Subject A102
Economics
Foundation Technical Syllabus

For the 2016 Examinations

August 2015

Aim

The aim of the Economics subject is to provide a grounding in the fundamental concepts of economics as they affect the operation of insurance and other financial systems, both from the point of view of individuals and their requirements for financial security, and from the point of view of financial institutions and their ability to provide products that meet customer needs. It will also provide a sufficient understanding of macroeconomics to enable the future actuary to interpret the economic environment and to make informed judgements as to suitable assumptions to make regarding future inflation, returns on investment, stock market behaviour, exchange rates and economic growth.

Links to other subjects

Subjects A205 (CT8) — Financial Economics, A301 (CA1) — Actuarial Risk Management and F105 — Finance and Investment Principles develop the material introduced in this subject.

Other Fellowship Principles subjects and all the Fellowship Application subjects require the use of economic judgement.

Objectives

On the successful completion of this subject the candidate will be able to:

(i) Discuss the interaction between supply and demand in the provision of a product and the way in which equilibrium market prices are determined.

1. Describe and discuss the scope of economics in terms of the problems of the allocation of scarce resources.

2. Discuss the functioning of free market and mixed economies.

3. Sketch supply and demand curves.

4. Describe and discuss how, in a free market, supply and demand for a good are equated by the equilibrium price.

5. Explain the meaning of the terms — normal good, inferior good, luxury good, necessity good and Giffen good.

6. Explain and discuss the meaning of the terms — complementary goods and substitute goods.

7. Explain and discuss the reasons for movements along, and shifts in, supply and demand curves.

8. Explain and discuss how controls on prices or subsidies can affect the levels of supply and demand.

9. Explain and discuss how controls on supply affect prices.

(ii) Define elasticity of demand and supply and discuss the effects on a market of different levels of elasticity.

1. Define:

   - price elasticity of demand
   - price elasticity of supply
   - cross price elasticity of demand
   - income elasticity of demand

2. Describe and discuss the implications of:

   - elastic demand
   - unit elasticity
   - inelastic demand

3. Calculate the numerical value of elasticities from given data.

4. Discuss the factors which might give rise to different levels of elasticity.

(iii) Describe and discuss the application of utility theory to economic and financial problems.

1. Explain the meaning of the term "utility function".

2. Explain the axioms underlying utility theory and the expected utility theorem.

3. Explain how the following economic characteristics of consumers and investors can be expressed mathematically in a utility function:

   - non-satiation
   - risk aversion, risk neutrality and risk seeking
   - declining or increasing absolute and relative risk aversion

4. Discuss the economic properties of commonly used utility functions.

5. Discuss how a utility function may depend on current wealth and discuss state dependent utility functions.

6. Describe and discuss how changes in consumer choices can be expressed in terms of income and substitution effects.

7. Explain the concept of utility maximisation and hence explain the traditional theory of consumer choice.

8. Perform calculations using commonly used utility functions to compare investment opportunities.

9. State conditions for absolute dominance and for first and second-order dominance and discuss their relationships with utility theory.
10. Discuss the aspects of investor behaviour that might not be explained easily using utility theory.

11. Describe how the adverse financial impact of uncertain future events may be reduced by a system of insurance.

12. Analyse simple insurance problems in terms of utility theory.

(iv) Describe how profit maximising firms make short run and long run production choices.

1. Describe opportunity cost.

2. Describe normal profit and supernormal profit.

3. Define marginal cost.

4. Define marginal revenue.

5. Explain why marginal revenue and marginal cost change with differing levels of output.

6. Distinguish between fixed and variable factors of production.

7. Describe how economies and diseconomies of scale may arise.

8. Explain the marginal product of labour and diminishing marginal productivity.

9. Distinguish between short run and long run effects.

(v) Describe what is meant by different sorts of competition, or lack of it, and discuss the practical effect on supply and demand.

1. Describe the conditions assumed in a perfect market.

2. Describe and discuss the features of perfect competition.

3. Describe and discuss the features of monopoly.

4. Describe the features of oligopoly.

5. Describe the features of monopolistic competition.

6. Compare and contrast different market structures.

(vi) Use knowledge of the following microeconomic principles to increase his/her understanding of the markets in which we operate, the regulatory issues and the ramification of strategic decisions:

1. The competitive firm, the competitive industry in the long run, long run costs, supply profits, constant/decreasing-cost industries, and equilibrium

2. Collusion, game theory, the prisoner's dilemma, and the breakdown of cartels

3. Consumers and producers surplus economics.

(vii) Describe and discuss the structure of the public sector finances of an industrialised economy.

1. Describe and discuss the differences between direct and indirect taxes.

2. Describe and discuss the differences between progressive and regressive systems of taxation.

3. Describe and discuss the main classes of revenue and expenditure of the governments of industrialised economies.

4. Describe the terms Public Sector Net Cash Requirement, Public Sector Debt Repayment and National Debt.

(viii) Define what is meant by GDP, GNP and Net National Product, show how these concepts may be useful in describing the economy and in making comparisons between countries, and discuss their limitations.

1. State the major factors which have to be taken into account in the management of a country's economy.

2. Explain the circular flow of income and the equivalence of national income, expenditure and output.

3. Explain the difference between basic costs and market prices.

4. Explain the relationship between savings and investment in the economy.

5. Describe the constituents of Gross Domestic Product, Gross National Income and Gross Value Added at Basic Prices.

6. Discuss the difficulties which might be encountered in placing a value on measures of national income.

(ix) Describe how the propensity to save or to consume by the private sector or the corporate sector affects the economy.

1. Define the marginal propensity to consume and the marginal propensity to save.

2. Explain how injections into the economy may tend to raise the equilibrium level of national income.

3. Explain the concepts of the "multiplier" and the "accelerator".

4. Draw and interpret IS and LM curves.

5. Draw and interpret aggregate demand and aggregate supply (including vertical aggregate supply) diagrams.

(x) Describe and discuss the impact of fiscal and monetary policy and other forms of government intervention on different aspects of the economy, and in particular on financial markets.

1. Discuss the effects of government fiscal policy on the economy.

2. Explain how the government finances the Public Sector Net Cash Requirement.

3. Explain why the government will seek to finance a Public Sector Net Cash Requirement by the sale of government securities.

4. Describe and discuss the likely effects on short term and long term interest rates of public sector surpluses or deficits.

5. Describe the constituents of narrow and wider measures of money supply.

6. Describe and discuss how credit creation can take place through the banking system.

7. Describe why the government may seek to maintain control over the growth in monetary aggregates.

8. Describe and discuss the actions that the government might take to maintain control over the growth in monetary aggregates.

9. Describe and discuss the likely effects on short term and long term interest rates of actions that the government might take in seeking to control the growth of the monetary aggregates.

(xi) Discuss the role of exchange rates and international trade in the economy and the meaning of the term balance of payments.

1. Discuss the importance of international trade.

2. Explain the terms "absolute advantage" and "comparative advantage".

3. Explain what is meant by the terms of trade.

4. Describe the constituents of the balance of payments.

5. Explain how the level of exchange rates may affect the volume of exports and imports.

6. Discuss the measures which might be taken by government to reduce an adverse trade balance.

7. Explain the Purchasing Power Parity theory of exchange rates.

8. Discuss the theoretical relationships between real and nominal interest rates in different countries and why these interest rates may not hold in practice.

9. Describe the advantages and disadvantages of fixed and floating exchange rates.

10. Explain how the level of exchange rates interacts with the level of short-term interest rates.

(xii) Describe the major factors affecting the rate of inflation, the level of interest rates, the exchange rate, the level of unemployment, and the rate of economic growth in the economy of an industrialised country.

1. Describe and discuss the principal economic statistics.

2. Define the following types of unemployment:

   - voluntary
   - involuntary
   - natural
   - demand-deficient
   - classical
   - structural
   - technological
   - seasonal
   - frictional
   - regional

3. Discuss the factors which might cause unemployment.

4. Distinguish between cost-push and demand-pull inflation.

5. Discuss how the level of money supply, the level of the exchange rate and the level of aggregate demand may affect the level of prices in the economy.

6. Describe why government seeks to control inflation.

7. Describe and discuss the Phillips' Curve.

8. Discuss the methods by which government might seek to control inflation.

9. Describe the factors which may lead to growth in economic activity.

10. Contrast the Monetarist and Keynesian approaches to government economic policy.

End of Syllabus