



University of South Australia

If you are required to use a calculator,
please note the make and model here:

Calculator Make:

Calculator Model:

2006 Study Period 2 Examination

Student ID Number

Student ID Number									
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Family Name	
Given Names	

Division of Information Technology, Engineering and the Environment

School of Natural and Built Environments

Course Name Construction Management 1

Subject Area BUIL Catalogue Number 1007

Examination Day Examination Date

Examination Time Length of Exam 3 hours

Examination Venue: Ridley Centre/ Royal Banquet Room/ Other

EXAMINER: Virginia Mehrtens, Tel 8302 2041

REVIEWER: Stephen Pullen

Instructions to Candidates

- This exam is worth 50% of the total course marks.
- You must answer Question 1 in Section A, and any four Questions from Section B. (**Five questions in total.**)
- The value of each question is noted adjacent to the question.
- **No resources or reference materials are allowed.** Calculator is allowed.
- State any assumptions made.

Conduct in examinations

Examination procedures

- Students will be allowed a designated reading time prior to the published starting time for the examination.
- No writing in the examination booklets is permitted during the reading time. However, during this period students may complete attendance slips, make notes on loose-leaf paper provided, and fill in details required on the front cover of examination booklets.
- Every student shall fill in the attendance slip where provided. Students will display their student identification card, or an alternative form of photographic identification acceptable to the invigilator. Students who are unable to provide such proof of identity will be permitted to proceed with the examination but will be required subsequently to provide proof of identity. Students holding an ENTEXT card or Access Plan should display the ENTEXT card or Access Plan in addition to their identification card.
- No student shall commence writing answers until authorised by the chief invigilator. All students shall cease writing when instructed by the chief invigilator. At the conclusion of the examination all students shall remain seated until all examination booklets have been collected.
- No student will be permitted to enter the examination room more than 30 minutes after the published starting time.
- No student shall leave the examination room before 30 minutes have elapsed from the published starting time or during the last 30 minutes of any examination.
- After the published starting time a student may leave the examination room temporarily only with the consent of the chief invigilator, and shall be adequately supervised during this period.
- Any student who wishes to leave the examination room, except temporarily, must hand to the invigilator all examination booklets. The invigilator must endorse the booklets as correctly identifying the student.
- A student must not take into the examination room any books, dictionaries, calculators, mobile telephones, personal digital assistants, notes, or other documents, devices or personal items except those specified in the Course Information Booklet (see clause 5.4 c) and authorised by the examiner.
- During an examination no student shall speak to or communicate with any other student.
- During the examination no student will give to or receive from any other person any form of assistance, academic or otherwise.
- No student shall bring into, or remove from, an examination room any examination answer booklet or examination attendance slip.
- Where a student is disrupting the examination, the student may be summarily dismissed from the examination room at the discretion of the chief invigilator.
- Exceptions to the above procedures may be made only with the prior approval of the Director: Student and Academic Services.

Breaches of examination procedures

- Any student who breaches these examination procedures will be guilty of misconduct.
- If misconduct is detected, the invigilator will inform the student at the completion of the examination that the misconduct will be reported.
- The invigilator will document the incident using the Incident Report proforma, and will provide a copy of this report to the Head of School/Dean: Whyalla responsible for the course, within 5 working days of the incident. The Head of School/Dean: Whyalla will investigate the incident.
- Where the Head of School/Dean: Whyalla concludes that no misconduct was involved, no further action will be taken and no record of the investigation will be placed in the student's file.
- Where the Head of School/Dean: Whyalla concludes that the action of the student was an example of inadvertent misconduct, the student will be counselled by the Head of School/Dean: Whyalla, and a note to that effect will be placed in the student's file.
- Where the Head of School/Dean: Whyalla concludes that the action of the student constitutes deliberate misconduct, the Head of School/Dean: Whyalla may determine that the appropriate penalty is the first penalty specified in clause 9.28 below.
If the Head of School/Dean: Whyalla makes such determination and if the student admits to misconduct and agrees to imposition of the first penalty specified in clause 9.28 then:
 - a** the Head of School/Dean: Whyalla will prepare a written statement using the proforma ([Investigation Report - PDF staff access only](#)) setting out the findings on the facts, referring to the evidence or other material on which the findings were based, noting the student's admission of misconduct and setting out the penalty imposed, the reasons for its imposition, and the student's agreement to its imposition.
 - b** the Head of School/Dean: Whyalla will, within 10 working days, provide a copy of the Investigation Report to the student, the relevant Pro Vice Chancellor, the Head of School/Dean: Whyalla, the Division Manager and the Director: Student and Academic Services; and
 - c** a copy of the Investigation Report will be retained in the student's file and the Head of School/Dean: Whyalla will issue a reprimand to the student.
- Where the Head of School/Dean: Whyalla concludes that the case involves deliberate misconduct and either:
 - a** the student does not admit to misconduct; or
 - b** the student does not agree to accept the first penalty prescribed in clause 9.28 below; or
 - c** the Head of School/Dean: Whyalla or the student believes that the first penalty prescribed in clause 9.28 below is not appropriate; then the Head of School/Dean: Whyalla shall establish a formal inquiry.

Section A	You must answer Question 1	20%
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Question 1

In describing **sustainable development**, the UK Government notes that:

“At its heart is the simple idea of ensuring a better quality of life for everyone, now and for generations to come. This means achieving four objectives simultaneously:

1. Social progress that recognises the needs of everyone
2. Effective protection of the environment
3. Prudent use of natural resources
4. Maintenance of high and stable levels of economic growth.”

Explain why there is a **role for the construction industry** in achieving a balance between these sometimes conflicting objectives.

Go to next page for start of Section B.

Section B Answer any <u>four</u> questions from the six questions in this section.

Question 2 (20%)

In describing the construction industry in Australia, some of the characteristics identified are as follows:

- Size of firms
 - Project based
 - Nature of the workforce
 - Ease of entry
 - Separation of design and construction
 - Nature of demand
 - Role of government
 - Contribution of the industry to environmentally sustainable development
 - Role in reducing cost and waste
- a) Select three industry characteristics from the list above, and for each selected characteristic, write a brief explanation and description of that characteristic of the industry. (3 x 4% = 12%)
- b) Identify and describe at least two of the ways in which the management in the industry demonstrate:
- i. social responsibility.
 - ii. environmental responsibility (2 x 4% = 8%)

Question 3 (20%)

If a construction project team is a temporary organization:

- a) Identify two examples for each of the human, financial, and physical and information resources used by construction project manager to achieve to the objectives of the project. (2 x 4 = 8%)
- b) Describe briefly how a construction project manager might combine and coordinate these resources. In your description, you should include examples of planning and decision-making, organising, controlling and leading activities that a construction project manager could undertake. (12%)

Question 4 (20%)

The Department of Industry Science and Resources outlined a multi-dimensional cluster framework to describe the groups within the construction industry. The framework identifies information and knowledge flow between the following groups:

- Regulatory framework
 - Supply network
 - Project-based firms
 - Property sector
 - Technology support infrastructure
- a) Describe some of the activities of project-based firms. Illustrate your description by including examples of firms and their activities drawn from the South Australian construction industry. (12%)
- b) Describe how the project-based firms may interrelate with each of the other four groups. (4x2=8%)

Question 5 (20%)

“A management system is, simply put, a way of doing things.” (Griffith, 2004, p.15)

- a) Describe how management systems assist construction organisations to deliver projects. Illustrate your answer by identifying at least two specific systems used to manage particular aspects of projects. (10%)
- b) Identify at least two elements of any management system, and explain how the effectiveness of management systems may be influenced by factors at both corporate and project level. (10%)

Question 6 (20%)

The development life cycle of a project -based development can be summarised as follows:

- Identification of need for development
- Feasibility study
- Conceptual design
- Detailed design
- Procurement
- Construction
- Completion
- Occupation/use
- Refurbishment
- Recycling
- Obsolescence
- Demolition/dereliction

- a) Choose two of the stages in the development life cycle as listed above, describe what typically happens and identify the key participants in each of those two stages of the project. Make reference to examples in your answer.

(2x5% =10%)

- b) Explain why the procurement strategy is of fundamental importance to a project and the construction industry.

(10%)

Question 7 (20%)

- a) Explain how the features of a proposed construction site and its boundaries may influence the following:

- i. Selection of plant and methods
- ii. Siting of facilities and storage areas
- iii. Sequence of operations
- iv. Access

(10%)

- b) Illingworth (1996, p1) states that: “Construction involves two fundamental activities: the handling of materials and their fixing in the final location.”

Explain the role of both temporary works and plant in construction and describe two examples of each.

(10%)

END OF QUESTIONS