

**2007 HSC Notes from
the Marking Centre
Construction**

© 2008 Copyright Board of Studies NSW for and on behalf of the Crown in right of the State of New South Wales.

This document contains Material prepared by the Board of Studies NSW for and on behalf of the State of New South Wales. The Material is protected by Crown copyright.

All rights reserved. No part of the Material may be reproduced in Australia or in any other country by any process, electronic or otherwise, in any material form or transmitted to any other person or stored electronically in any form without the prior written permission of the Board of Studies NSW, except as permitted by the *Copyright Act 1968*. School students in NSW and teachers in schools in NSW may copy reasonable portions of the Material for the purposes of bona fide research or study.

When you access the Material you agree:

- to use the Material for information purposes only
- to reproduce a single copy for personal bona fide study use only and not to reproduce any major extract or the entire Material without the prior permission of the Board of Studies NSW
- to acknowledge that the Material is provided by the Board of Studies NSW
- not to make any charge for providing the Material or any part of the Material to another person or in any way make commercial use of the Material without the prior written consent of the Board of Studies NSW and payment of the appropriate copyright fee
- to include this copyright notice in any copy made
- not to modify the Material or any part of the Material without the express prior written permission of the Board of Studies NSW.

The Material may contain third-party copyright materials such as photos, diagrams, quotations, cartoons and artworks. These materials are protected by Australian and international copyright laws and may not be reproduced or transmitted in any format without the copyright owner's specific permission. Unauthorised reproduction, transmission or commercial use of such copyright materials may result in prosecution.

The Board of Studies has made all reasonable attempts to locate owners of third-party copyright material and invites anyone from whom permission has not been sought to contact the Copyright Officer, ph (02) 9367 8289, fax (02) 9279 1482.

Published by Board of Studies NSW
GPO Box 5300
Sydney 2001
Australia

Tel: (02) 9367 8111
Fax: (02) 9367 8484
Internet: www.boardofstudies.nsw.edu.au

ISBN 978 174147 8594

2007726

Contents

Section I.....	4
Section II.....	5
Section III.....	6

2007 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 contains comments on candidate responses to the 2007 Higher School Certificate examination, indicating the quality of the responses and highlighting their relative strengths and weaknesses.

This document should be read along with the relevant syllabuses, the 2007 Higher School Certificate examinations, 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.

Teachers and candidates should consider that examiners may ask questions which require candidates to respond by integrating their knowledge, understanding and skills developed through studying the course and those gained through work experience.

Candidates need to be familiar with the Board's Glossary of Key Words (www.boardofstudies.nsw.edu.au/syllabus_hsc/glossary_keywords.html) which contains some terms commonly used in examination questions. However, candidates should also be aware that not all questions will start with or contain one of the key words from the glossary. Questions such as 'how?', 'why?' or 'to what extent?' may be asked or verbs may be used which are not included in the glossary, such as 'design', 'translate' or 'list'.

Section I

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

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

Section II

Question 16

- (a) In better responses, candidates used descriptive language to identify causes in building construction delays.
- (b) Weaker responses did not link possible implications to delays in building construction. Better responses supported their answer with examples.

Question 17

- (a) Typical responses identified some items of personal protective equipment (PPE). Better responses provided a range of PPE items for operating an impact power drill.
- (b) Most candidates were able to make reference to the problems associated with an inefficient impact power drill. Weaker responses made reference to peripherals (eg drill bits) which were not within the context of the question and did not identify key indicators or inefficiency.

Question 18

Candidates are reminded to use the correct unit of measurement and to develop a clear understanding of how construction materials are calculated. For example, bricks are calculated by number and not by weight.

Question 19

- (a) Typical responses showed some understanding of the identified area and completed quantity calculations. Candidates are reminded to show all working and use the correct unit of measurement.
- (b) Typical responses identified the BBQ area to be calculated. Weaker responses did not link the relationship between area and the volume of the concrete to be ordered, including the 10% waste and the rounding up to 0.2 cubic metres.
- (c) Weaker responses identified generic safety controls and were not site specific.

Question 20

- (a) Typical responses identified a method of informing consumers about hazardous substances, with most stating either MSDS sheets or a 'Hazardous' warning label.
- (b) Typical responses outlined some areas that management would need to consider in managing an emergency situation. Weaker responses discussed either the process of evacuation, or the management of the actual spill. Better responses did both.

- (c) Typical responses described how the container would be physically stored on-site. Better responses also discussed the documentation that would be necessary in such a situation.

Question 21

- (a) Better responses gave a clear comparison of the two roles. Weaker responses tended to describe only one role.
- (b) Better responses outlined areas such as good communication procedures, role definition or some examples of incentives. Weaker responses described the benefits of teamwork and not how it could be achieved.
- (c) Typical responses demonstrated that some form of action must be taken. Better responses described the process management that would need to be followed when considering legislative requirements.

Question 22

Typical responses discussed a variety of options that could be used to make the machine operation safe. Better candidates structured their response around the different levels of risk control. Weaker responses tended to discuss the use of PPE without linking its use to the hierarchy of risk control.

Section III

Question 23

Better responses considered the company's attitude to managing waste efficiently. These responses described company policies and procedures while considering the actions and decisions that management or supervisors may adopt. These better responses also included the roles of tradespersons and labourers in waste reduction and management. The use of a wide range of detailed examples to demonstrate and expand the candidate's discussion was noted in the better responses.

Some candidates recognised that efficient waste management began with careful planning before the building process was started. Examples included standard sizing of materials, prefabrication and subsequent building activities, incorporation of existing materials on renovation or extension projects, deconstruction processes and the use of materials which may be recycled or reused. Candidates realised that waste did not only occur in materials but could also cover lost time and improved labour efficiency. The best answers made reference to the sequencing of trades, using Gantt charts to plan and better manage losses due to waste.

Generally, responses addressed recycling, reuse and waste disposal well. These aspects of waste management were mostly well known and were characterised by a variety of examples and management practices. Examples of occupational health and safety procedures were commonly related to these areas. Specific disposal bins, material safety data sheets and materials commonly recycled were outlined. The best responses linked planned waste reduction with reuse, recycling and disposal.

Question 24

Typically, candidates considered all three criteria outlining the problems identified in the question about worksite communication and considered relevant information, providing examples in these areas.

This question related to a commercial building site (a construction company) that has a hierarchical management structure. This is quite different from the management structure on a domestic building site. Better responses considered the communication systems of a construction company in relation to the stated problems. Weaker responses did not consider the implications of commercial site construction.

Communication methods that were typically discussed included on-site meetings, memos, notes, meetings, signage, journals, training seminars, records of meetings and news sheets.

Management techniques considered could include supervision structures, policies, defined roles, OHS training at three different levels, provision of resources including PPE, allowances, bonus payments and awards, union involvement, legal responsibilities and legislative requirements. Better responses used a range of relevant examples.

Question 25

Typical responses considered and used the stimulus material provided effectively. Most candidates were able to identify with the scenario in the photograph and provided accurate answers to the question.

In the better responses, examples were detailed and relevant. These responses considered emergency response procedures, appropriate first aid treatment, a variety of reporting and documentation methods, site inspection and risk analysis procedures, WorkCover, workers rights and procedural reviews.

Weaker responses considered only a first aid response to the scenario. Better responses discussed DRABCD as the initial emergency response.

Typical responses referred to the documentation on the accident report form but failed to provide references to WorkCover reporting, OHS inspections, work rehabilitation, compensation and legal claims. Responses which considered the scenario only from the perspective of a tradesperson and failed to consider the role of the site management disadvantaged themselves. The better responses included the actions and roles of management.

When considering strategies to reduce injuries on a worksite, typical responses correctly suggested that site housekeeping procedures and OHS site inspection procedures needed to be instituted. Better responses considered that risk management systems needed to be reviewed, and provided examples that management could use to ensure that hazards and the risk of accidents were eliminated, controlled and reduced.

Construction

2007 HSC Examination Mapping Grid

Question	Marks	Unit of competency / Element of competency
Section I		
1	1	BCGCM2004B Handle construction materials
2	1	BCGCM2006B Apply basic levelling procedures
3	1	BCGCM2005B Use construction tools and equipment
4	1	BCGCM2006B Apply basic levelling procedures
5	1	BCGCM1001B Follow OHS policies and procedures
6	1	BCGCM2006B Apply basic levelling procedures
7	1	BCGCM2004B Handle construction materials
8	1	BCGCM2004B Handle construction materials
9	1	BCGCM2001B Read and interpret plans and specifications
10	1	BCGCM2001B Read and interpret plans and specifications
11	1	BCGCM1001B Follow OHS policies and procedures
12	1	BCGCM1001B Follow OHS policies and procedures BCGCM1002B Work effectively in the General Construction Industry
13	1	BCGCM1001B Follow OHS policies and procedures
14	1	BCGCM1005B Carry out measurements and calculations
15	1	BCGCM1001B Follow OHS policies and procedures
Section II		
16 (a)	2	BCGCM1002B Work effectively in the General Construction Industry BCGCM1003B Plan and organise work
16 (b)	3	BCGCM1002B Work effectively in the General Construction Industry BCGCM1003B Plan and organise work
17 (a)	2	BCGCM1001B Follow OHS policies and procedures, BCGCM1003B Plan and organise work BCGCM2005B Use construction tools and equipment
17 (b)	2	BCGCM1003B Plan and organise work BCGCM2005B Use construction tools and equipment
18	2	BCGCM1005B Carry out measurements and calculations
19 (a)	2	BCGCM1005B Carry out measurements and calculations BCGCM2001B Read and interpret plans and specifications
19 (b)	2	BCGCM1005B Carry out measurements and calculations BCGCM2001B Read and interpret plans and specifications
19 (c)	2	BCGCM1001B Follow OHS policies and procedures, BCGCM1005B Carry out measurements and calculations, BCGCM2001B Read and interpret plans and specifications
20 (a)	1	BCGCM1001B Follow OHS policies and procedures, BCGCM2005B Use construction tools and equipment
20 (b)	3	BCGCM1001B Follow OHS policies and procedures, BCGCM2005B Use construction tools and equipment

Question	Marks	Unit of competency / Element of competency
20 (c)	3	BCGCM1001B Follow OHS policies and procedures BCGCM2005B Use construction tools and equipment
21 (a)	2	BCGCM1002B Work effectively in the General Construction Industry BCGCM1003B Plan and organise work
21 (b)	2	BCGCM1002B Work effectively in the General Construction Industry BCGCM1003B Plan and organise work BCGCM1004B Conduct workplace communication
21 (c)	3	BCGCM1002B Work effectively in the General Construction Industry BCGCM1003B Plan and organise work BCGCM1004B Conduct workplace communication
22	4	BCGCM1001B Follow OHS policies and procedures
Section III		
23	15	BCGCM1001B Follow OHS policies and procedures BCGCM1003B Plan and organise work BCGCM2004B Handle construction materials
24	15	BCGCM1001B Follow OHS policies and procedures BCGCM1002B Work effectively in the General Construction Industry BCGCM1003B Plan and organise work BCGCM1004B Conduct workplace communication
25	15	RTC2704A Provide basic first aid BCGCM1001B Follow OHS policies and procedures BCGCM1003B Plan and organise work BCGCM2004B Handle construction materials

2007 HSC Construction Marking Guidelines

Section II

Question 16 (a)

Competencies assessed: BCGCM1002B, BCGCM1003B

MARKING GUIDELINES

Criteria	Marks
• Demonstrates a sound understanding of delays in building construction	2
• Demonstrates a general understanding of delays in the building industry	1

Question 16 (b)

Competencies assessed: BCGCM1002B, BCGCM1003B

MARKING GUIDELINES

Criteria	Marks
• Demonstrates a sound knowledge of possible implications of delays	3
• Demonstrates a general knowledge of possible implications of delays	2
• Demonstrates a basic knowledge of possible implications of delays	1

Question 17 (a)*Competencies assessed: BCGCM1001B, BCGCM1003B, BCGCM2005B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a sound understanding of impact power drill personal protective equipment	2
• Demonstrates a basic understanding of impact power drill personal protective equipment	1

Question 17 (b)*Competencies assessed: BCGCM1003B, BCGCM2005B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a sound knowledge of impact drill operation	2
• Demonstrates a basic knowledge of impact drill operation	1

Question 18*Competencies assessed: BCGCM1005B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a sound knowledge of units of measurement in the construction industry AND examples	2
• Demonstrates a limited knowledge of units of measurement AND examples	1

Question 19 (a)*Competencies assessed: BCGCM1005B, BCGCM2001B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a sound understanding of area AND allowances	2
• Demonstrates a basic understanding of area OR allowances	1

Question 19 (b)*Competencies assessed: BCGCM1005B, BCGCM2001B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a sound understanding of volume with correct answer	2
• Incorrect answer but demonstrates understanding of the calculation	1

Question 19 (c)*Competencies assessed: BCGCM1001B, BCGCM1005B, BCGCM2001B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a sound understanding of the need for risk identification and prevention dealing with plan interpretation	2
• Demonstrates a limited understanding related to plan interpretation	1

Question 20 (a)*Competencies assessed: BDGCM1001B, BCGCM2005B***MARKING GUIDELINES**

Criteria	Marks
• Any correct answer	1

Question 20 (b)*Competencies assessed: BCGCM1001B, BCGCM2005B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates an extensive knowledge of emergency procedures	3
• Demonstrates a sound knowledge of emergency procedures	2
• Displays a limited knowledge of managing emergencies	1

Question 20 (c)*Competencies assessed: BCGCM1001B, BCGCM2005B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a comprehensive understanding by providing a variety of different features or procedures of flammable liquid storage	3
• Demonstrates a sound understanding of flammable liquid storage providing several features OR procedures	2
• Displays limited understanding of flammable liquids storage, using general features OR procedures	1

Question 21 (a)*Competencies assessed: BCGCM1002B, BCGCM1003B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a sound knowledge of personnel in the construction industry	2
• Demonstrates a general knowledge of personnel in the construction industry	1

Question 21 (b)*Competencies assessed: BCGCM1002B, BCGCM1003B, BCGCM1004B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a sound understanding of successful teamwork	2
• Demonstrates a limited understanding of teamwork	1

Question 21 (c)*Competencies assessed: BCGCM1002B, BCGCM1003B, BCGCM1004B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a broad knowledge of the responsibilities AND procedures of the Site Manager	3
• Demonstrates a general knowledge of the responsibilities of the Site Manager	2
• Demonstrates a basic knowledge of harassment OR responsibilities of a manager	1

Question 22*Competencies assessed: BCGCM1001B***MARKING GUIDELINES**

Criteria	Marks
• Demonstrates a comprehensive knowledge of the hierarchy of risk control measures	3–4
• Demonstrates a general knowledge of the degrees of risk control measures	2
• Demonstrates a basic knowledge of risk assessment and controls	1

Section III

Question 23

Competencies assessed: BCGCM1001B, BCGCM1003B, BCGCM2004B

MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none">• Demonstrates an extensive knowledge and understanding of waste management procedures using extensive, relevant examples• Provides an extensive range of recommendations using a variety of accurate information• Correctly uses precise industry terminology in a well-reasoned cohesive response.	13–15
<ul style="list-style-type: none">• Demonstrates a clear knowledge and understanding of waste management procedures, using relevant examples• Provides a range of recommendations using some accurate information• Uses appropriate industry terminology in a cohesive response	10–12
<ul style="list-style-type: none">• Demonstrates a general understanding of waste management procedures using examples• Is able to apply the principle of recycling and/or reprocessing of materials when planning AND organising work routines• Uses appropriate industry terminology	7–9
<ul style="list-style-type: none">• Demonstrates an understanding of waste management procedures using some appropriate examples• Uses basic industry terminology	4–6
<ul style="list-style-type: none">• Demonstrates a limited knowledge of waste management procedures• Uses limited industry terminology	1–3

Question 24*Competencies assessed: BCGCM1001B, BCGCM1002B, BCGCM1003B, BCGCM1004B***MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none">• Demonstrates an extensive knowledge and understanding of communication AND management procedures in resolving the identified problem• Provides an extensive range of examples to resolve the identified problems• Correctly uses precise industry terminology in a well-reasoned cohesive response	13–15
<ul style="list-style-type: none">• Demonstrates a clear knowledge and understanding of procedures involved in resolving the identified problems• Provides a range of examples to resolve the identified problems• Uses appropriate industry terminology in a cohesive response	10–12
<ul style="list-style-type: none">• Demonstrates a general understanding of methods involved in resolving problems• Provides a limited number of examples to resolve some of the problems• Uses appropriate industry terminology	7–9
<ul style="list-style-type: none">• Demonstrates an understanding of management procedures AND communication methods• Uses basic industry terminology	4–6
<ul style="list-style-type: none">• Demonstrates a limited knowledge of management procedures AND/OR communication methods• Uses limited industry terminology	1–3

Question 25*Competencies assessed: RTC2704A, BCGCM1001B, BCGCM1003B, BCGCM1004B***MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none">• Demonstrates an extensive knowledge and understanding of first aid management, OHS regulations, documentation and risk management• Provides an extensive range of recommendations using a variety of accurate information• Correctly uses precise industry terminology in a well-reasoned cohesive response	13–15
<ul style="list-style-type: none">• Demonstrates a clear knowledge and understanding of all aspects of first aid management, OHS documentation and risk management• Provides a range of recommendations using accurate information• Uses appropriate industry terminology in a cohesive response	10–12
<ul style="list-style-type: none">• Demonstrates a general understanding of first aid management, on site injury prevention and documentation• Uses appropriate industry terminology	7–9
<ul style="list-style-type: none">• Demonstrates a general understanding of incident management• Uses basic industry terminology	4–6
<ul style="list-style-type: none">• Demonstrates a limited knowledge of incident management• Uses limited industry terminology	1–3