



CPCBC4001

Apply building codes and standards to the construction process for Class 1 and 10 buildings

Assessment 2 of 3

Short Answer Questions

Assessor Guide



Assessment Instructions

Task overview

This assessment task requires you to answer **twelve [12]** short answer questions. Read each question carefully before typing your response in the space provided.

Additional resources and supporting documents

To complete this assessment, you will need to access UP Building and Construction's Intranet (Case Study module: Module 1) – Policies and procedures:

- Beginning Construction - Quality Systems
- Mandatory Inspections- Quality Systems
- UP Building and Construction: Best Practices
- Work Health and Safety Policy and Procedures

Supporting documentation:

- Case Study: Curtin (South Australia)
- Case study: Birkenhead (Australian Capital Territory)



Assessment Information

Submission

You are entitled to three [3] attempts to complete this assessment satisfactorily. Incomplete assessments will not be marked and will count as one of your three attempts.

All questions must be responded to correctly to be assessed as satisfactory for this assessment.



Answers must be typed into the space provided and submitted electronically via the LMS. Hand-written assessments will not be accepted unless previously arranged with your assessor.

Reasonable adjustment

Students may request a reasonable adjustment for assessment tasks.

Reasonable adjustment usually involves varying:

- the processes for conducting the assessment (e.g. allowing additional time)
- the evidence gathering techniques (e.g. oral rather than written questioning, use of a scribe, modifications to equipment)

However, the evidence collected must allow the student to demonstrate all requirements of the unit.

Refer to the Student Handbook or contact your Trainer for further information.



Please consider the environment before printing this assessment.

Student Name: [Click or tap here to enter text.](#)
Student Number: [Click or tap here to enter text.](#)

Question 1

As a new employee of the company, access and review the following documents regarding quality management systems of UP Building and Construction:

- Beginning Construction - Quality Systems
- Mandatory Inspections - Quality System

The quality documents can be found on UP Building and Construction's Intranet (Case Study module: Module 1), under 'Policies and Procedures' – 'Building policies and procedures'.

Once you have accessed and reviewed the documents above, answer the questions in the table below.

Instructions to the assessor:

This is an example of a competent response:

Questions	Answers
Briefly explain why proper procedures for demolition and temporary fencing are needed during construction. (10-15 words)	To ensure the safety of not only the workers but the general public as well.
Briefly explain why mandatory inspections are needed during the construction of new buildings. (15-20 words)	To ensure the safety of the users of the building when the building is finally completed. Inspections also provide continuous monitoring of compliance to WHS regulations, NCC requirements, and the conditions of consent.
Identify two (2) tasks that should be done before demolition starts.	Students can list any 2 of the following: <ul style="list-style-type: none">▪ Apply for necessary demolition permits▪ Disconnect existing utilities, such as power, drainage, gas, and water▪ Establish protective measures to protect nearby properties and structures. If necessary, perform dilapidation reports.▪ Arrange for salvage and disposal of waste produced from demolition
Identify two (2) characteristics that temporary fencing around a construction site should have.	Students can list any 2 of the following: <ul style="list-style-type: none">▪ Cover the full length of the site where the public can access it▪ Provide access that ensures that no hazard or that no nuisance gets to pedestrians or traffic▪ Be designed so that it does not block the line of sight of motorists, pedestrians, traffic lights, crossings, ramps, or vehicles entering or leaving the site

	<ul style="list-style-type: none"> ▪ Have the necessary signs and devices for traffic and pedestrian management that are placed in a way that they do not pose a hazard to either pedestrians or traffic. ▪ Leave a gap of at least 1.5 metres between the fencing and the road ▪ Have gates and doors that swing only inwards ▪ Allow sufficient space so that vehicles can be loaded and unloaded inside the property's boundaries. ▪ Be between 1.8 and 2 metres tall.
Identify two (2) inspections that must be done by a certified building surveyor.	<p>Students can list any 2 of the following:</p> <ul style="list-style-type: none"> ▪ Footings-inspection ▪ Slab inspection/base stage inspection ▪ Framing inspection ▪ Waterproofing inspection ▪ Final inspection
Identify two (2) rooms in a building that must be inspected for waterproofing by a certified building surveyor.	<p>Students can list any 2 of the following:</p> <ul style="list-style-type: none"> ▪ Kitchens ▪ Laundries ▪ Bathrooms ▪ Swimming pools

Question 2

Access and review the *UP Building and Construction: Best Practices* document regarding quality management systems of UP Building and Construction, then answer the questions in the table below. The quality document can be found on UP Building and Construction's Intranet (Case Study module: Module 1), under 'Policies and Procedures' – 'Building policies and procedures'.

Instructions to the assessor:

This is an example of a competent response:

Questions	Answers
Identify two (2) practices that UP Building and Construction implements to uphold lean construction practice.	<p>Students can list any 2 of the following:</p> <ul style="list-style-type: none"> ▪ Maintaining constant and open communication with the customers ▪ Careful scrutiny of processes in construction ▪ Creating detailed project plans and adhering to said plans ▪ Constantly checking for opportunities for workers to improve their skills through training and education.

<p>Identify two (2) areas the UP Building and Construction focuses on to uphold sustainable construction.</p>	<p>Students can list any 2 of the following:</p> <ul style="list-style-type: none"> ▪ Earning the most profit that will help the organisation to invest in new, sustainable technologies. ▪ Constructing buildings that provide greater satisfaction and ensure the well-being of its users. ▪ Constructing energy-efficient buildings by utilising renewable energy. ▪ Treating employees of the organisation with respect and fairness, which includes taking into account health and safety factors. ▪ Protecting the environment from harmful effects of construction. ▪ Reducing waste and pollution during construction.
--	--

Question 3

Access and review UP Building and Construction's *Work Health and Safety Policy and Procedures*, then answer the questions in the table below. The policy and procedures document can be found on UP Building and Construction's Intranet (Case Study module: Module 1), under 'Policies and Procedures' – 'Behavioural policies and procedures'.

Instructions to the assessor:

This is an example of a competent response:

Questions	Answers
<p>What must workers wear when working in rural work/field? List a minimum of five (5) items.</p>	<p>Students must list all of the following:</p> <p>All workers must wear:</p> <ol style="list-style-type: none"> 1. long-sleeved shirts 2. steel-capped footwear 3. wide brim hat 4. UV protection sunscreen 5. long pants and gaiters where suitable. <p>Additional answers:</p> <ul style="list-style-type: none"> • Collared shirts • Hard hat
<p>List five (5) registers that UP Building and Construction should keep regarding the safety of its workers.</p>	<p>Students must list all of the following:</p> <ol style="list-style-type: none"> 1. Phone/contact details – Staff Medical Advisors, Ambulance, Police, etc. 2. Risk, hazard, incident and injury reporting register. (Accident: Minor and Serious) 3. Inductions 4. Licensing

	5. Safety training courses attended
List five (5) safety clothing that workers must wear when working on a construction site.	<p>Students must list any of the following:</p> <ol style="list-style-type: none"> 1. Steel Cap Footwear (boots) – at the discretion of the safety officer 2. Hard hat 3. UV protection sunscreen (supplied) 4. Long-sleeved shirts buttoned or affixed at the wrist 5. Collared shirts. 6. Safety glasses 7. Goggles 8. Earplugs/Earmuffs 9. Face mask 10. Gloves

Question 4

For each building component listed in the table below, made of a specified material, provide **one (1)** characteristic, **one (1)** property, and **one (1)** limitation.

Instructions to the assessor:

Sample answers provided below are examples of a competent answers:

Component	Characteristic	Property	Limitation
Brick wall	<p>Students must list 1 of the following:</p> <ul style="list-style-type: none"> ▪ Colour depends on a variety of factors such as type of clay used, firing temperatures, and additives used ▪ Made of bricks that are generally rectangular 	<p>Students must list 1 of the following:</p> <ul style="list-style-type: none"> • Good thermal regulation • Durable 	<p>Students must list 1 of the following:</p> <ul style="list-style-type: none"> ▪ More expensive than some other options ▪ Slow to install <p>[Source: Bricks] Labour intense technology</p>
Terracotta roof	<p>Students must list 1 of the following:</p> <ul style="list-style-type: none"> • It comes in a wide variety of colours • It comes in a wide variety of shapes as well 	<p>Students must list 1 of the following:</p> <ul style="list-style-type: none"> • Waterproof ▪ Fire resistant 	<p>Students must list 1 of the following:</p> <ul style="list-style-type: none"> ▪ Fragile ▪ Heavy – requests more robust structure ▪ May attract moss and lichen <p>[Source: Terracotta roof tiles]</p>

Question 5

In your own words, briefly explain what a zero-energy building is, then identify a technique used in zero-energy buildings and explain how this technique can be implemented.

Instructions to the assessor:

Sample answers provided below are examples of a competent answers:

Questions	Answers
Definition of zero-energy building (10-15 words)	Zero-energy building involves constructing buildings that produce at least as much energy as they consume.
One technique used (15-20 words)	Using renewable energy sources to power the building, such as heat pumps, high efficiency windows and insulation, and solar panels.
How this technique can be implemented (3-6 words)	Install rooftop solar panels.

Question 6

In your own words, briefly explain what demolition is, then identify a technique used in demolition and explain the procedure in implementing this technique.

Instructions to the assessor:

Sample answers provided below are examples of a competent response:

Questions	Answers
Definition of demolition (10-15 words)	Demolition is the process of dismantling or destroying a structure after its life of serviceability.
One technique used (2-5 words)	Non-explosive demolition.
The procedure to implement the technique (25-30 words)	Using a wrecking ball to take down a building that's taller than seven storeys. Different equipment used for the demolition activity are sledgehammers, excavators and bulldozers and wrecking balls.

Further reference: [Demolition Methods and Process for Building Structures](#)

Question 7

Consider the columns in the following photo, then answer the questions in the table:



Instructions to the assessor:

Sample answers provided below are examples of a competent answers:

Questions	Answers
What kind of stress is being applied on the columns by the ceiling?	Compressive stress or compression
Describe the deformation that the columns are possibly undergoing due to the stress that the ceiling is applying on them. [10-15 words]	The length of the columns could be decreasing due to the weight of the ceiling.
Briefly explain what would happen to the columns if the ceiling were too heavy to be supported. [10-15 words]	If the ceiling were heavy enough, the columns may buckle.
Which section of NCC provides guidance regarding a structure's Performance Requirements? [3-5 words]	Students must select any from the below: <ul style="list-style-type: none">• Section 2.1.1 Structural stability and resistance• Part 3.0 Structural provisions
Suggest a solution that would assist in rectifying a potential deformation. [10-15 words]	Introduce horizontal support or increase the loadbearing capacity with an applied reinforced mantle.

Question 8

One tread of a rarely used basement staircase in a two-storey house located in a termite-risk area broke off while a resident was climbing down the stairs. The tread was hollow and was infested with termites.

Student Name: [Click or tap here to enter text.](#)
Student Number: [Click or tap here to enter text.](#)

Upon further inspection, most of the staircase was constructed from untreated timber, and the project plans made no mention of the fact that the house was made in a termite-risk area.

Given the information above, complete the table below:

Instructions to the assessor:

Sample answers provided below are examples of competent answers:

Questions	Answers
Identify two (2) factors that contributed to the degradation of the house's staircase.	<p>Students must list the following 2:</p> <ul style="list-style-type: none"> • The house is being built on termite-risk area. • The staircase is constructed from untreated timber.
Identify which clause from the Building Code of Australia Volume 2 was not properly applied.	3.1.4.2 Requirements for termite management systems
Briefly explain how the identified clause from the Building Code of Australia Volume 2 was not properly applied. (10-15 words)	The staircase was constructed from untreated timber despite being built on termite-risk area.
Identify which Australian Standard was not properly applied.	AS 3660 Part 1
Briefly explain how the identified Australian Standard was not properly applied. (10-15 words)	Proper measures to combat termite infestation was not properly applied.
Identify one (1) practice endorsed by Safe Work Australia that was not properly applied. (20-25 words)	Establishing the risk management context by identifying the breadth of workplace hazards and relevant legislation, codes of practice and standards that need to be considered.
Briefly explain how the identified practice endorsed by Safe Work Australia was not properly applied. (30-35 words)	No research was done to identify risks and hazards on the site of construction, and even if research were done, no measures were put in place to address the risks and hazards.
Identify what other defect the house would have considering the deviations of the construction from the code and standard. (35-40 words)	Other wooden structures in the house, especially the rest of the staircase, may be compromised and could pose a hazard to its inhabitants. If the structural frame of the building is also made of timber, immediate termite inspection needs to be conducted.
Describe the extent of the work that needs to be done to rectify the termite infestation. (25-30 words)	Parts of the house that were made with untreated timber must be replaced with those required by the Building Code of Australia. Termite protection to be introduced.

Question 9

A bungalow has a living room with large bay windows oriented east and west. The residents complain that it gets very hot in the living room, even with the air conditioner running at full power, and that they get glare from the sun shining on their television.

Given the information above, complete the table below:

Student Name: [Click or tap here to enter text.](#)
 Student Number: [Click or tap here to enter text.](#)

Instructions to the assessor:

Sample answers provided below are examples of a competent answers:

Questions	Answers
Identify the design defect of the living room. (5-10 words)	Windows oriented east and west don't have sufficient shading.
Describe the extent of work that needs to be done to rectify the design defect of the living room. (20-25 words)	Shading device to be introduced. For east and west orientation, vertical shading devices need to be designed and built.

Question 10

If your construction company wanted to commence a project in your state/ territory, identify an environmental law that the company must abide by. Identify **two (2)** requirements that the law specifies that a construction company must abide by. In the required space, indicate the state/territory you live in.

Instructions to the assessor:

Sample answers provided below are examples of a competent answers:

Questions	Answers
State/territory	[Student to identify their state/territory, such as NSW, ACT, VIC, QLD, TAS, NT, SA, WA]
Relevant environmental law	NSW and ACT: Environment Protection Act 1997 QLD: Environmental Protection Act 1994 VIC: Environment Protection Amendment Act 2018 WA: Environmental Protection Act 1986 SA: Environment Protection Act 1993 NT: Environment Protection Act 2019
Two (2) environmental requirements	The following sample answers apply for all states/territory: <ul style="list-style-type: none"> Construction companies must not use fuel that contains more than the prescribed proportion of a prescribed constituent unless the activity is authorised by an environmental authorisation. Construction companies must not conduct an activity listed in Schedule 1 of the Environment Protection Act 1997 as a class A activity unless the company holds an environmental authorisation in relation to that activity.

Question 11

Access and review the following project plan: [Case Study: Curtin, Australian Capital Territory.](#)

After reviewing the project plan, answer the questions in the table below:

Student Name: [Click or tap here to enter text.](#)
Student Number: [Click or tap here to enter text.](#)

Instructions to the assessor:

Sample answers provided below are examples of a competent answers:

Questions	Answers
What is the size of the land?	825m ²
What is the size of the house, excluding the garage and laundry?	185m ²
Based on the floor plan, how many bedrooms the house has?	5
Based on the working drawing, in which direction is the terrace oriented?	East
What was used to replace bricks that were removed?	Reconstituted timber weatherboards

Question 12

Access and review the following project plan: [Case Study: Birkenhead, South Australia.](#)

After reviewing the project plan, answer the questions in the table below:

Instructions to the assessor:

Sample answers provided below are examples of a competent answers:

Questions	Answers
What is the size of the land?	330m ²
What is the size of the house, excluding the garage and laundry?	125m ²
Based on the working drawing, how many bedrooms does the house have?	3
Based on the working drawing, what is the size of the carport?	18.2m ²
What are the walls of the house made of?	Structural insulated panels

Assessment checklist

Students must have completed all questions within the assessment before submitting. This includes:

12 short answer questions to be completed in the spaces provided	<input type="checkbox"/>
--	--------------------------

Congratulations, you have reached the end of Assessment 2!

This document was developed by TotalVET Training Resources.

© 2021 TotalVET Training Resources. All rights reserved.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of TotalVET Training Resources.

© UP Education Australia Pty Ltd 2021

Except as permitted by the copyright law applicable to you, you may not reproduce or communicate any of the content on this website, including files downloadable from this website, without the permission of the copyright owner.