (d), candidates appeared to have limited understanding of reduced level (RL) of ground level. Candidates in part (e) identified a range of drawing types. However, the majority of candidates could only list two of the three requirements.

Question 25 (8 marks)

Candidates found this question difficult with the majority unable to respond successfully in part (c) psychological hazard and in part (d) biological hazard. In general, candidates could only provide one aspect of each type of health hazard. An adequate description needed to identify more than one aspect of the specified hazard.

Section III

Question 26 (15 marks)

This question proved quite challenging for the majority of candidates as they responded in very generic terms. Candidates could only respond to part of the question, either in relation to risk assessment or legislation. They did not provide specific examples, which limited their ability to access higher marks.

The candidates generally cited examples using very simplistic terms and contexts, most of which centred on personal protective equipment. In some instances, some additional safety precautions were included. The use of industry terminology was limited, with many candidates simply repeating ‘key words’ used in the question. In many cases, candidates were unable to cite the sequential ‘management’ procedures required for those working on a construction site.

Question 27 (15 marks)

Most candidates found this question difficult. Subject knowledge of the question was generally good, but most candidates failed to develop their responses to provide a cohesive and clear analysis. The majority of candidates understood the question, but only in a general sense. Most responded to the question from the perspective of a construction tradesperson.

Candidates were able to list techniques used in non-verbal communication. Signage was a common response. Candidates were not generally familiar with the meaning of ‘analysis’. Responses were considered to be too general and the examples selected too vague to describe the effectiveness of the technique being considered.

Candidates understood that ‘non-verbal’ meant without spoken words and generally indicated their understanding that a construction site could be a noisy place which required unique communication techniques. Many responses suggested the benefits of utilising non-verbal communication, particularly from a safety perspective.

Many candidates did not identify characteristics, advantages and disadvantages and failed to provide specific examples for the range of techniques they had listed. Generally, only two or three techniques were discussed. Candidates focused on the term ‘effectiveness’, which was mostly interpreted as exhibiting positive attributes. Negative aspects were not considered.

Quality responses to this question demonstrated clear analysis with specific, relevant and appropriate examples.

Question 28 (15 marks)

The majority of candidates attempted this optional question. Responses varied in their definition of management. Many candidates were not specific about legislation and only mentioned ‘law’. Although candidates cited examples, they were not discussed in detail, or in variety. It was apparent that ‘training’ was not seen as an important practice when ‘working at height’.

Many candidates focused upon ‘explaining’ examples, rather than looking at how industry ‘manages’ the problem. Management concepts were lacking in the majority of answers.

In general, the vast majority of candidates understood the dangers of working at height. They were able to cite appropriate personal protective equipment (PPE) and the strategies to prevent someone from falling. They were unable however to detail preventative strategies.

Areas such as training, education, regulation, registration, licences and supervision were missing from the majority of responses.

Construction

2002 HSC Examination Mapping Grid

Question	Marks	Competencies
Section I		
1	1	BCG 1003 A Read and interpret plans BCC 2000 A Read and interpret plans BCG 1004 A Carry out measurements and calculations
2	1	BCG 1001 A Carry out OH&S requirements
3	1	BCG 1001 A Carry out OH&S requirements BCG 1002 A Plan and organise work
4	1	BCG 1011 A Handle construction materials and safe disposal of waste BCG 1001 A Carry out OH&S requirements
5	1	BCG 1008A Use simple levelling devices
6	1	BCG 1003 A Read and interpret plans BCC 2000 A Read and interpret plans
7	1	BCC 1006 A Use small plant and equipment BCG 1006 A Use small plant and equipment
8	1	BCG 1004 A Carry out measurements and calculations
9	1	BCG 1006 A Use small plant and equipment BCC 1006 A Use small plant and equipment BCG 1011 A Handle construction materials and safe disposal of waste
10	1	BCG 1005 A Use hand and power tools BCC 1005 A Use hand and power tools
11	1	BCG 1003 A Read and interpret plans BCC 2000 A Read and interpret plans BCG 1008 A Use simple levelling devices
12	1	BCG 1001 A Carry out OH&S requirements BCG 1000 A Carry out interactive workplace communications
13	1	BCG 1004 A Carry out measurements and calculations
14	1	BCG 1004 A Carry out measurements and calculations
15	1	BCG 1000 A Carry out interactive workplace communications BCG 1001 A Carry out OH&S requirements
Section II		
16	1	BCG 1008 A Use simple levelling devices
17	1	BCG 1006 A Use small plant and equipment BCG 1001 A Carry out OH&S requirements
18	1	BCG 1000 A Carry out interactive workplace communications
19	3	BCC 1005 A Use hand and power tools BCG 1005 A Use hand and power tools

Question	Marks	Competencies
20	3	BCG 1000 A Carry out interactive workplace communications BCG 1008 A Use simple levelling devices
21	3	BCG 1004 A Carry out measurements and calculations
22 (a)	2	BCG 1005 A Use hand and power tools BCC 1005 A Use hand and power tools
22 (b)	2	BCG 1005 A Use hand and power tools BCG 1001 A Carry out OH&S requirements BCC 1005 A Use hand and power tools
23	5	BCG 1001 A Carry out OH&S requirements
24 (a)	1	BCG 1003 A Read and interpret plans BCC 2000 A Read and interpret plans
24 (b)	1	BCG 1004 A Carry out measurements and calculations BCG 1003 A Read and interpret plans BCC 2000 A Read and interpret plans
24 (c)	1	BCG 1003 A Read and interpret plans BCC 2000 A Read and interpret plans
24 (d)	1	BCG 1003 A Read and interpret plans BCC 2000 A Read and interpret plans BCG 1008 A Use simple levelling devices
24 (e)	2	BCG 1003 A Read and interpret plans BCC 2000 A Read and interpret plans
25 (a)	2	BCG 1001 A Carry out OH&S requirements BCG 1002 A Plan and organise work
25 (b)	2	BCG 1001 A Carry out OH&S requirements BCG 1002 A Plan and organise work
25 (c)	2	BCG 1001 A Carry out OH&S requirements BCG 1002 A Plan and organise work
25 (d)	2	BCG 1001 A Carry out OH&S requirements BCG 1002 A Plan and organise work
Section III		
26	15	BCG 1000 A Carry out interactive workplace communications BCG 1001 A Carry out OH&S requirements BCG 1002 A Plan and organise work BCC 1005 A Use hand and power tools BCG 1005 A Use hand and power tools BCG 1006 A Use small plant and equipment BCC 1006 A Use small plant and equipment BCG 1011 A Handle construction materials and safe disposal of waste
27	15	BCG 1000 A Carry out interactive workplace communications
28	15	BCG 1006 A Use small plant and equipment BCC 1006 A Use small plant and equipment

2002 HSC Construction Marking Guidelines

Section II

Question 16

Competency assessed: BCG 1008A

MARKING GUIDELINES

Criteria	Marks
• Appropriate test outlined	1

Question 17

Competencies assessed: BCG 1006A, BCG 1001A

MARKING GUIDELINES

Criteria	Marks
• Correct response	1

Question 18

Competency assessed: BCG 1000A

MARKING GUIDELINES

Criteria	Marks
• Correct response	1

Question 19*Competencies assessed: BCG 1005A, BCC 1005A***MARKING GUIDELINES**

Criteria	Marks
• Three correct responses	3
• Two correct responses	2
• One correct response	1

Question 20*Competencies assessed: BCG 1000A, BCG 1008A***MARKING GUIDELINES**

Criteria	Marks
• Provides three definitions	3
• Provides two definitions	2
• Provides one definition	1

Question 21*Competency assessed: BCG 1004A***MARKING GUIDELINES**

Criteria	Marks
• Calculation and correct answer (accept 553 or 554 or 553.5)	3
• Makes one simple calculation error	2
OR	
• Correct answer with inadequate working shown	
• Shows understanding of how to calculate area	1

Question 22 (a)*Competencies assessed: BCG 1005A, BCC 1005A***MARKING GUIDELINES**

Criteria	Marks
• Two correct responses	2
• One correct response	1

Question 22 (b)

Competencies assessed: BCG 1005A, BCG 1001A, BCC 1005A

MARKING GUIDELINES

Criteria	Marks
• Three correct responses	2
• Two correct responses	1

Question 23

Competency assessed: BCG 1001A

MARKING GUIDELINES

Criteria	Marks
• Demonstrates a sound knowledge of the legislation and gives a description of at least four benefits	4–5
• Demonstrates a basic knowledge of the legislation (ie gives a detailed description of at least three benefits or lists only four)	3
• Demonstrates a limited understanding of the legislation (ie only describes two or lists three)	2
• Displays an elementary understanding of the legislation (ie only one benefit given)	1

Question 24 (a)

Competencies assessed: BCG 1003A, BCC 2000A

MARKING GUIDELINES

Criteria	Marks
• Correct response	1

Question 24 (b)

Competencies assessed: BCG 1004A, BCG 1003A, BCC 2000A

MARKING GUIDELINES

Criteria	Marks
• Correct response	1

Question 24 (c)

Competencies assessed: BCG 1003A, BCC 2000A

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none">• Correct response in either metres or millimetres but must include the correct units	1

Question 24 (d)

Competencies assessed: BCG 1003A, BCC 2000A, BCG 1008A

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none">• Correct response from drawing to 0.1 m	1

Question 24 (e)

Competencies assessed: BCG 1003A, BCC 2000A

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none">• All three parts correct	2
<ul style="list-style-type: none">• Two parts correct	1

Question 25 (a)

Competencies assessed: BCG 1001A, BCG 1002A

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none">• Correct explanation with appropriate example• Correct appropriate related action(s)	2
<ul style="list-style-type: none">• One of above	1

Question 25 (b)

Competencies assessed: BCG 1001A, BCG 1002A

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none">• Correct explanation with appropriate example• Correct appropriate related action(s)	2
<ul style="list-style-type: none">• One of above	1

Question 25 (c)*Competencies assessed: BCG 1001A, BCG 1002A***MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none">• Correct explanation with appropriate example• Correct appropriate related action(s)	2
<ul style="list-style-type: none">• One of above	1

Question 25 (d)*Competencies assessed: BCG 1001A, BCG 1002A***MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none">• Correct explanation with appropriate example• Correct appropriate related action(s)	2
<ul style="list-style-type: none">• One of above	1

Question 26

Competencies assessed: BCG 1000A, BCG 1001A, BCG 1002A, BCC 1005A, BCG 1005A, BCG 1006A, BCC 1006A, BCG 1011A

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none"> • Presents sequential procedures of a construction task that indicates extensive understanding of the legislative OH&S requirements and risk management • Demonstrates a clear and concise knowledge of how NSW legislative requirements help to control risks on construction sites • Correctly uses precise industry terminology in a well-organised cohesive response • Good use of appropriate and varied example(s) to enhance answer 	13–15
<ul style="list-style-type: none"> • Demonstrates a thorough understanding and knowledge of OH&S regulations for risk management • Indicates a sound understanding of the work sequence for an appropriate construction task • Uses specific industry terminology to clearly present understanding • Uses examples in context to support answer 	10–12
<ul style="list-style-type: none"> • Demonstrates a general understanding of OH&S regulations for risk management • The construction task presented indicates an understanding of the organisation of safe work operations and sequencing • Communicates using basic industry terminology • Uses an example(s) to demonstrate a general understanding 	7–9
<ul style="list-style-type: none"> • Demonstrates a basic knowledge of OH&S regulations • Indicates a basic understanding of safe work operations and OH&S (requirements and practice) through the detail provided in the example • Communicates using some correct industry terminology 	4–6
<ul style="list-style-type: none"> • Limited understanding of OH&S legislation, risk management regulations of practices • Demonstrates elementary understanding of safe work method, risk assessment, job safety analysis • Uses some industry terminology 	1–3

Question 27

Competency assessed: BCG 1000A

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none"> • Clearly analyses non-verbal communication techniques, using appropriate examples to identify characteristics, advantages and disadvantages • Correctly uses precise industry terminology in a well organised cohesive response • Indicates a precise and extensive understanding of the use of non-verbal communication within the construction industry • Good use of appropriate and varied example(s) to enhance answer 	13–15
<ul style="list-style-type: none"> • Analyses some non-verbal communication techniques, with examples appropriately linked to characteristics, advantages and disadvantages • Uses specific industry terminology to clearly present understanding • Is able to demonstrate a broad understanding of non-verbal communication as used in the construction industry • Uses a variety of example(s) to support answer 	10–12
<ul style="list-style-type: none"> • Is able to analyse some non-verbal communication techniques • Uses some examples linked to characteristics • Demonstrates understanding of some advantages or disadvantages • Presents response using basic industry terminology in context • Uses an example(s) to demonstrate a general understanding 	7–9
<ul style="list-style-type: none"> • Able to outline a basic understanding of non-verbal communication • Answer contains basic industry terminology in context • Is able to make reference to some characteristics, advantages or disadvantages 	4–6
<ul style="list-style-type: none"> • Limited understanding of non-verbal communication • Answer indicates a cursory knowledge of its context to and use in the construction industry • Uses some industry terminology 	1–3

Question 28

Competencies assessed: BCG 1006A, BCC 1006A

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none"> Indicates a sound understanding of the need for training and the risks for various methods of working at height Discusses the legal requirements in the construction industry and procedures essential for safe operation when working at height Correctly uses industry terminology in a well organised, cohesive response Good use of appropriate and varied examples to enhance answer 	13–15
<ul style="list-style-type: none"> Indicates a knowledge of the need for training and/or risks for a variety of methods of working at height Uses specific industry terminology to demonstrate understanding Uses a variety of examples to support answer 	10–12
<ul style="list-style-type: none"> Describes the need for training or the risks for at least two methods Shows an awareness of legal requirements Communicates using basic industry terminology Uses at least two different examples 	7–9
<ul style="list-style-type: none"> Shows a basic understanding for training and/or the risks involved in working at height Demonstrates some understanding of the legal requirements Uses some basic terminology used in industry 	4–6
<ul style="list-style-type: none"> Limited understanding of requirements of working safely at height Use of limited industry terminology 	1–3