

UNIVERSITY OF LONDON
IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE

EXAMINATIONS 2004

MEng Honours Degrees in Computing Part IV
for Internal Students of the Imperial College of Science, Technology and Medicine

*This paper is also taken for the relevant examinations for the
Associateship of the City and Guilds of London Institute*

PAPER C442

MANAGEMENT - ECONOMICS AND LAW

Friday 30 April 2004, 10:00
Duration: 120 minutes

Answer THREE questions

Paper contains 4 questions
Calculators not required

Section A (*Use a separate answer book for this Section*)

- 1 a Explain what is meant by *Gross Domestic Product* (GDP).

Briefly discuss the main items to be considered when GDP is determined using the *expenditure* approach.

- b A recent article discussing the Chinese economy expressed concern that, with GDP growing by 9% over the past year and with investment expenditure growing by 32% over that period, there was a possibility that the economy may be overheating.

- i) Explain what is meant by an economy *overheating*.

Discuss the effects that overheating may have on:

- the rate of inflation experienced by the economy
- the level of investment in the economy
- the overseas trade position of the economy

- ii) The article suggests that the Chinese government (which operates a fixed exchange rate) should revalue its currency.

Explain what is meant by a *revaluation* of the currency.

Discuss why this measure may be expected to alleviate some of the problems associated with an overheated economy.

- iii) The Chinese Central Bank increased the reserve requirements ratio in September 2003.

Explain what is meant by *reserve requirements*.

Discuss the effect this measure may be expected to have on investment expenditure.

The two parts carry, respectively, 25%, and 75% of the marks.

- 2 a Discuss the items that typically appear in the *current* and *financial* accounts of the balance of payments.
- b Distinguish between *fixed* and *floating* exchange rates and discuss the major reasons why fluctuations occur in the value of the country's currency.
- c Distinguish clearly between *Demand-Pull* and *Expectational* inflation.

 If wage rates in a country always rise in line with inflation, discuss why the government of that country is still likely to give priority to reducing the rate of inflation.

- d Discuss the effectiveness of using interest rates as a means of achieving both stability of the country's exchange rates and control over inflation.

The four parts carry, respectively, 25%, 30%, 25% and 20% of the marks.

Section B (Use a separate answer book for this Section)

- 3 Adam, a freelance computer programmer, participates in a fantasy football league in which he is required to 'select' real football players and place them on 'his' team. He has the opportunity to 'trade' his players during the course of the season. He pays £250 to participate and the top prize is £15,000. To assist him in the selection and maintenance of his team, he decides to purchase the 'Dream Team' computer program produced by Marvello Products plc. Marvello Products plc has advertised the program widely in the following terms:

'Dream Team is the program to use to select your fantasy football team. Allow our experts to select your team – and to keep you up-dated throughout the year with daily e-mails of information to allow you to make the best trades throughout the course of the year. We guarantee success – if, after following our installation instructions and daily advice, you are unable to finish in the top ten of your fantasy league, we will refund the participation fee paid by you to join your league'

Adam purchases the program over the internet from Nonentity Products plc; he both pays for the program and downloads the program over the internet. Adam follows the installation instructions and advice. He selects his team following this advice and follows the 'tips' and information sent to him daily by e-mail. Unfortunately, Marvello Products plc had used outdated information in compiling the initial team selection advice and were not diligent in compiling the material placed in their daily e-mails. Indeed, most of the material was completely useless. Adam's team is a hopeless flop and, at the end of the season, he finished last in his league.

He contemplates this situation as he prepares a large program for an important client. Unfortunately, Transnat Gas Co. workmen outside his office drill through the electrical cables to his house and he loses his supply of electricity. As a result, his computer crashes and he permanently loses all the material he has been working on. In addition, it takes over a week for the electricity to be supplied, during which time Adam is unable to work on this job or any other.

Advise Adam as to any rights and remedies he may have. To what extent, if any, would your advice differ if Nonentity Products plc had posted a cd-rom containing the 'Dream Team' program to Adam?

- 4 Zapp is an internet bank. You are a manager with Zapp. They have experienced the following problems and ask you to comment on any legal aspects which may arise from these problems.
- a Zapp employed Beth as a programmer for four years. She has recently left Zapp and is now working with Charles, a freelance IT consultant, who is currently contracted to work at Zapp four days a week. Beth and Charles have developed a computer program, 'Sort-it', which provides a highly efficient method for internet banks to order their customers' accounts and provide the necessary on-line privacy and security for their customers. 'Sort-it' possesses great functional similarity to 'Bodge-it' the program used by Zapp.
 - b Zapp employ David as a data processor. David is very interested in writing an account of the lives of the rich and famous. For the last month, he has been asking Elizabeth, a Zapp account manager, for the banking details of some of Zapp's richest clients to determine something of the lifestyles of the rich and famous. Elizabeth, who is authorised to access such details, has been providing David with the information he has requested.
 - c Zapp also employs Fred. He is angry with Gordon, his supervisor. Fred gives Gordon a floppy disk with an interesting card game on it. It also contains a virus which, at the end of the game, causes the sentence 'Gordon is a meanie' to run across the bottom of the computer screen. When Gordon began to play the game he so enjoyed it that he sent a copy of the game to everyone at Zapp. All the computers at Zapp now display Fred's message, much to Gordon's discontent.

The three parts carry, respectively, 40%, 35% and 25% of the marks.