

The University of Melbourne  
Semester one  
Final Examination  
2006

Faculty of Architecture, Building and Planning

Student Name: \_\_\_\_\_

Student Number: \_\_\_\_\_

Subject Number: 702 117

Subject Title: Principles of Construction Management

Reading Time: 15 minutes

Exam Duration: 3 hours

This paper has 5 pages including this cover sheet.

**Authorised Materials:**

Foreign language dictionaries (paper based not electronic) are allowed.  
No other materials are authorised.

**Instructions to Invigilators:**

Students will require 1 script book (14 pages).

Please randomly check dictionaries to ensure they are not annotated in any way.  
The examination paper and script book(s) are to be collected at the end of the exam.

**Instructions to Students:**

This examination is in 2 parts. It is worth 60% of the total mark for the subject. The marks for this exam add up to 100. You are required to answer all questions.

**Part A** is worth 30% of the examination mark. You are required to answer it in the spaces provided on the examination paper.

**Part B** is worth 70% of the examination mark. You are required to answer all 4 questions in the script book.

The examination paper and script book(s) are to be handed in at the end of the exam.

*This paper is to be held by the Baillieu Library.*

## PART A

*Please answer the following question in the spaces provided on this examination paper. This part is worth 30% of the total exam mark.*

### Question 1 (30 marks)

Please answer the following questions in the space provided. Each is worth 3 marks.

(a) List the three broad areas of activities of the construction industry. Provide one construction project example for each (i.e. hospital)?

- 1 .....
- 2 .....
- 3 .....

(b) Name three professionals who are part of the building construction life cycle and indicate their main role.

- 1 .....
- 2 .....
- 3 .....

(c) Organisations share three common characteristics. Please list these below.

- 1 .....
- 2 .....
- 3 .....

(d) Name three activities which are completed in the design stage of a building construction project.

- 1 .....
- 2 .....
- 3 .....

(e) In a prequalification scheme for main contractors what are the three main factors they should be assessed on?

- 1 .....
- 2 .....
- 3 .....

(f) What are the three main types of contracts used in the construction industry?

- 1 .....
- 2 .....
- 3 .....

(g) List six of the nine project management knowledge areas as defined by the Project Management Institute.

- 1 .....
- 2 .....
- 3 .....
- 4 .....
- 5 .....
- 6 .....

(h) Organisations perform work either through operations or projects. How do operations and projects differ?

.....  
.....  
.....

(i) Managers can be described by the functions they perform. List three of the four functions and provide a construction related example for each one.

- 1 .....
- 2 .....
- 3 .....

(j) What Managers do can be described in terms of three skills –please list these skills. Indicate which are more important (1), of the same importance (2), or less important (3), at top level management than they are at lower management.

Circle one

- 1 ..... (1) or (2) or (3)
- 2 ..... (1) or (2) or (3)
- 3 ..... (1) or (2) or (3)

**Please turn over for Part B**

## PART B

Please answer the following three questions in the script book provided.  
This part is worth 70% of the total exam mark.

### Question 1 (20 marks)

A large furniture retailer “Funtastic Furniture Company (FFC)” has decided to expand its business to Melbourne. A decision has been made to construct a large retail centre in one of the outer suburbs. This centre will include a large open showroom, warehouse facilities and 200 space car park. It will sell moderately priced furniture such as sofas, tables and chairs and outdoor settings.

FFC has previously built centres in Brisbane and Sydney and they are happy with the building design concepts previously used and the corporate image that was portrayed to their potential market. FFC are keen to make their entry into the Melbourne market soon and in particular, be operating by mid 2007. This represents a relatively quick time frame. Their budget is reasonable for the facility required which is more functional rather than one requiring high design quality.

You are asked by the company to provide them with some advice.

- (a) What four procurement options are available to FFC? Name each of the options and outline the particular advantages and disadvantages of each.

*12 marks*

- (b) Indicate the procurement strategy you believe FFC should adopt. Discuss why this strategy will be the best solution and why other procurement strategies would be either unsuitable or not as suitable.

*6 marks*

- (c) Draw an organisational chart for the procurement strategy recommended showing the contractual and functional links between the parties.

*2 marks*

### Question 2 (20 marks)

- (a) What role does the quantity surveyor take in a building construction project? One function they perform is the development of Cost Plans A, B, C and D. What are these, when are they prepared and how much do each of them typically vary from the final cost of the project?

*(6 marks)*

- (b) Outline the main steps undertaken by the main contractor during the tendering process. Please highlight the main issues the main contractor needs to consider at each step.

*(6 marks)*

- (c) What are the main cost categories that make up the main contractor's tender price? Draw a diagram to help illustrate their relationships and provide at least one example from each category. Why is it important to accurately assess the direct costs during the tendering process?

*(8 marks)*

**Question 3 (15 marks)**

- (a) Tenders for a project are invited in one of three ways - open; selected and by negotiation. Discuss the relative advantages and disadvantages of each method. Which method is preferred by public sector clients and why?

*(8 marks)*

- (b) Traditionally the main/head contractor has been selected using price as the only criteria (i.e. lowest price tender accepted). Discuss what problems this creates and what other criteria clients should consider? (Hint: *reference should be made to the multi parameter model and you should discuss how this would be used in practice*).

*(7 marks)*

**Question 4 (15 marks)**

- (a) What are the five stages of team development? What occurs in each stage and how do you know when each stage is complete?

*10 marks*

- (b) Why is good teamwork particularly important in the construction industry and why is it hard to achieve?

*5 marks*

**END OF EXAMINATION**