

CPCBC4006B

SELECT, PROCURE AND STORE CONSTRUCTION MATERIALS FOR LOW RISE PROJECTS

ASSESSMENT SUMMARY

The assessment activities for *CPCBC4006B Select, procure and store construction materials for low rise projects* cover all aspects of the unit of competency required. To demonstrate competence in this unit, a participant must undertake all tasks and complete them satisfactorily and consistently. For Apprentices and Trainees, this includes employer completion of the Employer Record Book (ERB).

Participants must read all the information given before starting any assessment task. The assessment tasks are intended to be equitable, fair and flexible. If a participant has any questions or requires alternative arrangements to be made such requests should be directed to their Trainer/Assessor, who should note such arrangements in the 'Assessor Comments' on the affected assessment. If a participant feels they are not yet ready to be assessed, they should discuss their options with their Trainer/Assessor.

To satisfactorily complete the assessment, the participant is required to answer all questions correctly and demonstrate their skills to industry standards. If a participant does not answer some questions or perform some tasks, they will be deemed 'Not Satisfactory' for the task and 'Not Yet Competent' for the unit of competency. The Trainer/Assessor is able to provide the participant with additional information on interpreting the assessment outcomes and provide guidance on the participant's options. Should a participant still be deemed 'Not Satisfactory' they will have the opportunity to undertake a supplementary assessment or appeal the result.

By signing the cover page for each assessment item, the participant acknowledges they understand the assessment instructions and requirements and consent to being assessed. The participant also verifies and assures the RTO that the work submitted is their own work.

Participant Name	Lorna Merrica
------------------	---------------

Task	Assessment Results	
Theory Exam	☐ Satisfactory	☐ Not Yet Satisfactory
Practical Assessment	☐ Satisfactory	☐ Not Yet Satisfactory
Outcome for Unit of Competency	☐ Competent	☐ Not Yet Competent

Assessor Name	
Assessor Signature	
Unit Competence Determination Date	Click here to enter a date.

CPCCBC4006B

SELECT, PROCURE AND STORE CONSTRUCTION MATERIALS FOR LOW RISE PROJECTS

THEORY EXAM INSTRUCTIONS

- This exam will occur under standard assessment conditions.
 - An oral examination may be allowed under certain circumstances, whereby the Participant's answers will be documented by a party other than the Participant. This must be acknowledged in writing (e.g. FT001 and Assessor Comments)
- Participants must provide enough detail in their responses to demonstrate their knowledge and skills.
- Please fill in the details below, providing your name, signature and date of assessment.
 - Your signature acknowledges that this is your own work.
- Assessors are to complete marking in pen of a different colour to the Participant.
- If a Participant initially answers a question incorrectly but modifies their response, they must follow the instructions below:
 - If a Participant changes their response in writing, they must put their initials next to the written change.
 - If a Participant changes their response verbally, this must be noted on the exam paper by the assessor.

Participant name

Participant signature

Date

Assessor name

Assessor signature

Date

Lorna Merrick

[Handwritten Signature]

Click here to enter a date.

25-8-2021

Click here to enter a date.

Number of questions	Number of questions answered correctly	Task outcome (Tick)	
		Satisfactory	Not Yet Satisfactory
44		☐	☐

Theory Exam - CPCCBC4006B Select, procure and store construction materials for low rise projects

ASSESSOR COMMENTS

Q1. Which of the following documents and/or people would you refer to when selecting materials for a building project? Tick all that apply.

Answer

Choice	Possible Answers
☒	Australian Standards
☐	Contract
☐	Drawings
☐	Manufacturer
☒	National Construction Code
☐	Specifications
☐	Tolerances

Q2. Identify the Volume and Parts of the NCC that relate to suitability of materials for Classes 1 and 10, and Classes 2 to 9.

Answer

Classes 1 and 10	Classes 2 to 9
Volume 2. 1.2.2	Volume one. PART B1 A1.6.

Q3. Identify the assessment methods used to verify a performance solution.

Answer

Evidence of Suitability. A ventilation method. Expert Judgement Comparison with the Deemed-to-Satisfy provisions

Q4. Which of the following solutions for material selection often references the Australian Standards? Tick your response.

Answer

Choice	Possible Answers
☒	Deemed-to-Satisfy solution
☐	Performance solution

Q5. Identify five (5) materials commonly used for *low rise buildings* in your region. For each material, identify the following:

- Its name
- Properties of the material

Answer

#	Material name	Properties
1	Flooring	water proof.
2	Roofing tiles	Colorfastness Strength.
3	Plaster board.	Plaster core Encased in Firmly banded paper liners to form rectangular bards,
4	Concrete	Cement, water, aggregates Some cases, admixtures
5	Structural Steel.	Workability. Wear resistance Corrosion resistance.



- Q6. For each of the materials in Q5. identify the following:
- Quality of the material (i.e. durability, serviceability, cost effectiveness)
 - Compatibility and non-compatibility of the material (i.e. what it would/would not be suitable for)

Answer

#	Quality	Compatibility
1	durable easy to clean free from dampness	Homes inside & out.
2	Keep rain out.	
3	light weight recyclable low embodied energy	Buildings - non compatibility on a boat.
4	Versatility. durability	
5	High strength. ductile	Commercial + industrial building construction



Q7. Identify five (5) physical characteristics that may be considered when evaluating potential building materials.

Answer

✓ Corrosion of metal.
✓ Stains & discolouring effects
✓ Shrinkage & expansion effects
✓ Structural differences
✓ Problems with surface finish



Q8. Match the terms and definitions below by writing the appropriate letter next to each number in the centre column.

Answer

Term		Answers	Definition	
1	Carbon footprint	1 - B	A	The amount of energy required to manufacture a product
2	CO ₂ e	2 - E	B	Total GHG emissions produced during manufacture construction and use
3	Embodied energy	3 - A	C	Greenhouse gas emissions
4	Embodied water	4 - D	D	The amount of water required to manufacture a product
5	GHG	5 - C	E	CO ₂ equivalent tonnes emitted into the atmosphere



Q9. Which of the following materials would be considered as 'low energy content'? Tick all that apply.

Answer

Choice	Possible Answers
☐	Bricks
☒	By-products of other industrial processes
☐	Cement
☐	Glass
☐	Metals
☐	Plastics
☒	Sand
☒	Stone
☒	Timber



Q10. Refer to the table below and identify the wall material type that has the smallest embodied energy and emission impact.

COMPONENT	kWh/ m2 indoor floor area	Kg CO2e/ m2 indoor floor area
Floor suspended slab 114 - 117 mm	208	68
Floor suspended timber on stumps	76	26
ROOF		
Roof steel frame colorbond steel or tile	209	72
Roof timber frame colorbond steel or tile	143	47
WALLS		
Walls double brick, s/b interior	312	103
Walls brick veneer timber frame	204	67
Walls timber frame fibro clad	61	20
Walls steel frame fibro clad	90	30
Walls Timber frame timber clad	68	23
Walls pre-cast concrete	264	88
Walls concrete block	160	53
OTHER , APPLICABLE TO ALL HOMES REGARDLESS OF TYPE		
Construction, admin, transport, other materials such as copper pipes, glass, aluminium	406	144
Floor coverings assume approx. 50% ceramic tile 50% polypropylene carpet	61	20
Fittings, fixed appliances built in \$ bathroom, kitchen, w/robes	96	43
ADDITIONS	kWh/ m2 area or m length	Kg CO2e/ m2 area or m length
Roofed open areas - alfresco / porch / verandah / carport	352	117
Garage single brick or cavity walls, concrete slab, steel or tile roof	675	219
Open Carport	352	117
Fence brick or metal (per metre length, assuming 1.5 m height)	186	61
Paving (brick or concrete)	96	32
Pool (concrete below ground)	534	198

Answer

Walls timber frame timber clad.



Q11. Identify the Volume and Parts of the NCC that relate to energy efficiency of materials for Classes 1 and 10, and Classes 2 to 9.

Answer	Classes 1 and 10	Classes 2 to 9	☐
	Volume 2 PART 1	Volume 1 PART. 2.6.	

Q12. Identify the relevant section of the Standards and Tolerances Guide and the associated Australian Standard that addresses residential slabs and footings.

Answer	Standards and Tolerances Guide	Australian Standard	☐
	3598.1 - 1991	AS 2870-2011.	

Q13. Identify the relevant section of the Standards and Tolerances Guide and the associated Australian Standard that addresses roof tiles.

Answer	Standards and Tolerances Guide	Australian Standard	☐
	7.0.	AS 2049. 1992	

Q14. Identify the Volume and Parts of the NCC that relate to safety barriers for swimming pools for Classes 1 and 10, and Classes 2 to 9.

Answer	Classes 1 and 10	Classes 2 to 9	☐
	Volume 2 Part 3.10.1	Volume one Part 1.	

Q15. In some states, barriers and fences for swimming pools are not entirely regulated by the NCC, as noted in the Ancillary Provisions and State and Territory Variations. Identify the applicable Act and Regulation that regulate safety barriers for swimming pools in your jurisdiction.

Answer	QBCC - AS/NZS 2172.1-2009.	☐
--------	----------------------------	--------------------------

Q16. Identify the Australian Standard that relates to safety barriers for swimming pools.

Answer

AS 1926-2012.

☐

Q17. True or False (Tick your response): According to the Standard in Q16. all gates must be fitted with a self-closing device that will return the gate to a closed position from any position without the use of manual force.

Answer

☒	True
☐	False

☐

Q18. Identify the Volume and Parts of the NCC that relate to fire-resistance of building elements for Classes 1 and 10, and Classes 2 to 9.

Answer

Classes 1 and 10	Classes 2 to 9
Part C1- Vol 2	Part C1.1 Vol 1.

☐

Q19. Identify the Australian Standard that relates to fire-resistance tests for elements of construction.

Answer

AS 1530.4-2005.

☐

Q20. For all NCC Classes, where the ground or subfloor space is excessively damp or subject to frequent flooding, which durability class must the subfloor framing must be used where above ground?

Answer

Class 1 or 2

AS 4654.1 & AS 4654.2

☐

Q21. Identify the Australian Standards that must be observed when meeting the requirements for Q20.

Answer

AS 4654.1 & AS 4654.2.



Q22. True or False (Tick your response): Where materials are not used as intended (or without considering NCC requirements), this can make a significant difference to the life or serviceability of the structure.

Answer

☒	True
☐	False



Q23. Explain why durability and serviceability impact on the cost effectiveness of chosen materials.

Answer



Q24. Provide an example of short term degradation of materials and describe its effects on a building on structure.

Answer

Timber is often prone to short term degradation. Due to exposure to weather, this may cause splitting and crumbling, if unprotected damp & it will rot.
an example is Western Red Cedar.
these timbers form a protective skin on the surface.



Q25. Provide an example of long term degradation of materials and describe its effects on a building on structure.

Answer

Metals - Corrode as they form a compound with the oxygen in the air.
Some, such as Iron, Corrode relatively quickly while others such as Copper are very slow.



Q26. You have spoken to a supplier who has indicated that some of the client's desired materials are unavailable. When considering alternative building materials what must be taken into consideration (i.e. other than the client's requirements)?

Answer

Material availability or lack of.
Environmental Issues
Life cycle Assessment methodology.



Q27. Identify two (2) things that you should look for when receiving a delivery of materials.

Answer

- damages
- shortages



Q28. If you encounter issues with delivery, what two (2) options do you have?

Answer

* Accept the shipment with conditions
* Reject the entire shipment

☐

Q29. Which of the following should be assessed before shifting materials?
Tick all that apply.

Answer

Choice	Possible Answers
☒	What needs to be relocated (e.g. size, weight)
☒	The relocation area, site layout and obstacles
☒	Distance and time to relocate load
☒	Whether a team is available and/or appropriate
☒	Whether PPE must be worn (e.g. for hazardous materials)

☐

Q30. What document should you refer to for guidance on how to handle and store hazardous chemicals?

Answer

Safety Data Sheets

☐

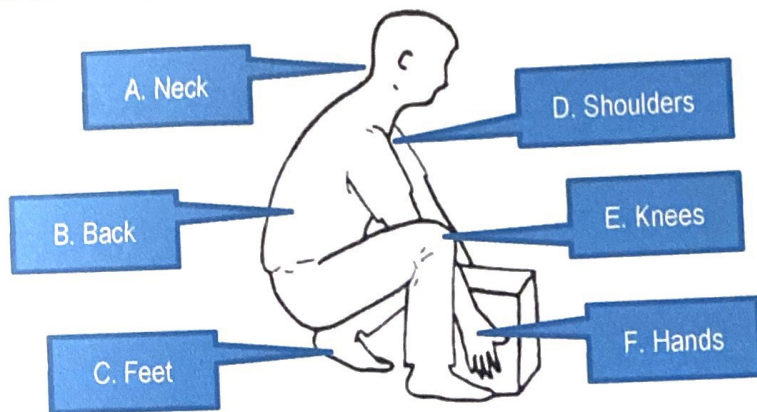
Q31. Name three (3) ways you can reduce the risk of injury if a load is too heavy for one person to carry, push or pull.

Answer

A trolley
Pallet trolley
Ask for help.

☐

- Q32. In the diagram below a person is lifting a tool box.
Filling in the table, indicate how each body part should be used/placed.



Answer

Area of body (Letter)	How it should be placed
D	Level
A	Upright
F	Good grip
B	Natural curve
E	Bent
C	Flat, facing load

- Q33. How should construction materials and components be handled?
Tick all that apply.

Answer

Choice	Possible Answers
☒	Sorted to suit material type and size, separating hazardous material
☒	Stacked or stockpiled for ease of identification and retrieval
☐	Stored in access ways for ease of retrieval
☒	Stored clear of access ways
☒	Handled and positioned ready for installation

- Q34. Identify the Australian Standard that relates to the storage and handling of LP gas.

Answer

AS/NZS 1596

Q35. List one (1) testing method for each of the building materials listed below.

Answer

Material name	Properties
Concrete	Hydraulic Press.
Metals	Ductility - is tested by bending a bar around a pin over in the angle .
Timber	Astress grading.

Q36. What Code gives detailed tables which state the required grade of timber for specific sizes and uses?

Answer

The Australian Timber Framing Code.

Q37. Name two (2) ways that defects may be seen in timber.

Answer

- ① Knots,
- ② Gum Veins.

Q38. Identify two (2) tests that may be performed to determine the durability of stone.

Answer

- ① acid immersion.
- ② water retention.

Q39. Name two (2) ways that defects may be seen in stone.

Answer

① Cracks

② FISSURES in the rock surface -

☐

Q40. True or False (Tick your response): Under a contract, builders and other specialist tradespersons are the ones most likely to rectify or remedy problems that arise from incorrect installation, application or placement of materials.

Answer

☒	True
☐	False

☐

Q41. Name two (2) established methods that may be used to preserve timber.

Answer

Mechanical Protection = Prevention of termites.

Painting = Preventing fungal attacks.

☐

Q42. Identify two (2) established methods that may be used to protect ferrous metals.

Answer

* Cathodic Protection - Painting metal.

* Galvanising - Metalwork exposed to corrosive environments.

☐

Q43. Explain why the corrosion resistance of non-ferrous metals is superior to that of ordinary steel.

Answer

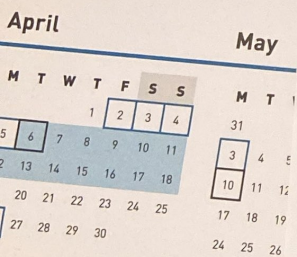
this is a result of the production of a ceramic coating of oxide or salt on the metal which protects it from further corrosion.



Q44. When should aluminium be coated with bituminous paint?
Tick all that apply.

Answer

Choice	Possible Answers
☐	At all times
☒	When it is buried in soil
☒	When it comes in contact with chemical materials
☒	When it is immersed in water
☐	When it is used on bitumen



October

