

**UNIVERSITY OF SOUTH AUSTRALIA  
SCHOOL OF GEOINFORMATICS, PLANNING & BUILDING**

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

**COURSE:** THE BUILT ENVIRONMENT

**EXAMINATION:** Internal Examination, Semester 1, 2003

**DURATION:** 10 minutes of Reading time plus 2 Hours 30 Mins of Exam time, a total of 2 Hrs 40 Min. For ENTEXT students 10 min of Reading time plus 2 Hrs 55 Mins of Exam time, a total of 3 Hrs 5 Mins.

**EXAMINER:** Jeremy Coggins (Tel: 83021069)

**INSTRUCTIONS TO CANDIDATES:**

- This exam is worth 50% of the total course marks
  - This exam paper comprises four (4) pages
  - Attempt FIVE (5) questions in total
  - You must answer at least TWO (2) questions from Section A (questions 1 to 5 inclusive) and at least TWO (2) questions from Section B (questions 6 to 10 inclusive)
  - All questions are of equal value
  - This is a closed book exam, i.e. no reference materials are allowed
  - Calculator is allowed
  - State any assumptions made
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**Section A**

*Answer at least TWO (2) questions from Section A*

**Question 1**

*(20 Marks)*

Select **four (4)** of the following and explain their importance to the property market. Use diagrams where appropriate.

- a) land use controls, especially zoning
- b) elasticity of demand
- c) property cycle
- d) income capitalisation
- e) positive and negative externalities
- f) Alonso's bid rent theory.

**Question 2**

*(20 Marks)*

Consider a modest 1926 bungalow in an inner city suburb in average condition. Explain why different valuations may be given for the same property depending on the reasons for valuation of the property (e.g. a home owner wishing to sell, a bank providing finance to a potential buyer, an insurance company).

In addition, outline one methodology that would be appropriate for determining a valuation on this property.

### Question 3

(20 marks)

Why is there a need for governments to influence the property market? How do they do this, and how effective are they in achieving the economic goal of maximising the housing opportunities of all individuals in society? Give an example of government intervention in each of the following tenure categories:

- (i) owner occupier;
- (ii) public housing; and
- (iii) private rental sector.

### Question 4

(20 marks)

A local government council has received submission from two parties for the development of a centrally located but under-utilised site currently used as a depot for council machinery and maintenance. The two submissions are from:

- (i) Dolphin Land Lease who wish to develop a medium and higher density residential area of 2 storey buildings; and
- (ii) Alfresh Fruit Group who wish to develop a community hub featuring a range of small and specialty shops surrounding a fresh food market hall.

The council seeks your advice as to which proposal represents the highest and best use of the site.

Firstly, define the objectives of a highest and best use analysis.

Secondly, show what data requirements would be needed to conduct a highest and best use study of these two proposals.

Finally, indicate which land use you consider to be the highest and best use. Give reasons for your choice, including the likely impact on land value.

### Question 5

(20 marks)

- a) Using economic concepts explain the meaning of:
  - (i) Shift in parameters for demand;
  - (ii) contracting demand and expanding demand; and
  - (iii) equilibrium price.
- b) Why does supply lag behind demand in property markets?
- c) Consider the following scenario: a company has captured the market for installation of in-ground swimming pools in a regional centre. Using **appropriately labelled graphs**, show the likely effects of the following events on demand and supply of pools:
  - (i) reports of an outbreak of Legionnaires disease in public pools;
  - (ii) new inventions reduce the time required for domestic pool maintenance;
  - (iii) the cost of water escalates; and
  - (iv) increase in public liability costs of the company increase the price at which they can install pools.

## **Section B**

Answer at least TWO (2) questions from Section B

### **Question 6**

The following table relates to the costs associated with the construction of various numbers of detached houses on a particular site.

(a) Number of houses	(b) Fixed Costs \$000	(c) Variable Costs \$000	(d) Total Costs \$000	(e) Average Total Costs \$000	(f) Average Variable Costs \$000	(g) Marginal Cost \$000
0	170	-	170	-		
1	170	30	200	200		
2	170	55	225	112.50		
3	170	75	245	81.67		
4	170	90	260	65		
5	170	120	290	58		
6	170	155	325	54.17		
7	170	195	365	52.14		
8	170	240	410	51.25		
9	170	300	470	52.22		
10	170	365	535	53.5		
11	170	455	625	56.82		
12	170	575	745	62.08		

- a) Complete the columns for Average Variable Costs (f) and Marginal Cost (g).  
(4 marks)
- b) Plot the Average Total Cost curve and show the optimum level of output. Explain the shape of the Average Total Cost curve you have plotted.  
(8 marks)
- c) If in a situation of oversupply the market sets the price of a detached house at \$40,000, at which level of output should the firm produce in order to minimise losses? Explain your answer.  
(8 marks)

### **Question 7**

- a) Explain the conditions that are required for what is termed a 'perfect market' and the assumptions regarding the behaviour of individuals in such a market.  
(8 marks)
- b) Explain, using diagrams, why a firm operating in perfect competition will earn normal profit levels in the long run.  
(12 marks)

### Question 8

- a) Examine the likely effect on the level of National Income of each of the following:
- (i) An increase in the marginal propensity to save;
  - (ii) An decrease in the level of imports purchased in the economy; and
  - (iii) An increase in the level of income tax.

Explain the process by which these effects take place, and consider each example separately. *(6 marks)*

- b) Given that the marginal propensity to consume is 0.75, calculate (showing your workings) the theoretical effect on National Income of an increase of \$600 million in government spending. *(4 marks)*
- c) Define what is meant by the term 'Trade (or Business) Cycle', and explain how the interaction of the multiplier and accelerator principles gives some insight into the causes of trade cycles. *(10 marks)*

### Question 9

- a) Briefly describe **two (2)** main forms of inflation observed in the economy. *(4 marks)*
- b) With the aid of diagrams, explain how the Government (via the Reserve Bank of Australia) may attempt to boost demand in the economy using an expansionary monetary policy. *(8 marks)*
- c) Explain the potential effects of a rise in interest rates in the economy on the Construction Industry. *(8 marks)*

### Question 10

- a) In relation to international trade, briefly explain what is meant by the term 'balance on goods and services'. *(4 marks)*
- b) A country may be said to be facing a balance of payments problem when it experiences a persistent and large negative balance for official financing in its capital and financial account (i.e. a technical balance of payments deficit). Explain the possible measures which a country could take in order to redress such a balance of payments problem. *(8 marks)*
- c) Discuss four main factors influencing the Australian dollar's exchange rate on world currency markets. *(8 marks)*

END OF QUESTIONS