BOARD OF STUDIES
NEW SOUTH WALES

2011 Construction HSC Examination
'Sample Answers'

When examination committees develop questions for the examination, they may write 'sample answers' or, in the case of some questions, 'answers could include'. The committees do this to ensure that the questions will effectively assess students' knowledge and skills.

This material is also provided to the Supervisor of Marking, to give some guidance about the nature and scope of the responses the committee expected students would produce. How sample answers are used at marking centres varies. Sample answers may be used extensively and even modified at the marking centre OR they may be considered only briefly at the beginning of marking. In a few cases, the sample answers may not be used at all at marking.

The Board publishes this information to assist in understanding how the marking guidelines were implemented.

The 'sample answers' or similar advice contained in this document are not intended to be exemplary or even complete answers or responses. As they are part of the examination committee's 'working document', they may contain typographical errors, omissions, or only some of the possible correct answers.

Section II

Question 16 (a)

Sample answer:

To ensure the task to be completed is carried out correctly and safely, avoiding injury or accidents.

Question 16 (b)

Sample answer:

Material Safety Data Sheet (MSDS)
This written communication is for use on site by workers, to inform them of the correct procedures to follow when using, handling and storing materials. It provides correct advice for emergency situations such as a spill.

Question 16 (c)

Sample answer:

There is a range of possible communication methods used by workers on a site. Each method will have particular advantages and be relevant in a different range of circumstances.
The worker will need to consider the most suitable method to communicate with others so that the message is quickly and accurately conveyed. Effective communication will benefit all workers, will improve safety, and ensure that work schedules and waste are minimised, and that there is an efficient use of time.

A range of possible communication methods may include:

Clear verbal instructions. This may be done when the relevant workers are nearby. Speech can be used to convey information, give warnings and answers or ask questions. Where a worker's voice will not carry, methods of non-verbal communication such as signals may be used.

Signage, a permanent, easily understood and recognised symbol is useful. This is understood by all workers.

Mobile phones are very quick and convenient to use. Workers may be accessed on large sites readily.

Site meetings are very effective in conveying information to all workers on the site. It means that all workers have the same knowledge.

Question 17 (a)

Answers could include:

- Sole plate can be raised or lowered to adjust the depth of the saw cut.
- Sole plate can be tilted at an angle to allow for an angled cut.

Question 17 (b)

Answers could include:

- Size of the saw blade (diameter)
- Number of teeth/teeth configuration depending on what material is to be cut
- Type of cutting task to be carried out
- Centre bore hole size (diameter)

Question 17 (c)

Answers could include:

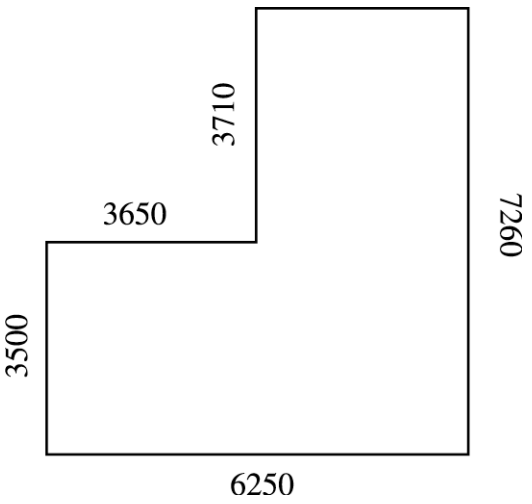
There are a range of routine maintenance checks, including to:

- check the blade and teeth for chips, cracks and perhaps, sharpness
- remove any dust or material build-up around the saw body and motor vents
- check the sole plate adjustments and fence guides so they are free moving and accurate
- check outside casing/components for cracks and any irregularities
- check electrical leads for current tagging for safe use
- check for wearing down of brushes
- ensure that the saw guard is in place and operating

Question 18 (a)

Sample answer:

Dining room – $2600 \times 3760 = 9.776\text{m}^2$
Living room – $6250 \times 3500 = 21.875\text{m}^2$
Total floor area = $21.875 + 9.776 = 31.651\text{m}^2$



Question 18 (b)

Sample answer:

Kitchen – $4760 \times 3650 = 17.374 m^2$

Tiles – $17.422 \div 3 = 5.791$ boxes – rounded up to 6 boxes

6 boxes @ \$90/box = \$540

Adhesive $17.4216 \div 0.8 = 21.717$ litres = 5.429 tubs – rounded up to 6 tubs

6 tubs @ \$35/tub = \$210

Labour $17.374 \times 55 = \$955.57$

TOTAL = Tiles + Adhesive +Labour

= \$540 + \$210 + \$955.57

= \$1705.57

Question 19 (a)

Sample answer:

This is the order of preference for controlling hazards with the emphasis on controlling the hazard at the source. Preference is given to the first five engineering controls.

Question 19 (b)

Answers could include:

- Workmanship
- Efficiency in completing tasks to specifications
- Meeting expected deadlines
- Punctuality
- Application/ability to overcome unforeseen problems

Question 19 (c)

Answers could include:

- Workplace stress
- Intolerance
- Prejudice
- Poor communication
- Cultural ignorance
- Racism/Lack of empathy for cultural diversity
- Changes to procedures without notification/prior warning
- Literacy/numeracy abilities of workers

- Aggressive or derogatory voice tone when making requests
- Practical jokes/Workplace misadventures
- Contractors/tradespeople running behind schedule
- Poor planning
- Safety compromised, hazards not attended to

Section III

Question 20

Answers could include:

- Two deliveries could be expected at 7am
- Location and overflow of materials onto footpath and roadway
- Size and weight of deliveries – manual handling
- Site restricting for the use of mechanised movement
- Personnel required
- Site amenities required
- Site inductions
- Time constraints
- Site layout – scope and footing of path
- Site run off into watercourse
- Safe storage of material (cement)
- Suggest ways of minimising issues and achieving task such as:
  - Take time to plan carefully. Develop a SWMS
  - Sufficient workers
  - Manual handling procedures followed
  - Path marked and made safe
  - Sufficient tools and plant for job
  - Correctly trained workers
  - First aid/Luncheon facilities
  - Site "Y" made safe – runoff, and dry storage area for cement
  - Planning for inclement weather (hot, wet, cold)
  - Traffic control for roadway and footpath.

Section IV

Question 21 (a)

Answers could include:

Mandatory signs – Symbolic (may have text)
– white symbol on blue background
– you must follow the sign

Prohibition signs – Signs explaining things that should not be done
– Includes a red circle border, with a diagonal line through the middle
– White background with a black symbol


Digging prohibited


No pedestrian access

Question 21 (b)

Answers could include:

- Locate the hazard
- Identify the level of risk
- Inclusion of site safety officer
- Regular OHS committee meetings to address identified risks/hazards
- Issuing of memos on recent events
- Data analysis of safe work practices (ie days without injuries)
- Log of specific/actual type of injuries incurred on site
- Frequency data of injuries sustained on site
- Issues of MSDS
- Maintain chemical restrictions.

Question 21 (c)

Answers could include:

- Origins of the modern OHS legislation
- Rights and responsibilities of employers and employees
- Identification of common workplace hazards
- Workplace inspection to assess risks
- Identification of quality control measures to control hazards
- Purpose and use of work method statements
- Identification of PPE
- Identification of barricades, hoardings and various signage to highlight site hazards and to protect workers.
- Requirements for written statements and records (who, when & dates)
- Site-specific safety issues or hazard identification
- Must be completed before work commences