

**2003 HSC Notes from
the Marking Centre
VET Construction**

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2003 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 2003 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 2003 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 students to acquire a range of technical, personal and organisational skills valued both within and beyond the workplace. Students also acquire underpinning skills and knowledge related to function areas within the construction industry.

Specific Comments

Approximately 1048 candidates attempted the 2003 Construction HSC examination.

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

The paper consists of THREE sections.

Section I (15 marks)

There are FIFTEEN multiple-choice questions.

All questions in this section are compulsory.

All questions are of equal value.

Section II (35 marks)

The questions in this section are short response items, in parts, with a range of mark values.

All questions in this section are compulsory.

Section III (30 marks)

The questions in this section are extended response items.

Students must attempt two of the three questions.

All questions are of equal value.

Section I

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

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

Section II

General Comments

This compulsory section is comprised of short answer questions. Candidates were asked questions relating to drawing types, calculations relating to excavated material, functions and maintenance of machinery, power tools, interpretation of work plans, maintenance of paint brushes, dust hazards and communication.

Question 16 (2 marks)

The majority of responses were strong for the battery drill component of this question. Some responses were unable to express an understanding of 'pneumatic'.

Question 17 (2 marks)

This question was not well answered. Candidates were generally unclear of the procedure or steps involved in cleaning a paintbrush with many simply citing 'it should be put into a jar containing a solvent'. Some candidates confused types of solvents claiming that 'brushes should be rinsed in water then in turps'. Storage of the brush after cleaning was poorly answered. Candidates generally did not understand the need to store a brush with the bristles unobstructed.

Question 18 (3 marks)

This question was well answered by most candidates. Drawing types were well understood.

Question 19 (1 mark)

The majority of candidates were able to determine the staff reading. Those responses that made an error most likely used an incorrect 1.2m starting point.

Question 20 (3 marks)

The calculation question elicited a wide range of responses. Some responses did not provide final calculations. Credit was given for information/formulas used in the working of responses. A few responses displayed only minimal understanding of volumes formulae which was required to calculate the correct volume and the costs involved.

Question 21 (2 marks)

Many candidates found this question challenging because of the requirement linking communication with ‘circumstances’ in the table. Many candidates referred to an informal situation that could exist with a contractor on a home building site. Many responses were far too general in nature.

Question 22 (4 marks)

Most candidates were able to outline two important functions of the regulator. Some addressed the maintenance check in terms of OHS.

Question 23 (10 marks)

This question provided candidates with the opportunity to interpret a work plan. Few responses indicated a sound understanding of management and its relationship to forward planning. In several cases, candidates did not distinguish the differences between the role of a worker and a site manager.

Question 24 (2 marks)

Candidates generally were not able to display an understanding of battery size in terms of voltage. Very few supported their understanding with ‘12 or 14.4 volts’, citing instead that ‘some batteries last longer than others’, without giving more technical information. Some candidates cited ‘fast charge’ type batteries.

Question 25 (6 marks)

The majority of candidates were able to attempt this question via some understanding of dust and the importance of minimising its effect on the environment. Many candidates cited the need for dust extraction in internal / enclosed areas, with only some citing the broader effects of dust in the construction industry and how it should be minimised, eg wetting down. In their responses, candidates generally overlooked the term ‘range of measures’, citing just one or two.

Section III

Question 26 (15 marks)

Candidates related well to the scenario. However, the majority of candidates found the requirement to ‘analyse’ challenging. The development and implementation aspects of the question were not treated in any detail. Most responses provided limited detail about the components of a plan and how it would be put into practice. The majority of candidates did not support their answer with appropriate concepts or explain the consequences of having and utilising an evacuation plan on a large construction site.

In general, candidates were able to express knowledge of exits, evacuation routes and procedures, practice drills, first-aid kits and rooms, meeting points and name checks. The use of appropriate terminology was a strength in the majority of responses.

Areas that were overlooked or showed evidence of minimal understanding by candidates included the knowledge of when a plan is developed (ie prior to construction), delegation of duties (eg safety officer), reporting processes on the site, resources required (rescue equipment, fire extinguishers) and maintenance and checking of emergency equipment and exits. Few candidates referred to the legal requirements of management relating to OHS and evacuation plans.

Question 27 (15 marks)

Responses frequently provided relevant information but did not provide the necessary links between the roles of personnel and measurement calculation. Justification of the statement was minimal with many considering only one or two types of measurement.

The majority of responses considered the perspective of a tradesperson or worker. Responses typically failed to examine the industry broadly enough to include site managers and professional involvement. Candidates were rewarded for using specific industry terms.

Question 28 (15 marks)

Most candidates found this question challenging. The majority concentrated on the first part of the question and wrote about change in very broad terms. These included changing technology, social/aesthetic and new and improved materials. Candidates did not cite appropriate examples to support their statements. Many candidates responded negatively about ‘change’ citing their on-site experiences in the trade, generally with smaller builders.

In general, most responses centred only on ‘cost’. In many instances the relevant impact of change was not well balanced.

Safety issues played a major role in many responses. Many responses provided a list or cited safety rules, regulations and OHS requirements without linking this to an impact of change.

Candidates were able to provide a description of a change in tools and equipment without naming a specific example or, if cited, not able to relate it to the impact the equipment would bring to the industry. This also applied to responses relating to manual handling. Candidates could relate how to lift a heavy load or the fact that PPE (gloves) should be worn when handling chemicals, but very few related this to an increase in the need for training and instruction.

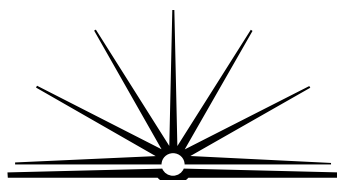
Excellent responses included examples such as the increasing use of steel frames, MDF type materials and pre-fabrication techniques to fully describe aspects of change and the impact of change.

Construction

2003 HSC Examination Mapping Grid

Question	Marks	Unit of competency	
Section I			
1	1	BCG 1008A	HSC p3
2	1	BCG 1011A	Material section HSC p3
3	1	BCC 2000A , BCG 1003A	1.2, p2 and HSC
4	1	BCG 1004A	2.1, p2
5	1	BCC 1005A , BCG 1005A	2.3, p2
6	1	BCG 1001A	HSC p3
7	1	BCG 1001A, BCG1002A	Critical aspects p2
8	1	BCG 1008A	1.4, p2, HSC p2
9	1	BCC 1006A, BCG 1006A	1.1, p2, 2.1
10	1	BCG 1000A	HSC p3
11	1	BCG 1004A	1.1, p2 variables p3
12	1	BCC 2000A , BCG 1004A, BCG 1003A	Skills p2
13	1	BCC 1006A , BCG 1006A	3.2, p3
14	1	BCG 1000A	Variables p4
15	1	BCG 1011A	HSC p3
Section II			
16	2	BCC 1005A , BCG 1005A	1.3, p2 HSC req. p3
17	2	BCC 1005A , BCG 1005A	HSC req. p2, variables p4
18	3	BCC 2000A , BCG 1003A	1.2 p2 HSC req. p3/4
19	1	BCG 1008A	HSC req p2
20	3	BCG 1004A	2.1 p2, 3.5 p3
21	2	BCG 1000A	HSC req. p3, 3.1, 3.2, 4.1, 4.2
22	4	BCC 1006A , BCG 1006A	1.1, 1.2, 2.4, HSC p3
23	10	BCG 1002A	HSC req. p3, 5.1, 5.2 p3
24	3	BCC 1005A , BCG 1005A	P2 1.3 p2
25	6	BCC 1002A, BCC 1006A, BCG 1002A, BCG 1006A, BCG 1011A	1011A, HSC req. p2 &4, 4.4 p4

Question	Marks	Unit of competency	
Section III			
26	15	BCG 1000A General Occupational Health and Safety for Construction BCG 1001A BCG 1002A	2.5, 6.1, 6.2, 2.3 HSC p4 HSC p3, 3.2, p3 Critical Asp & Ev p2
27	15	BCC 1005A BCC 2000A BCG 1002A BCG 1003A BCG 1004A BCG 1008A	1.1, 1.2, 3.1, 3.3, 3.4 HSC Req. underpin K&S p2 underpin K&S p2 underpin K&S p2
28	15	BCC 1005A BCC 1006A BCG 1001A BCG 1002A BCG 1005A BCG 1006A BCG 1011A	3.2 & HSC req. p2–3 1.4 p2 1.2 p2, 2.1 p3 2.2, 2.3 p2 4.1 & HSC 2.2, 2.3 p3



B O A R D O F S T U D I E S
NEW SOUTH WALES

2003 HSC Construction Marking Guidelines

Question 16

Competencies assessed: BCC 1005A, BCG 1005A

MARKING GUIDELINES

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

Question 17

Competencies assessed: BCC1005A, BCG 1005A

MARKING GUIDELINES

Criteria	Marks
• Correct response for cleaning and storage. Cleaning must include use of appropriate solvent	2
• Correct response for either cleaning or storage OR • A limited response to both	1

Question 18*Competencies assessed: BCC 2000A, BCG 1003A***MARKING GUIDELINES**

Criteria	Marks
• Four correct responses	3
• Three correct responses	2
• Two correct responses	1

Question 19*Competencies assessed: BCG 1008A***MARKING GUIDELINES**

Criteria	Marks
• Correct response	1

Question 20*Competencies assessed: BCG 1004A***MARKING GUIDELINES**

Criteria	Marks
Correctly: • Calculated volume of excavation AND • Calculated or estimated 'bulked' volume (using the volume determined by the student) AND • Calculation of the cost of skips (using the bulked volume determined by the student)	3
• Two correct steps	2
• One correct step	1

Question 21*Competencies assessed: BCG 1000A***MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none">• Correct response for method and its appropriate advantage for both circumstances	2
<ul style="list-style-type: none">• Correct response for method and its appropriate advantage for one circumstance OR	1
<ul style="list-style-type: none">• A correct response for the method of both circumstances	

Question 22 (a)*Competencies assessed: BCC 1006A, BCG 1006A***MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none">• Two correct responses	2
<ul style="list-style-type: none">• One correct response	1

Question 22 (b)*Competencies assessed: BCC 1006A, BCG 1006A***MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none">• Correct check and appropriate explanation	2
<ul style="list-style-type: none">• Correct check	1



Question 23 (a)

Competencies assessed: BCG 1002A

MARKING GUIDELINES

Criteria	Marks
• Correct response	1

Question 23 (b)

Competencies assessed: BCG 1002A

MARKING GUIDELINES

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

Question 23 (c)*Competencies assessed: BCG 1002A***MARKING GUIDELINES**

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

Question 23 (d)*Competencies assessed: BCG 1002A***MARKING GUIDELINES**

Criteria	Marks
The answer should include: <ul style="list-style-type: none">• A clear understanding that multiple trades are on site• Two or more gangs require OH&S induction training• Clear explanation of relevant considerations	5
<ul style="list-style-type: none">• A clear understanding that multiple trades are on site• Indicates some relevant considerations	3–4
<ul style="list-style-type: none">• Shows an understanding of multiple trades on site• Limited relevant considerations	1–2

Question 24*Competencies assessed: BCC 1005A, BCG 1005A***MARKING GUIDELINES**

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

**Question 25***Competencies assessed: BCC 1002A, BCC 1006A, BCG 1002A, BCG 1006A, BCG 1011A***MARKING GUIDELINES**

Criteria	Marks
• Appropriately identifies and clearly describes both preventative and control measures	5–6
• Appropriately identifies preventative and/or control measures with descriptions	3–4
• Identifies or describes some preventative or control measures	1–2

Question 26*Competencies assessed: BCG 1000A, BCG 1001A, BCG 1002A***MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none">• Demonstrates extensive understanding of the legislative OH&S requirements and risk management in relation to the development of an Emergency Plan• Indicates a clear and concise knowledge of Emergency Planning• Correctly uses precise industry terminology in a well-organised cohesive response• Extensive use of appropriate concepts to produce a comprehensive analysis of the issues	13–15
<ul style="list-style-type: none">• Demonstrates a clear understanding and knowledge of OH&S regulations of an Emergency Plan• Indicates a sound understanding of developing an Emergency Plan• Uses specific industry terminology to clearly present understanding and analysis of issues• Uses appropriate concepts to support the answer	10–12
<ul style="list-style-type: none">• Demonstrates a general understanding of OH&S regulations of an Emergency Plan• Analysis indicates an understanding of the organisation of safe work practice in relation to Emergency Plans• Communicates using basic industry terminology• Demonstrates a general understanding of Emergency Planning concepts	7–9
<ul style="list-style-type: none">• Demonstrates a basic knowledge of OH&S regulations relating to an Emergency Plan• Indicates a basic understanding of Emergency Plans and OH&S through the detail provided• Communicates using some correct industry terminology	4–6
<ul style="list-style-type: none">• Limited understanding of OH&S legislation, relating to an Emergency Plan• Indicates elementary understanding of developing an Emergency Plan• Uses limited industry terminology	1–3

Question 27

Competencies assessed: BCC 1005A, BCC 2000A, BCG 1002A, BCG 1003A, BCG 1004A, BCG 1008A

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none"> • Clearly justifies the statement using appropriate examples linked to numerous industry roles • Correctly uses precise industry terminology in a well organised cohesive response • Indicates a precise and extensive understanding of the use of accurate measurement and calculation by personnel within the construction industry • Extensive use of appropriate and varied examples to enhance answer 	13–15
<ul style="list-style-type: none"> • Justifies some accurate measurement and calculation techniques, with examples appropriately linked to industry roles • Uses specific industry terminology to clearly present understanding • Is able to demonstrate a broad understanding of accurate measurement and calculation as used in the construction industry • Uses a variety of examples to support answer 	10–12
<ul style="list-style-type: none"> • Is able to justify some aspects of measurement and calculation techniques • Uses basic industry terminology in context • Limited use of examples linked to industry roles • Demonstrates some understanding of links between measurement, calculation and roles • Uses examples to demonstrate a general understanding 	7–9
<ul style="list-style-type: none"> • Able to outline a basic understanding of construction industry measurement and calculation • Uses basic industry terminology in context • Is able to make reference to links between measurement, calculation and roles 	4–6
<ul style="list-style-type: none"> • Limited understanding of construction industry measurement and/or calculation • Uses limited industry terminology • Indicates a cursory knowledge of measurement and/or calculation in the construction industry 	1–3

Question 28

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

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none">• Indicates a comprehensive knowledge of the changes and provides a clear analysis of the impacts on industry• Details an extensive understanding of changes in materials and processes• Correctly uses precise industry terminology in a well organised cohesive response• Extensive use of appropriate and varied examples to enhance answer	13–15
<ul style="list-style-type: none">• Analysis indicates a thorough knowledge of the changes and the implications for industry• Uses a number of appropriate examples of changes in materials and processes• Uses specific industry terminology to demonstrate understanding• Uses a variety of examples to support the answer	10–12
<ul style="list-style-type: none">• Indicates a knowledge of change and the implications for the industry• Provides a relevant analysis of the implications caused by change in materials and processes• Uses basic industry terminology in context• Uses at least two different examples	7–9
<ul style="list-style-type: none">• Shows a basic understanding of changes in materials and processes in the industry• Demonstrates some understanding of the implications of changes in materials and processes• Uses some basic terminology used in the industry	4–6
<ul style="list-style-type: none">• Limited understanding of changes in materials and processes• Uses limited industry terminology• Lists some examples of change	1–3