

EXAMINERS' REPORT ON 2006 TERTIARY ENTRANCE EXAMINATION

SUBJECT: ECONOMICS

STATISTICS

Year	Number Who Sat	Non-Examination Candidates	Did Not Sit
2006	2578	36	153
2005	2596	23	148
2004	2703	32	190

The 2006 Examiners' Report has been written by the Chief Marker to comment on matters relating to the Tertiary Entrance Examination in Economics. The Chief Marker was not a member of the examining panel which set the questions but was responsible for coordinating the marking of the paper. The opinions and recommendations expressed in this report are those of the Chief Marker and not necessarily representative of or endorsed by the Curriculum Council.

The Marking Guide provided at the end of this report was prepared for markers and may have been substantially amplified by discussions held in the pre-marking meeting. It is not intended as a set of model answers, and is not exhaustive as regards alternative answers. Some of the answers are less than perfect, but represent a standard of response that the examiners deemed sufficient to earn full marks. Teachers who use this guide should do so with its original purpose in mind.

SUMMARY/ABSTRACT

The 2006 TEE Economics paper was a three hour examination, requiring students to complete 25 multiple choice questions, 3 data interpretation questions and 3 extended writing questions from a choice of 5 questions. The exam structure was identical to previous years. Section B questions were topical reflecting current issues in the economy while Section C questions were more theoretical in nature. The paper provided for a relatively even balance of questions across the syllabus. Markers found the paper relatively straightforward to mark. The overall summary statistics indicate that the paper performed well – the overall mean was close to the ideal mean, the reliability measure was high and similar to previous years and there was an excellent spread of marks (3 – 98). The correlations of individual sections of the paper to the total were all very good.

With a mean mark of 55.09, the overall paper was marginally more difficult than in 2005 (mean score of 56.18) but was slightly more difficult than in 2003 (mean score of 58.77). This pattern was also evident in the mean scores for section A (with mean scores of 15.97, 16.42, 14.59 for 2006, 2005 and 2004 respectively) and section B (with mean scores of 15.57, 16.23, 14.89 for 2006, 2005 and 2004 respectively). The mean for Section C was relatively low (23.3) but similar to 2005. The reliability for the overall paper was 0.79, similar to the 2005 figure of 0.80.

The paper did not pose any real difficulties for the marking group. Section A (multiple choice) performed well with a relatively high reliability score. Section B of the paper contained topical questions which tested the student's ability to combine economic data with economic theory. Part (a) questions usually require students to extract information from the data set, while part (b) questions require students to describe or explain the pattern of data or concepts associated with the data. The questions contained in part (c) of Section B are purposely designed to be more difficult and to be more discriminatory. Generally part (c) questions require students to evaluate and/or interpret and test a higher level of understanding. The difficulty of the part (c) questions is evident in the 2006 paper with each of these

questions having a mean of between 2 and 2.3/5 (40-45%). Section C of the paper contained three sectionalised questions and two essay style questions. Question 29 was a topical question relating to inflation in Australia, while the other four questions directly related to content areas of the syllabus. I would prefer at least two of the five questions in Section C to be relatively topical rather than 'textbook' oriented. There was little scope in Section C for students to discuss current Australian economic issues.

I would like to recommend to the examining panel that for future examination papers where stimulus material such as cartoons or specific quotes are used, that the source and date of the material be provided with the question. Both question 26 (cartoon) and question 29 (quote) did not provide a specific date (month and year). This is essential information for answering topical questions and students are potentially disadvantaged if this information is not included with the question.

GENERAL COMMENTS

The 2006 examination consisted of:

Section A (25 multiple-choice questions, each worth one mark);

Section B (3 data interpretation questions, each worth 10 marks); and

Section C (5 extended writing questions, of which candidates were required to do three, each worth 15 marks).

The general standard of students sitting the 2006 Economics paper was satisfactory. The majority of students displayed a good understanding of macroeconomic principles and policies, and were generally aware of the main economic indicators/conditions of the Australian economy in 2006. While most students are adept at defining and explaining key concepts, many find it more difficult in answering the data interpret questions in Section B and the more topical type question set in Section C. These types of questions do require students to 'think on their feet' but are arguably the best test of their economic understanding. Teachers should always try and incorporate current economic events and data when teaching the different syllabus areas and encourage students to be more confident in tackling topical questions.

Emphasis should be given to the understanding and appropriate use of economic models. Specifically the Keynesian expenditure model and the AD/AS model are both relevant in explaining different sections of the syllabus. Many students often use incorrectly or poorly labelled diagrams which is a reflection of their weak and limited understanding of these models. For example, question 32 which was based on the multiplier concept was poorly answered and yet this is one of the most fundamental concepts in macroeconomics. Many students also confuse the AD/AS model with the expenditure model and the exchange rate diagram showing the demand for and supply of Australian dollars.

I would like to thank and congratulate the examining panel of Paul Crompton, Anne Garnett and Theresa Gibson for their efforts in setting a successful paper for 2006.

COMMENTS ON SPECIFIC QUESTIONS

Section A (Multiple Choice)

The correct alternatives, and the proportion of candidates selecting them, are set out below.

Question number	Answer	Proportion selecting	Question number	Answer	Proportion selecting
1	B	0.71	14	A	0.27
2	C	0.74	15	B	0.59
3	B	0.71	16	B	0.79
4	D	0.91	17	D	0.75
5	A	0.84	18	C	0.79
6	A	0.43	19	B	0.71
7	D	0.68	20	D	0.76
8	B	0.33	21	A	0.80
9	C	0.74	22	D	0.76
10	C	0.80	23	D	0.62
11	B	0.64	24	D	0.33
12	D	0.23	25	A	0.41
13	A	0.63			

Mean 15.97 Standard deviation 4.12

Section A this year was slightly more difficult than in 2005 as reflected by a lower mean score (15.97 in 2006 compared to 16.41 in 2005, but higher compared to the mean score of 14.59 in 2004). Ideally the mean score should be close to 15.0. The standard deviation of 4.12 is similar to the previous year (4.17 in 2005). The multiple choice section of the paper appears to be working well. The reliability of the multiple choice section has been increasing - from 0.67 in 2004 to 0.72 in 2005 and 0.74 this year. For each question, the correlation of question score with total examination score is positive and, with the exception of two questions (13 and 14), exceeds 0.3.

There were six questions which proved difficult with less than 50 per cent of students answering correctly - questions 6, 8, 12, 14, 24 and 25.

Question 6 tested the students' knowledge of the composition of GDP. While 43 per cent of students chose the correct answer of A, nearly 40 per cent of students chose alternative D. It should be noted that GDP only measures output produced in the market and does not include output produced in the home.

In Question 8, only 33 per cent of students selected the correct alternative of B. More students (37 per cent) chose alternative C. It seems that many students believe that subsidies can improve efficiency. This is incorrect. Both subsidies and tariffs are inefficient because they decrease economic welfare, and both lead to a decrease in average living standards.

Question 12 was the most difficult question in Section A with only 23 per cent of students selecting the correct answer. Most students (44 per cent) chose alternative A. This is an area of the syllabus that is probably not given much attention but it is clearly highlighted in one of the prescribed texts (see *Parry & Kemp, Exploring macroeconomics 7th ed.* p. 87). The equilibrium condition in the circular flow model is: $I + G + X = S + T + M$. These terms can be rearranged to give: $X - M = T - G + S - I$.

Question 14 also proved to be a very difficult question with only 27 per cent of students selecting the correct answer. A change in the value of the currency will affect the price of exports and imports which will then affect the current account. A depreciation reduces the price of exports but increases the price of imports. If both exports and imports are price inelastic, then export receipts will fall, while import payments will increase, thus leading to a larger trade deficit. Alternatives (b) and (d) refer to the whole balance of payments either worsening or improving, but this is nonsensical since the balance of payments always balances.

Question 24 concerned the impact of a large budget deficit. A budget deficit ($G > T$) requires the government to borrow to fund the shortfall of revenue. Borrowing will push up interest rates (alternative d) which could lead to a crowding out effect, harming domestic investment and resulting in an appreciation of the exchange rate.

Question 25 asked students to identify the factor that does not lead to productivity growth. Productivity refers to the amount of output per unit of input. It is affected by improvements in technology, investment in capital goods, improvements in work practices, increased training and education and microeconomic reform. Alternatives (b), (c) and (d) have all promoted rapid productivity growth in Australia. Increased demand for Australia's primary commodities [alternative (a)] has helped to increase exports, and therefore GDP, but not productivity.

Section B (Data Interpretation)

Question 26 *The mean was 5.08. The standard deviation was 2.15.*

Part (a) was generally done well. Part (i) required a simple definition of a budget surplus. In Part (ii), the typical response was that budget surpluses had been used to retire government debt.

The key to part (b) was an understanding of the link between the business cycle and the budget balance. The Australian economy has been in a long period of sustained economic growth. This has resulted in large tax collections – increased income tax from employment growth and rising incomes, increased company tax from higher company profits, increased excise duties from higher levels of spending and higher petrol prices. At the same time, government spending on welfare decreases with a booming economy.

Part (c) was poorly answered. The Treasurer is protecting the surplus in order to prevent the economy from overheating. When the economy has been in a long expansion, budget surpluses help to apply the 'brakes' to slow the economy and keep a lid on inflation. If the surplus disappeared, by increasing government spending, then inflation would rise and the Reserve Bank would raise interest rates.

Question 27 *The mean was 5.02, the lowest for section B. The standard deviation was 2.33.*

This question focused on Australia's foreign debt and its implications for the balance of payments. This area of the syllabus has always proved difficult for students. Most students were able to answer the first part of part (a). The second part however proved a stumbling block – the majority of students got this wrong. Looking at the graph, public foreign debt was approximately one third of total foreign debt. It is apparent that many students do not know how to calculate simple percentages from a graph.

Part (b) was answered well, with most students being able to correctly describe three costs and/or benefits associated with foreign debt.

Part (c) required a good understanding of the link between the current account deficit and the level of foreign debt. The Australian economy traditionally runs a current account deficit (financial account surplus) which has been usually funded through increased borrowing from overseas which adds to the stock of foreign debt. In times of strong economic growth, foreign investment flows into the economy, increasing the financial account surplus. At the same time, increased spending on imports (higher incomes and investment) boosts the current account deficit. Since 1980/81, the trend in Australia's foreign debt has been rising, from around 8 per cent of GDP to close to 50 per cent. Rising levels of foreign debt can have important implications for the current account. Foreign debt must be serviced in terms of interest payments which feed back into the current account through the incomes section. The other main trend to recognise is that most of Australia's foreign debt (> 97%) is private debt – public foreign debt has, over this period, been reduced to almost zero.

Question 28 *The mean was 5.53, the highest for section B. The standard deviation was 2.06.*

I personally thought that this question was an excellent question and it performed well. Part (a) worked well testing students' understanding of both the unemployment rate and the participation rate. Although some students failed to recognise in the second part that a different year was selected. I think the examiners should have kept the same year for both parts.

Part (b) was also answered well. Most students were able to link the peak in unemployment in 1992/93 to the recession of 1990/91. Since then, continued economic growth has steadily reduced the level of unemployment. Productivity growth has also been strong and labour market reforms have also contributed to strong employment growth.

The key to part (c) was to recognise that Australia was at or below its natural rate of unemployment. Australia's unemployment rate had fallen to 4.8%. This was the lowest level in over 30 years. Therefore it would be unlikely for the downward trend to continue. Continued growth in the economy is more likely to result in higher wage and price inflation rather than further falls in unemployment.

Section C (Extended Writing)

Question 29 (Selected by 1948 candidates (75%) - mean 7.75; standard deviation 3.18)

This question was the only topical question that was asked in Section C and was also one of the two most popular questions. It indicates that students do prefer this style of question and the examining panel should note this when setting the 2007 paper. Part (a) was generally well answered. Markers were looking for students to discuss at least three inflationary forces at work in the Australian economy. Part (b) proved to be more difficult with the mean mark of just 3.8/8. Students were required to discuss the benefits of maintaining a low rate of inflation. Alternatively, students could point out the costs of high inflation in terms of increased uncertainty, adverse effects on investment, economic growth, resource allocation and international competitiveness.

Question 30 (Selected by 1975 candidates (77%) - mean 8.52; standard deviation 2.91)

This was the most popular question and it was also the question recording the highest mean mark. Most students were able to identify that the hypothetical economy was in a downturn or contractionary phase of the business cycle, with a low rate of economic growth and a relatively high rate of unemployment. The appropriate policies to implement would be expansionary fiscal and monetary policy to boost the level of aggregate demand to stimulate production and employment growth. Microeconomic reform policies could also be used, but these are more long-term policies. While most students discussed these policies many failed to evaluate them, that is, to point out the strengths and weaknesses of using fiscal and monetary policy in this particular scenario.

Question 31 (Selected by 684 candidates (26%) - mean 8.02; standard deviation 3.32)

This was the least popular question in Section C. It does require students to demonstrate a fairly detailed and specific knowledge of foreign investment, which would account for its unpopularity. Many markers did comment that the mark allocation did not seem appropriate for this question, with 7 marks awarded for describing the different types of foreign investment. Students were expected to discuss both direct and portfolio investment and provide examples of each. The marking key for part (a) is fairly brief for an allocation of 7 marks. The mean mark for part (a) was 4/7 while the mean for part (b) was 4.1/8. Part (b) was more discriminatory, requiring students to explain the effects of these different types of investment on economic growth. Many students simply repeated some of the points from part (a) or listed strengths and weaknesses rather than directly answer the question.

Question 32 (Selected by 1243 candidates (48%) - mean 7.55; standard deviation 2.97)

This question recorded a relatively low mean mark similar to question 33. This is surprising, given that this is a very 'textbook' style question and is a fundamental part of the macroeconomics syllabus. In part (a) most students could define the MPC and the multiplier, and explain the link between the two (e.g. an increase in the MPC would increase the value of the multiplier). Many students, however, did not provide the correct diagram showing an increase in the slope of the consumption function, but rather used a diagram showing a shift of the consumption function. Part (b) also required students to use a diagram of the Keynesian expenditure model to show the effect of a change in private investment on the equilibrium level of income. For an allocation of 10 marks students should be able to provide a detailed explanation of how the multiplier works using a numerical example. Students should also recognise that the multiplier effect on output depends on the position of the economy in the business cycle. When the economy is in a contraction (low GDP, high unemployment), then an increase in private investment expenditure will have a full multiplier effect on the level of output. If the economy is close to full employment, then an increase in expenditure will have little effect on output but will instead cause the price level to rise. This last point was not mentioned by the vast majority of students and yet it should be understood by the best students.

Question 33 (Selected by 1781 candidates (69%) - mean 7.46; standard deviation 2.83)

This question was the third most popular question but it received the lowest mean mark in Section C. Many students were able to discuss the benefits of trade to the Australian economy, although many answers tended to just focus on the benefits of exports. Trade refers to both exports and imports – imports are just as beneficial as exports. Markers were looking for students to use an appropriate model to show the benefits of trade. Students could have used a comparative advantage example, incorporating a PPF model – for example, they could have used the example provided in question 10 of Section A. A simpler model that students could use to show the gains from trade is the demand/supply model showing the world price relative to the domestic price (for example, see *Parry & Kemp, Exploring Macroeconomics 7th ed.* p. 91-95). The demand/supply model is an excellent and effective way to clearly show how the economy benefits from both exports and imports and it provides a good lead in to the analysis of tariffs and protection. Teachers should be encouraged to teach this method to students in the international economics section of the syllabus. Even though this question did not specifically ask for a model, students are expected to use models in economics to justify their answers.

ISSUES FOR THE SYLLABUS COMMITTEE TO CONSIDER

Nil.

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January 2007

2006 Examining Panel

Chief Examiner: Dr Paul Crompton

Deputy: Ms Anne Garnett

Third Member: Ms Theresa Gibson

Chief Marker: Mr Steven Kemp

APPENDIX MARKING GUIDE

Multiple Choice

1. B
2. D
3. B
4. D
5. A
6. A
7. D
8. B
9. C
10. C
11. B
12. D
13. A
14. A
15. B
16. B
17. D
18. C
19. B
20. D
21. A
22. D
23. D
24. D
25. A

SECTION B

26.

- (a) (i) Government revenues (T) exceed government expenditures (G) or $T > G$ **(1 mark)**
(ii) Repay government debt; invest in infrastructure; funding of tax cuts **(1 mark)**
- (b) One mark for each factor: **(3 marks)**
- Strong economic growth (mining boom) has increased income and GST revenues
 - Government sale of assets has reduced government debt and lowered interest payments
 - Record low levels of unemployment; fall in welfare payments

A good answer to the first point can earn 2 marks (because this is the key point), the final mark for one of the last two points.

- (c) Surplus budgets are expected when the economy is in a long expansion, when the economy is close to its peak with low unemployment. Surplus budgets help to reduce inflationary pressures in the economy which helps to sustain the expansion.
Mr Costello may want to keep the surplus in order to rebalance the economy away from consumption towards business investment and export growth. Longer term infrastructure spending is a key objective.
Furthermore, recent surpluses boost national savings and help fund the cost of an ageing population via the Future Fund.
If private (household savings) are low, government surpluses can contribute significantly to national savings.
Budget surpluses also help to keep interest rates low. **(5 marks)**

27.

- (a) (i) 47 to 49% of GDP = \$376b to \$392b (must indicate billions) **(1 mark)**
(ii) 30 to 38 per cent **(1 mark)**
- (b) One mark for each factor: **(3 marks)**
- Debt servicing is made more difficult by a downturn in terms of trade
 - Interest payments cause a money flow overseas, reduces living standards
 - Downgrading of Australia's credit rating
 - Foreign debt can be used to boost the productive capacity of Australia
 - Allows high consumption and investment rates
- (c) Implications
- Financial inflows create annual surpluses on the Capital + Financial Account
 - This has coincided with large CADs
 - Rising foreign debt levels increase the CAD via income transfers

Additional marks for comments about future implications of a continuation of this trend. **(5 marks)**

- 28.
- (a) (i) $514/10533 = 4.88$ per cent. (1 mark)
(ii) $9757/15375 = 63.46$ per cent (1 mark)
- (b) Unemployment peaked in 1992/93 following the recession of 1990/91.
Firms were slow in re-employing labour resulting in a slow and gradual fall in the number of unemployed.
Strong economic and productivity growth since 1992/93 created jobs and reduced the number of unemployed.
Effective labour market programs have reduced the unemployment rate.
Mining and housing booms have pushed unemployment down. (3 marks)
- (c) No. Australia is currently at (or below) the natural rate of unemployment. (2 marks)
- As a result, the number of unemployed persons is unlikely to continue to fall in the coming years (even if Australian economic growth continues at current high levels).
Economic growth is likely to slow in 2007 as interest rates rise. (5 marks)

SECTION C

29. Inflationary forces in 2005/06:
Must discuss at least 3 factors for 7 marks.
- International factors**
Rise in world oil prices to record levels.
Booming world commodity prices.
- Domestic factors**
Tight labour markets in many industries.
Consumer spending and the housing market were fueling demand side pressures. (7 marks)
- Must discuss at least 4 factors for 8 marks*
Basically a discussion of the costs of inflation / the benefits of low inflation
A low inflation rate enables economic decisions without having to account for higher and uncertain price levels in the future.
Creates a more certain and stable macroeconomic environment; more investment and growth.
- Improves resources allocation in the economy.
Promotes saving *ceteris paribus*. (8 marks)
30. Students should start with a description of the state of the economy, ie, deflationary gap, economy in slump – low growth, high unemployment (2/3 marks)
The multiplier process should be mentioned at some stage. The multiplier effect could be weak during a recession. Should use a diagram to illustrate FP and MP.
- Expansionary monetary policy (5 marks)*
Reduce interest rates through a reduction in the cash rate.
Strengths:
It is a flexible policy tool.
Can be implemented quickly.
Policy changes are highly visible
- Weaknesses:
Effects can take time.
Has an indirect effect on aggregate expenditure
During a downturn, poor expectations may prevent households and firms from increasing their spending.

Expansionary fiscal policy (5 marks)

Increase G or decrease T

Strengths:

Has a direct impact on aggregate expenditure.

Weaknesses:

Implementation lags exist.

Microeconomic reform (2/3 marks)

More of a long term solution to such problems.

Can make the economy more flexible and able to adapt to changing economic circumstances.

Can boost job creation and lower the natural rate of unemployment.

(15 marks)

31.

- (a) A definition and examples of each type of investment is required.

Direct investment: Greater than 10 per cent ownership

Portfolio investment: Purchase of financial securities

(7 marks)

- (b) Note: common mistake by students is to confuse foreign investment with ordinary investment (I)

Direct investment

Will lead to a boost economic growth by increasing the productive capacity of the economy.

(Arguably the most beneficial)

Can improve technology transfer rates.

Improves productivity and competitiveness

Portfolio investment

Can also boost growth through the foreign purchase of shares or bonds that funds either private sector or government investment.

Increases foreign debt and requires debt servicing, which can make future borrowing more costly.

4 marks for the fact that both investments will boost growth

4 marks for differences in the effects of each.

(8 marks)

32.

- (a) An increase in the MPC, for example, will increase the value of the multiplier and boost the level of economic activity. The AE function becomes steeper. Good students should use the multiplier formula as part of the answer.

Many students will simply shift the AE line upwards which is incorrect

(5 marks)

- (b) A increase in private investment expenditure would shift the AE line upwards, triggering a multiplier effect which ultimately increases the level of equilibrium output. A diagram is required.

(6 marks)

Good students should discuss the relative position of the economy in the business cycle e.g.

position on AS curve

(2 marks)

Numerical example

(2 marks)

33. Allows a country to specialize according to its comparative advantage.
Best answers should include a model to show benefits e.g. PPF or D & S showing gains from exports & imports *(5/6 marks)*

Elaboration of the benefits:

- Enables firms to increase their market and benefit from economies of scale.
- Exposure to international competition boosts productivity
- Essential inputs can be accessed.
- Australian resources can be traded on world markets.
- Consumers benefit through greater choice.
- Higher real income levels

(9/10 marks)