

**UNIVERSITY OF SOUTH AUSTRALIA**  
**SCHOOL OF NATURAL & BUILT ENVIRONMENTS**

**PROGRAM:** Bachelor of Construction Management & Economics

**COURSE:** DEVELOPMENT ECONOMICS BUIL 3011 (10281)

**EXAMINATION:** Semester 1 – June 2004

**DURATION:** 2.5 Hours of Exam time preceded by 10 minutes of Reading Time (ENTEXT students extra 10 minutes/hr)

**EXAMINER:** Tim O’Leary – City East Campus BJ 3-23 Tel: 8302 2921

**INSTRUCTIONS TO CANDIDATES:**

- This exam is worth 50% of the total course marks
  - **Answer FOUR of six questions (Question 4 is compulsory)**
  - Equal marks (25%) allocation for each question
  - Neatness and presentation are taken into account in marking
  - Reference material is allowed in the examination. Calculator IS allowed.
  - Candidates must include (Q4 worksheet) with their Answer Books and be clearly marked with their Student ID number
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**Question 1**

Discuss the nature of public involvement and development controls in major urban property developments. Identify and discuss the development and control issues that are most prevalent to these types of projects. List some strategies and decisions for developers to consider in undertaking projects, which have ‘*sustainable development*’ principles as part of the project goals.

**Question 2**

Financing of property developments can take various forms. Explain the various types of lending and finance arrangements, which a developer might utilise. Identify and discuss the major risk factors for lenders to property developers and explain how these lenders might mitigate these risks.

What are the advantages/disadvantages of fixed interest and interest only loans?

**Question 3**

What are the common reasons for requesting a valuation of a property?  
Discuss the three main approaches to valuation of property and illustrate your answer with examples of each.

#### Question 4 COMPULSORY

Prepare an after tax cash flow analysis on the following property investment assuming a 10 year holding period. (refer to week 7 example 'After Tax Cash Flow Analysis'). You are required to compute the Net Present Value of the cash flow using the tables attached to the exam paper. **Use attached worksheet and return with your answer booklet.**

Net Income	\$150,000
Initial Capitalisation Rate (this is the 'discount' rate for NPV calcs.)	10%
Reversionary capitalisation rate	10%
Rental escalation	7%
Gearing	70%
Interest rate (principal paid at end of term)	8%
Inflation rate (CPI increases for capital gains calc.)	8%
Tax rate (for both Income and Capital Gains)	36%
Building Cost/Value (portion of bldg cost to total value of development)	60%
Depreciation allowances on proportion of building cost	
Fittings (12% of Building cost)	15%
Plant (22% of Building cost)	20%
Building Capital Allowance eg. Structure (55% of bldg. Cost)	2.5%

**Note: CPI adjusted Cost base for Capital Gains calculation is (Initial Cost multiplied by 2.1589)**

#### Question 5

The tax treatment of property is a complex and constantly changing area. Discuss this statement with regard to both state and federal current property taxes. Give an example of both an 'entry' and 'exit' property tax.

#### Question 6

A Value Engineer is reporting to a developer/client on two possible design solutions for the external cladding of an office building. Both adequately meet the functional and aesthetic requirements for this element of the building. One is based on a newly patented solar reflective glazing system and the other on conventional curtain walling. {use PV (table 2) and PV of an annuity (table 3) attached}.

The costs associated with each option are:

	Solar Glazing	Curtain Walling
Initial Cost	\$650,000	\$240,000
Annual Treatment	\$6,000	\$3,000
Overhaul Cost	\$10,000 every 10 yrs	\$60,000 (yrs 15 & 30)

(a) Which is the most economical choice given a 7% discount rate and a 40 year effective life for the building?

(b) The following annual energy savings can be attributed to the choice of the patented solar reflective glazing system.

Heating \$15,00 per annum

Cooling \$42,000 per annum

What affect on the total Life Cycle Cost of the building does this have and what would you recommend in your report to the client regarding the choice of external cladding?