



**UNIVERSITI KUALA LUMPUR
BUSINESS SCHOOL**

**FINAL EXAMINATION
MARCH 2024 SEMESTER**

COURSE CODE : EGB20703
COURSE NAME : FINANCIAL ECONOMICS 1
PROGRAMME NAME : BACHELOR OF SCIENCE (HONS) IN ANALYTICAL ECONOMICS
DATE : 4 JULY 2024
TIME : 2.00 PM – 5.00 PM
DURATION : 3 HOURS

INSTRUCTIONS TO CANDIDATES

1. Please **CAREFULLY** read the instructions given in the question paper.
2. This question paper has information printed on both sides of the paper.
3. This question paper consists of **TWO (2)** sections; **Section A** and **Section B**.
4. Answer **ALL** questions from **Section A** and **Section B**.
5. Please write your answers on the answer booklet provided.
6. All questions must be answered in **English** (any other language is not allowed).
7. This question paper must not be removed from the examination hall.

THERE ARE SIX (6) PAGES OF QUESTIONS, INCLUDING THIS PAGE.

SECTION A (Total: 35 marks)

INSTRUCTION: Answer ALL questions.

Please use the answer booklet provided.

Question 1

- (a) Explain the importance of studying the financial markets. (5 marks)
- (b) Define financial markets and list three (3) functions of the financial markets. (5 marks)

Question 2

- (a) Explain why we should study banking and financial institutions. (6 marks)
- (b) Explain how the primary market and the secondary market affects the economy. (9 marks)

Question 3

- a) Suzy is considering investing in new equipment. The cost of this equipment is \$45,000 and it will have a five-year life. The estimated cash flows are

Year	\$
1	8000
2	9000
3	12000
4	9500
5	9000

The firm currently has a return of 12%. Calculate the Net Present Value (NPV) of the investment and determine whether Suzy should consider this investment

(5 marks)

- b) Calculate the present value of the following payments.

i- \$1000 two years from now when the effective annual interest rate is 10%.

(1 mark)

ii- \$1000 two years from now when the bond equivalent yield is 10%.

(1 mark)

iii- \$1000 one-half year from now when the yield on a discount basis is 10%.

(1 mark)

iv- Based on your calculations, which of the above payments would you prefer?

(2 marks)

SECTION B (Total: 65 marks)**INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 4**

- a) As part of a promotion you are offered a car loan for \$30,000 at a YTM of 2% with payments made annually over 5 years.
- i- Find the annual fixed payment.
(2 marks)
 - ii- Identify how much would you save per year relative to taking out the same loan at a bank at 7%. Find how much would you save in present value terms.
(2 marks)

Instead of a promotion with a lower interest rate you are offered the car at a lower price but at 7%.

- iii- At what price are you better off buying the car at the higher yield?
(2 marks)

More realistically, the car loan for \$30,000 is quoted 2% (i.e. bond equivalent yield) interest with payments monthly over 5 years.

- iv- Find the monthly fixed payment.
(2 marks)
- v- Find how much would you save in present value terms relative to taking out the same loan at the bank's quoted rate of 7%.
(2 marks)

- b) An analyst anticipates the following returns from an asset:

Return	Probability
5%	65%
7%	25%
8%	10%

Calculate the expected value of the investment and the standard deviation.

(5 marks)

Question 5

- a) Suppose the following represents the historical returns for Microsoft.

Year	1	2	3	4	5
Historical Returns	10%	15%	-12%	20%	7%

- i- Determine the mean return for Microsoft.

(2 marks)

- ii- Find the standard deviation of returns for Microsoft.

(3 marks)

- b) Discuss the Walrasian System and its implications towards the General Equilibrium.

Explain whether the second asset is redundant.

(5 marks)

Question 6

- a) Suppose that there are four medical supply companies all racing to develop products and gain Food and Drug Association (FDA) approval for their products. Market forecasts suggest that large profits will be enjoyed by any company which gains FDA approval and takes its product to market. Investors in such company stand to gain \$100,000 on a \$20,000 investment. Assume that the probability for success for each company is 0.5. (a company will either gain FDA approval, or not, and that the FDA's decision for a company is independent of its decision on the other companies).

- i- If you invest 25% of your money in each company, determine all of the possible outcomes, the net payoff of each outcome and their probabilities.

(3 marks)

- ii- Find the expected return of the strategy.

(2 marks)

- iii- Determine the probability of earning more than the \$20,000 original investment.

(3 marks)

- iv- Identify the type of risk you are reducing by investing 25% of your money in each of the 4 companies.

(2 marks)

- b) Differentiate between a price level and price index.

(5 marks)

Question 7

- a) "The buyer of the call and the seller of the put both hope that the stock price will rise. Therefore, the two positions are identical." Justify whether the speaker is correct by illustrating with an appropriate diagram.. (10 marks)
- b) Determine the lower bound for the price of a four-month call option on a non-dividend paying stock when the stock price is \$28, the strike price is \$25, and the risk-free interest rate is 8% per annum. (5 marks)
- c) A one-month European put option on a non-dividend paying stock is currently selling for \$250. The stock price is \$47, the strike price is \$50, and the risk-free interest rate is 6% per annum. Explain the opportunities which is available for an arbitrageur. (10 marks)

END OF EXAMINATION PAPER