FINA1303 Introduction to Financial Markets
Mock Examination Questions

Part I: There are 30 multiple choice questions in this part. Please circle the best answer for each question.

Question 1

Which of the following items is consistent with the cash flow concept in finance?

I. The initial investment of a long-term asset that a company pays for its purchase.
II. The book value of a long-term asset that a company records in its financial statements.
III. The proceeds from the sale of a long-term asset that a company receives.

A. III only
B. I and II only
C. I and III only
D. I, II and III

Explanation

I is a cash outflow and III is a cash inflow. The book value of a long-term asset is an accounting concept, which may not be consistent with the cash flow concept in finance. Hence, C is the best answer.

Question 2

Mary borrows a one-year loan of $50,000 that she has to pay the principal plus interest in year 1. The annual flat rate is quoted as 12%, but actually it is compounded on a monthly basis. What will be the interest payment that Mary has to make in a year's time?

A. $6,000
B. $6,275.44
C. $6,341.25
D. $6,373.73

Explanation

Principal plus interest in a year's time = $\$50{,}000*(1+12\%/12)^{12} = \$56{,}341.25$

Interest payment = $56,341.25 - $50,000 = $6,341.25

C is the best answer.

Question 3

Which of the following is a systematic risk factor that affects the financial market as a whole?

I. The economic growth rate.
II. The inflation rate.
III. The quality of the management team of a company.
IV. The business nature of a company.

A. II only
B. I and II only
C. III and IV only
D. I, II, III and IV

Explanation

Both I and II are macroeconomic factors that affect all companies and securities, i.e. the financial market as a whole. Hence, they are systematic risk factors.
Both III and IV are firm-specific factors that affect a particular company and hence they are unsystematic factors.
The best answer is B.

Question 4

Borrowers are usually better informed about their credit standing than lenders. If lenders just charge an average interest rate on borrowers of different risk types, they may end up lending money mainly to high risk borrowers. This type of asymmetric information problem in the financial system is known as:

A. the moral hazard problem.
B. the risk sharing problem.
C. the transaction cost problem.
D. the adverse selection problem.

Explanation

This type of asymmetric information problem arises before a loan is made. It is known as the adverse selection problem. D is the best answer.

Question 5

Which of the following is a primary market activity in the financial system?

I. A company issues new shares to be bought by a selective group of investors.
II. Newly issued bonds are offered to the investors through a public offering.
III. The majority shareholder of a company sells his shares to the general public.

A. I only
B. I and II only
C. I and III only
D. II and III only

Explanation

A primary market is a market for trading newly issued securities. Hence, both I and II are primary market activities. III involves trading of already-issued securities and hence it is a secondary market activity. The best answer is B.

Question 6

Which of the following statements about a financial market is correct?

I. The maturity of a money market instrument is one year or less.
II. An exchange has a central market place for buyers and sellers to conduct trades.
III. Companies issue new securities in the secondary market.

A. I only
B. I and II only
C. I and III only
D. II and III only

Explanation

Both I and II are correct. Companies issue new securities in the primary market. Hence, III is not correct. The best answer is B.

Question 7

Which of the following is a statutory regulator in Hong Kong?

I. The Securities and Futures Commission
II. The Hong Kong Exchanges and Clearing Limited
III. The Office of the Commissioner of Insurance.
IV. The Mandatory Provident Fund Schemes Authority.

A. I and II only.
B. I, III and IV only.
C. II, III and IV only.
D. I, II, III and IV.

Explanation

The Hong Kong Exchanges and Clearing Limited is a self-regulatory body and the others are statutory regulators. The best answer is B.

Question 8

Which of the following regulators is responsible for monitoring the fund management sector in Hong Kong?

A. The Hong Kong Monetary Authority.
B. The Securities and Futures Commission.
C. The Mandatory Provident Fund Schemes Authority.
D. The Office of the Commissioner of Insurance.

Explanation

The Hong Kong Monetary Authority is responsible for monitoring the banking sector. The Mandatory Provident Fund Schemes Authority is responsible for monitoring the mandatory provident fund sector. The Office of the Commissioner of Insurance is responsible for monitoring the insurance sector. The Securities and Futures Commission is responsible for monitoring the securities and futures sector and the fund management sector. The best answer is B.

Question 9

When a central bank carries out an expansionary monetary policy by buying government securities in the open market, the money supply ______ and the interest rates ______.

A. increases ; rise
B. increases ; fall
C. decreases ; rise
D. decreases ; fall

Explanation

When a central bank carries out an expansionary monetary policy by buying more government securities in the open market, the money supply increases and the interest rates fall. The best answer is B.

Question 10

Which of the following is a characteristic of the money market?

I. Foreign currencies are traded in the money market.
II. The maturity of a money market instrument is one year or less.
III. Money market instruments are actively traded in the secondary market.
IV. Money market instruments involve relative low default risk.

A. I and II only
B. III and IV only
C. II, III and IV only
D. I, II, III and IV

Explanation

Foreign currencies are traded in the foreign exchange market while mainly short-term debt securities are traded in the money market. Hence, I is incorrect. II, III and IV are all characteristics of the money market. The best answer is C.

Question 11

An investor is considering the purchase of a 182-day euro-denominated money market instrument with a face value of €1,000,000. Its price is quoted at 99 and the day count convention is ACT/360. Given that there are 365 days in the year, what is the annualized discount rate for this money market instrument?

A. 1.00%
B. 1.98%
C. 2.01%
D. 2.04%

Explanation

discounted price = €1,000,000*99% = €990,000

discount rate = (€1,000,000-€990,000)/ €1,000,000 * 360/182 = 1.98%

The best answer is B.

Question 12

A large commercial bank, acting as a dealer, quotes HIBID and HIBOR for a 3-month interbank loan as 0.34% and 0.39% respectively. The day count convention is ACT/365 and the number of calendar days in three months is 90 days. If another commercial bank wants to borrow $20 million from this dealer, which of the following statements is correct with respect to this transaction?

I. The interest payment is $16,767.12.
II. The interest payment is $19,232.88.
III. The interbank loan is traded on an interest to maturity basis.
IV. The interbank loan is traded on a discount basis.

A. I and III only
B. I and IV only
C. II and III only
D. II and IV only

Explanation

Interbank loans are traded on an interest to maturity basis. Hence, IV is not correct.
The interest rate for the interbank loan is HIBOR (0.39%).
Interest payment = $20,000,000*0.39%*90/365 = $19,232.88.
Hence, I is not correct.
The best answer is C.

Question 13

An investor bought a 10-year floating rate note at a coupon rate equal to the three-month HIBOR plus 0.25%. The three-month HIBOR three months ago was 1% while the current three-month HIBOR is 1.5%. What is the applicable coupon rate for determining the coupon payment for the current period?

A. 1.00%
B. 1.25%
C. 1.50%
D. 1.75%

Explanation

applicable coupon rate = 1% + 0.25% = 1.25%
B is the best answer.

Question 14

Which of the following statements is correct with respect to the common stocks and bonds issued by a company?

I. Both interest expenses and dividends paid by a company are tax deductible.
II. The bondholders are a company's creditors while common stockholders are its owners.
III. The bondholders of a company have higher priority than its stockholders over the proceeds from sale of assets upon its liquidation.
IV. A company has contractual obligations to provide regular cash flows to both its bondholders and stockholders.

A. I and III only
B. I and IV only
C. II and III only
D. II and IV only

Explanation

Interest expenses are tax-deductible while dividends are not. Hence, I is not correct. The company has contractual obligations to provide regular cash flows to the bondholders, but the dividends to the stockholders are at the discretion of the company. Hence, IV is not correct. The best answer is C.

Question 15

Which of the following factors is likely to lead to a higher yield for a bond?

I. The credit standing of the bond issuer is deteriorating.
II. The bond includes an embedded option granted to the bondholders.
III. The maturity of the bond increases.

A. I and II only
B. I and III only
C. II and III only
D. I, II and III

Explanation

When a bond includes an embedded option granted to the bondholders, the bondholders are willing to pay a higher bond price resulting in a lower yield. The best answer is B.

Question 16

Which of the following statements is correct with respect to derivatives?

I. The buyer of a futures contract has the right, but not the obligation, to decide whether to exercise it while the seller of the futures contract has to fulfill the obligations once it is exercised.
II. The buyer of an option contract has the right, but not the obligation, to decide whether to exercise it while the seller of the option contract has to fulfill the obligations once it is exercised.
III. The buyer of a futures contract has to pay a premium to the seller at the inception of the contract.
IV. The buyer of an option contract has to pay a premium to the seller at the inception of the contract.

A. I and III only
B. I and IV only
C. II and III only
D. II and IV only

Explanation

Both the buyer and seller of a futures contract have the obligations to execute the contract as specified upon maturity. Hence, I is not correct. No money changes hand between the buyer and seller of a futures contract at the inception of the contract. Hence, III is not correct. The best answer is D.

Question 17

An investor sold a Hang Seng Index (HSI) futures contract at the market close of 22,000 through a brokerage house yesterday. The dollar multiplier is $50 per index point. The initial margin and maintenance margin have been and are still set at $72,000 and $57,600 respectively. Today, the settlement price for the HSI futures contract is 22,300. Which of the following statements is correct?

A. The investor has earned a profit of $15,000 from his position in the HSI futures contract.
B. The brokerage house will issue a margin call to the client.
C. The investor holds a long position in the HSI futures contract.
D. After being adjusted for today's profit and loss, the margin account balance of the client is $58,000.

Explanation

The investor has incurred a loss of (22,000 – 22,300)*$50 = -$15,000 (loss). Hence, A is not correct. When an investor sells the HSI contracts, he holds a short position. Hence, C is not correct. The adjusted margin account balance is $72,000 - $15,000 = $57,000. Hence, D is not correct. As the adjusted margin account balance falls short of the maintenance margin level, the brokerage issue will issue a margin call to the client. The best answer is B.

Question 18

The strategy that an investor uses derivative products to reduce or eliminate an existing risk exposure faced by him is known as:

A. hedging.
B. speculation.
C. investment.
D. arbitrage.

Explanation

This is the definition of hedging. The best answer is A.

Question 19

Which of the following is a characteristic of preferred stocks?

I. Preferred stockholders have priority over creditors and common stockholders in receiving the proceeds from sale of assets upon liquidation.
II. Preferred stock issuers have mandatory obligations to provide dividends to their shareholders.
III. Preferred stockholders of a company receive fixed dividends even through the company performs very well.
IV. Preferred stockholders can generally vote in the annual general meetings of the issuing companies.

A. None of the above
B. III only
C. I and II only
D. I, III and IV only

Explanation

Preferred stockholders have priority over common stockholders, but not creditors, upon liquidation. Hence, I is not correct. The dividend announcements to preferred stockholders are at the discretion of the board of directors of the issuing companies. Hence, II is not correct. In general, preferred stockholders cannot vote in the annual general meetings. Hence IV is not correct. The best answer is B.

Question 20

A company does not have any significant assets or operations, but it maintains the listing status in Hong Kong. This company is usually known as:

A. a small-cap company.
B. a penny company.
C. a B share company.
D. a shell company.

Explanation

It is the definition of a shell company. The best answer is D.

Question 21

If the cum-dividend stock price and dividend per share of a company are $12.5 and $1.5 respectively, the net assets of the company will _____ because of the dividend payment and the ex-dividend price is expected to be ____ on the ex-dividend date.

A. increase; $11
B. decrease; $11
C. increase; $14
D. decrease; $14

Explanation

As the company pays dividends in cash, its net assets will decrease. The ex-dividend price is $11 = $12.5 - $1.5. B is the best answer.

Question 22

When the exchange rate of GBP/HKD rises, it means that GBP ______ against HKD. GBP is said to be the _____ currency.

A. appreciates; base
B. appreciates; quoted
C. depreciates; base

D. depreciates; quoted

Explanation

When the exchange rate of GBP/HKD rises, it means that GBP appreciates against HKD. GBP is said to be the base currency. The best answer is A.

Question 23

When the currency of country X depreciates against that of country Y, the imports from country X appear to be _____ to the residents of country Y and the imports from country Y appears to be ______ to the residents of country X.

A. cheaper; cheaper
B. cheaper; more expensive
C. more expensive; cheaper
D. more expensive; more expensive

Explanation

When the currency of country X depreciates against that of country Y, the imports from country X appear to be cheaper to the residents of country Y and the imports from country Y appears to be more expensive to the residents of country X. The best answer is B.

Question 24

If USD/JPY has gone up from 93.44 to 98.38, which of the following statements best describes the change in the exchange rate?

A. USD depreciates against JPY by 5.02%.
B. USD appreciates against JPY by 5.02%.
C. USD depreciates against JPY by 5.29%.
D. USD appreciates against JPY by 5.29%.

Explanation

USD appreciates against JPY by (98.38-93.44)/93.44 = 5.29%. The best answer is D.

Question 25

Which of the following is a traditional function of commercial banking?

I. To receive deposits from investors through bank accounts.
II. To help corporate clients to carry out mergers and acquisitions.

III. To act as the banker of last resort.
IV. To provide loans to individual and corporate clients.

A. I and IV only
B. I, II and IV only
C. I, III and IV only
D. I, II, III and IV

Explanation
Investment banking involves the facilitation of a corporate client to carry out mergers and acquisitions. Hence, II is not correct. A central bank usually acts as the banker of last resort. Hence, III is not correct. The best answer is A.

Question 26
Which of the following factor has been a main driver of commercial banking in the last three decades?

I. The volatilities of the exchange rates and interest rates in the financial markets have been increasing over time.
II. Deregulation of commercial banking occurred in 1980s.
III. The technology in telecommunications and computer has been advancing over time.
IV. Stricter regulation of commercial banking has emerged after the financial tsunami in 2008.

A. I, II and III only
B. I, III and IV only
C. II, III and IV only
D. I, II, III and IV

Explanation
All of the above have been the main drivers of commercial banking in the last three decades. The best answer is D.

Question 27
In Hong Kong, the system for settling interbank payments is known as:

A. the Delivery Versus Payment System.
B. the Continuous Net Settlement System.

C. the Real Time Gross Settlement System.
D. the Central Clearing and Settlement System.

Explanation
The intebank payment system is the Real Time Gross Settlement System. The best answer is C.

Question 28
Which of the following represents the bid-ask spread in the fee structure of a managed fund?

A. The switching fee.
B. The redemption fee.
C. The annual management fee.
D. The front-end fee.

Explanation
The front-end fee represents the bid-ask spread. The best answer is D.

Question 29
The _____ determines a managed fund's long-term mix of asset classes which are groups of securities with similar investment characteristics.

A. strategic asset allocation
B. investment objective
C. investment constraint
D. benchmark index

Explanation
The strategic asset allocation determines a managed fund's long-term mix of asset classes which are groups of securities with similar investment characteristics. The best answer is A.

Question 30
The market values of the assets and liabilities of a managed fund are $100 million and $40 million respectively. The fund has 10 million shares outstanding. What is the net asset value per share of the fund?

A. $4
B. $6

C. $10

D. cannot be determined with the information provided

Explanation

NAV per share = ($100 -$40)/10 = $6

The best answer is B.

Part II: There are 6 questions in this part. Please write your answers in the space provided for each question.

Question 31

(a) An insurance company decides to buy an Exchange Fund Bill issued by the Hong Kong Monetary Authority with a face value of $500,000 and a term to maturity of 85 days. The quoted discount rate on the Exchange Fund Bill is 3.75%. The day count convention is stated as A/365.

(i) What is the purchase price of the Exchange Fund Bill?

(ii) What is the discount size on the Exchange Fund Bill upon its maturity?

(iii) What is the effective annual yield on the Exchange Fund Bill?

(b) In London, a bank intends to borrow an overnight interbank loan of £50 million from another bank which gives the two-way quotes as 4%-4.25%. The day count convention is A/365. Calculate the maturity proceeds for the interbank loan.

Explanation

(a) (i) purchase price = $500,000*(1-3.75%*85/365) = $495,633.56

(ii) discount size = $500,000 - $495,633.56 = $4,366.44

(iii) effective annual yield = $(\$500{,}000/\$495{,}633.56)^{365/85} - 1 = 3.848\%$

(b) As the bank wants to borrow an interbank loan, the ask rate 4.25% is the relevant interbank rate.

maturity proceeds = £50,000,000*(1+4.25%*1/365) = £50,005,821.92

Question 32

(a) Consider a $1,000 par bond that has a 10% coupon rate and a 2-year maturity. If investors require a return of 8% on this bond and it pays interest semi-annually, calculate the bond price.

(b) What is the accrued interest? How does it affect the settlement price of a bond? Explain.

(c) What does it mean by the positive convexity of a bond? Explain.

Explanation

(a) The bond price is $\$50/(1+4\%) + \$50/(1+4\%)^2 + \$50/(1+4\%)^3 + \$1,050/(1+4\%)^4 =$ \$1,036.30.

(b) For transactions taking place on non-coupon payment dates, the buyer has to compensate the seller for the accrued fraction of the next coupon due. The amount of interest that the seller should receive is called the accrued interest. As the quoted price does not include accrued interest, the final settlement price is equal to the summation of the quoted price and the accrued interest.

(c) The effect of a 1% fall in interest rate on the bond price is different from that of a 1% rise in interest rate. In particular, the effect of a fall in interest rate is greater than that of a rise in interest rate. This asymmetric effect gives a convex shape to the bond price-interest rate curve. It is referred to as the positive convexity of a bond.

Question 33

State whether each of the following statements is true or false. If the statement is false, explain why.

(1) When an investor holds a long position in the underlying asset and a short position in the futures contract to hedge against the risk exposure of the underlying asset, it is called a long hedge.

(2) When an investor simultaneously buys an undervalued underlying asset and sells an overvalued derivative on the underlying asset with the objective to earn riskless profit from the mispricing, this is known as offsetting.

(3) The buyer of a forward rate agreement expects that the interest rate will go up so that he can lend money out at a high interest rate.

(4) If the underlying asset price is higher than the exercise price of a put option, the put option is said to be out-of-the money.

	answer
statement (1)	true or false?
	explanation (if applicable):
Statement (2)	true or false?
	explanation (if applicable):
Statement (3)	true or false?

	explanation (if applicable):
Statement (4)	true or false?
	explanation (if applicable):

Explanation

	answer
statement (1)	false (0.25 mark)
	When an investor holds a long position in the underlying asset and a short position in the futures contract to hedge against the risk exposure of the underlying asset, it is called a short hedge. (1.25 mark)
Statement (2)	false (0.25 mark)
	When an investor simultaneously buys an undervalued underlying asset and sells an overvalued derivative on the underlying asset with the objective to earn riskless profit from the mispricing, this is known as arbitrage. (1.25 mark)
Statement (3)	false (0.25 mark)
	The buyer of a forward rate agreement expects that the interest rate will go up so that he can restrict the interest rate at a specified level. (1.25 mark)
Statement (4)	true (0.5 mark)
	not applicable

Question 34

Two companies X and Y have the following borrowing needs and opportunities in the loan market:

	Company X	Company Y
Fixed rate	6.5%	5%
Floating rate	HIBOR + 1.5%	HIBOR + 0.5%
Want to borrow	fixed	floating
Loan principal	\$50 million	\$50 million

Suppose the two companies have borrowed the type of loans that they have the comparative advantage in the loan market. In addition, the two companies then arrange an interest rate swap in which Company X pays 5.8% to Company Y in exchange for HIBOR+1%. Fill in the blank for the following table.

Issues to consider	Fill in the blank in the following
Which company has the absolute advantage in borrowing in the loan market?	
Which company has the comparative advantage in borrowing a fixed rate loan in the loan market?	
What is the size of the benefit to be shared by the two parties in this arrangement?	
What is the net interest rate paid by Company X after taking into account the loan and the interest rate swap?	
What is the net benefit to Company X?	
What is the net interest rate paid by Company Y after taking into account the loan and the interest rate swap?	
What is the net benefit to Company Y?	

Explanation

Issues to consider	Fill in the blank in the following
Which company has the absolute advantage in borrowing in the loan market?	Company Y
Which company has the comparative advantage in borrowing a fixed rate loan in the loan market?	Company Y
What is the size of the benefit to be shared by the two parties in this arrangement?	interest rate differential for fixed rate loan = 6.5% - 5% = 1.5% interest rate differential for floating rate loan = (HIBO+1.5%) – (HIBOR+0.5%) = 1% size of benefit = 1.5%-1% = 0.5%
What is the net interest rate paid by Company X after taking into account the loan and the interest rate swap?	5.8% - (HIBOR+1%) + (HIBOR+1.5%) = 6.3%
What is the net benefit to Company X?	6.5% - 6.3% = 0.2%
What is the net interest rate paid by Company Y after taking into account the loan and the interest rate swap?	(HIBOR+1%) – 5.8% + 5% = HIBOR+0.2%
What is the net benefit to Company Y?	(HIBOR+0.5%) – (HIBOR+0.2%) =

	0.3%

Question 35

A foreign exchange dealer quotes the following exchange rates:
spot EUR/USD: 1.3363
spot USD/JPY: 92.69
3-month forward EUR/USD = 1.3423

Assume that there are 92 days in 3 months and the day count convention is ACT/360. What is the cross rate of EUR/JPY? State whether EUR trades at a premium or discount against USD for the 3-month forward. Calculate the annualized premium/discount for the 3-month forward. If the nominal interest rate in the US rises against that in Japan, what is the impact on the exchange rate of USD/JPY? Explain your answer.

Explanation

EUR/JPY = 1.3363*92.69 = 123.86

As the 3-month forward rate is higher than the spot rate, EUR trades at a premium against USD for the 3-month forward.

annualized premium = (1.3423-1.3363)/1.3363 * 360/92 = 1.76%

If the nominal interest rate in the US rises against that in Japan, international investors tend to pull money out of Japan and invest in the US. Given that the real interest rates are the same under the interest rate parity, USD will depreciate against JPY in order to induce international investors to keep investing in Japan.

Question 36

State three differences between an open-end fund and a closed-end fund.

Any three of the following: (2 marks each for the first two correct answers, 1 mark for the third correct answer)

	open-end fund	closed-end fund
Trading market	over-the-counter	exchange
Who provides the market?	fund management company	exchange
Where to buy the shares/units?	fund management company and its appointed brokers	exchange
Number of shares/units outstanding	variable	fixed
Any redemption?	yes	no
Pricing of shares/units	net asset value as bid price	depend on demand and

		supply conditions in market

- The End -