



Mid Year 2006 Final Examination

University of South Australia

Question 1

(25 Marks)

In the context of development control describe :-

- a. part 1. the function of the "Development Act".
part 2. what is the BCA?
part 3. what is the "South Australian Housing Code"?
- b. Describe the development approval process.
- c. Illustrate how the BCA and Australian Standards have set the performance standards for public safety in the following areas :-
 - part 1. stair construction.
 - part 2. balustrades.
 - part 3. glazing.

Question 2 - Answer Part A or Part B

(25 Marks)

Part A : Many parts of Australia, including Adelaide, have the unenviable reputation for having predominantly reactive soils. Discuss the measures adopted to counter these conditions under the following headings :-

- a. define the principal soil classifications.
- b. with the aid of carefully drawn and annotated details describe a typical stiffened raft constructed on fill supporting brick veneer on timber walling.
- c. describe the steps taken to construct a concrete slab on ground.
- d. what is "articulated construction" and why is it used?

OR

Part B : Discuss timber flooring under the following headings :-

- a. describe with the aid of diagrams a typical timber framed floor on strip footings.
- b. describe one technique which is used to waterproof a wet area floor.
- c. describe one termite risk management system.
- d. describe one of the "new generation" timber products purported to assist in "whole of house" termite protection.
- e. what is meant by the term "floating floor"?

Question 3

(25 Marks)

Part A : There are many claims (and counter claims) made for the benefits of steel framed housing. What arguments would you use if you were advising a client to go with steel framed housing? You should include in your answer long-span floor framing, wall framing, roof and upper floor framing.

Part B : Some areas of masonry walls need particular attention. Describe with the aid of carefully drawn details the placement of damp proof courses/ flashings at :-

- a. the base of masonry cavity walling on a rebated edge to a concrete slab
- b. window openings
- c. onto adjoining lightweight roof coverings.



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Question 4 – Answer two (2) of the three (3) part questions (25 Marks)
All parts are of equal value.

Part A : Describe brick veneer on timber construction. Include in your answer the typical framing members, lintels, holding down straps, wall ties, cavity flashings, flashings at openings and structural bracing.

OR

Part B : Describe the components of a cut-on-site conventional roof. Assume lightweight roof covering. Include plasterboard ceiling in your description. You may wish to use the aid of a cross-sectional view.

OR

Part C : What are the benefits claimed for prefabricated multi-nail plate truss roof construction? Illustrate your answer with a typical type A truss configuration, labeling all parts and plates. Assume roof sheeting and plasterboard ceiling.

Question 5 – Answer two (2) of the three (3) part questions (25 Marks)
All parts are of equal value.

Part A : Describe the installation of plasterboard on framed walls and ceilings under the following headings :-

1. the fixing of the sheets.
2. the method of flush jointing.
3. what is meant by “back blocking”?

OR

Part B : Under the heading of “lightweight external cladding” describe the following:-

1. the merits claimed for “coated board products” as distinct from the traditional brick veneer or weatherboard cladding.
2. a method of finishing “weatherboard” style fibre cement sheets at external corners.
3. fixing and finishing of fibre cement sheets with architectural textured paint finishes.

OR

Part C : Assuming a typical electrical plan for domestic construction, draw up a legend of electrical fittings and fixtures.

END OF QUESTIONS