Hong Kong Securities and Investment Institute
香港證券及投資學會

PAST QUESTIONS AND ANSWERS (December 2006)

PAPER 9

DERIVATIVES

of

The Licensing Examination
for Securities and Futures Intermediaries

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Methodology of Developing Questions

Our Institute is committed to providing questions of the highest quality.

Our current examination structure has been benchmarked against those in both developed and emerging markets such as UK, US, Australia, Singapore, Malaysia and China. The syllabuses, study materials, training guides and questions were designed by international consultants specializing in financial education.

The Licensing Examination has been approved by the Academic and Accreditation Advisory Committee of the Securities and Futures Commission (SFC) as recognized industry qualification and local regulatory framework paper for meeting the competence requirements of the SFC.

External consultants are appointed to develop new questions according to specified criteria approved by our Examinations Committee. The aim of these criteria is to ensure that the candidates have thorough understanding of the manuals by testing them at different cognitive levels such as recall, comprehension, application, analysis and evaluation on predetermined weightings of each topic. The new questions are reviewed by reviewers who are market practitioners, legal and compliance professionals, and academics to ensure that the knowledge tested is covered in the study manuals, and that the standard of the questions is appropriate and consistent throughout.

To maintain their quality, the questions undergo frequent reviews and revisions internally which take into account, among others, the average correctness of the questions (i.e., the percentage of candidates in the examination who correctly answer the questions) and candidates' comments, if any, following each examination. In addition to the quality assurance being imposed on the questions, external assessors who are market practitioners, legal and compliance professionals, and academics, are engaged to conduct regular reviews. There are also periodic comprehensive reviews by external consultants on the manuals and questions.

The study manuals and their subsequent updates are the only source of materials for the setting of the questions, so that candidates need to study only those manuals and updates to prepare for the examinations.

It is estimated that the study manuals will require 6 to 11 hours of study time per topic, depending on which paper it is. Candidates may need to spend more or less time, depending on their work experience and background. They are advised to use the Learning Outcomes for each topic as a key to the way they study the materials in each topic, and unless explicitly stated, they could be tested on any aspect of the syllabus.

Please attempt ALL 40 questions in this question book.
All questions carry EQUAL MARKS.

<1>.
What is the break-even point at expiry of a short 12,000 Hang Seng Index (HSI) call option if the premium is 60 points?

A 11,940 points.
B 12,000 points.
C 12,060 points.
D 12,160 points.

<2>.
What are derivative warrants?

A Call options over shares to be issued by the underlying company at some time in the future.
B Either call or put options issued by a bank over existing shares.
C Either call or put options issued by the underlying company over existing shares.
D Similar to options but requiring physical delivery.

<3>.
What does the trader expect the market price to do if he/she has bought an at-the-money Mini-Hang Seng Index call option **AND** sold a Mini-Hang Seng Index futures contract?

A Remain stable.
B Rise.
C Fall.
D Move in either direction.

<4>.
An investor who will purchase a portfolio of stocks next month wishes to protect against an increase in stock values. Which of the following derivative strategies would provide the **GREATEST** hedge against this risk?

A Buy stock futures.
B Sell stock futures.
C Sell stock put options.
D Buy stock put options.

<5>.
A fund manager holds shares of a number of listed gold producing companies in his portfolio. The manager has reviewed market conditions and believes, whilst the performance of these companies will be satisfactory, the price of gold is very likely to fall in the near term. How could the fund manager **BEST** use derivatives to hedge this risk?

A Buy stock futures contracts of the specific gold producers.
B Sell gold futures contracts.
C Buy gold call options.
D Enter a commodity swap.

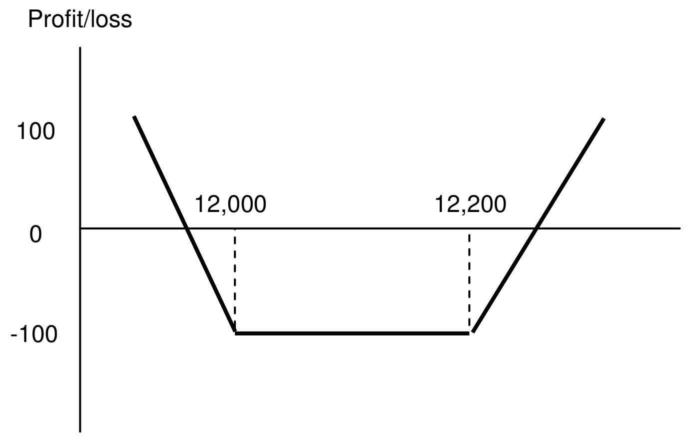
<6>.
An index arbitrageur identifies that Hang Seng Index (HSI) futures are trading at 25 points higher than the fair value. What trade should the manager implement? (Disregard transaction costs.)

A Buy shares.
B Sell shares and buy futures.
C Buy shares and sell futures.
D Sell futures.

<7>.
Which of the following statements describes a long straddle strategy?

A Buy a call option and a put option with the same strike price.
B Write a call option and a put option with the same strike price.
C Buy a call option with a higher strike price and a put option with a lower strike price.
D Write a call option with a higher strike price and a put option with a lower strike price.

<8>.



What is the name of the option strategy illustrated in the pay-off diagram pictured above?

A Long straddle.
B Short straddle.
C Long strangle.
D Short strangle.

<9>.
As the result of a predicted increase in short-term interest rates, a speculator has the view that stock market prices in Hong Kong will fall moderately over the next 30 days. Which of the following strategies will **BEST** fit this speculator's view?

A Buy Hang Seng Index (HSI) futures contract.
B Buy HSI bear spread.
C Buy 1-month HIBOR futures contract.
D Buy a HSI call option.

<10>.
When market volatility goes up, what happens to the premium of exchange-traded options?

A Call premiums increase and put premiums decrease.
B Call premiums decrease and put premiums increase.
C Call premiums decrease and put premiums decrease.
D Call premiums increase and put premiums increase.

<11>.
What is the **MAIN** difference between speculators and hedgers?

A Speculators take on more risk than hedgers do.
B Speculators trade more frequently than hedgers do.
C Speculators sell more derivative products than hedgers do.
D Speculators use leverage while hedgers do not.

<12>.
An investor has a long position on call option. The price of the option has risen significantly in the past few days. How may the investor **BEST** lock-in the profit on this long call option position?

I Sell futures contracts.
II Buy futures contracts.
III Buy a put option with the same strike and expiry date.
IV Sell a call option with the same strike and expiry date.

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

<13>.
The options trader of a large hedge fund identifies that Hang Seng Index (HSI) futures are trading at 150 points below fair value. Given that the HSI options are priced on the index and the trader obtains the following derivatives, what trades would allow the trader to profit with little or no risk of loss from this situation? Ignore transaction costs.

Current price of HSI futures is 10,980.
Current price of HSI 11,000 calls is 50 points premium.
Current price of HSI 11,000 puts is 50 points premium.

I Buy the HSI futures at 10,980.
II Buy the HSI 11,000 puts at 50 and sell the HSI 11,000 calls at 50.
III Buy the HSI futures at 10,980 and buy HSI 11,000 puts at 50.
IV Buy the HSI futures at 10,980, buy the HSI 11,000 puts at 50 and sell the HSI 11,000 calls at 50.

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

<14>.
What does a 7.000 EUR/HKD call option trading at 50 points entitle the buyer to do?

A Sell HKD and buy EUR at a rate of EUR/HKD7.000.
B Buy HKD and sell EUR at a rate of EUR/HKD7.000.
C Sell HKD and buy EUR at a rate of EUR/HKD6.950.
D Buy HKD and sell EUR at a rate of EUR/HKD7.050.

<15>.
Which option trading techniques would be **MOST APPROPRIATE** for an investor who holds the view that volatility will increase?

I Long straddle.
II Short put options.
III Long call options.
IV Short strangle.

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

<16>.
What market risk applies to derivatives?

A The risk that a counter-party will fail to meet its financial obligations.
B The risk that transactions cannot be settled due to breakdown of computer system.
C The risk that no buyers or sellers are available for an investor to exit a position.
D The risk that arises from movement in price as a result of changes in market conditions.

<17>.
Which of the following statements concerning options trading are **CORRECT**?

An investor can use options to:

I trade a bullish, bearish or neutral view.
II trade his/her view on the volatility of a particular share.
III eliminate all the risks of his/her portfolio.
IV gain leveraged effect on share price movements.

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

<18>.
Which of the following features of a futures contract is **NOT** defined in the standard specification set out by the futures exchange?

A Price.
B Settlement date.
C Quantity of underlying asset.
D Contract month.

<19>.
A large manufacturing company is planning to build a new factory and will borrow HKD10 million on a floating rate basis in three months' time. Which of the following derivatives will provide a suitable hedge against any unfavourable changes in interest rates over the next three months?

A Buy 3-year Exchange Fund Notes futures contracts.
B Sell 3-year Exchange Fund Notes futures contracts.
C Sell 3-month HIBOR futures contracts.
D Buy 3-month HIBOR futures contracts.

<20>.
Exchange-traded derivatives markets do **NOT** have which of the following characteristics?

A Centralised market place for trading.
B Clearing and settlement by a clearing house.
C Standardised products.
D Counter-party risk.

<21>.
A speculator has a short strangle on an index by selling 11,250 call at 20 points and selling 11,000 put at 15 points. What are the break-even points for this strategy?

A 10,965 and 11,285.
B 10,985 and 11,270.
C 11,000 and 11,250.
D 11,270 and 11,285.

<22>.
Which of the following features of futures contracts is negotiated between the buyer and seller?

A Contract value.
B Contract price.
C Settlement price.
D Spot market price.

<23>.
What option strategy should a speculator implement if he/she believes the recent volatility in USD/HKD exchange rate will decrease over the next few months?

A Short straddle.
B Long strangle.
C Long straddle.
D Long put options.

<24>.
Which of the following inputs is **NOT** needed in calculating the fair value of Hang Seng Index (HSI) futures contracts?

A Dividend yield.
B Interest rates.
C Time to expiry.
D Market volatility.

<25>.
Catco shares are currently trading at HKD65.00. Which of the following options is out-of-the-money?

A Long Catco 70.00 put trading at HKD3.00 premium.
B Long Catco 70.00 call trading at HKD5.00 premium.
C Short Catco 75.00 put trading at HKD8.00 premium.
D Short Catco 65.00 call trading at HKD1.00 premium.

<26>.
A client instructs his broker to purchase 20 September Hang Seng Index (HSI) futures contracts at no more than 11,000. What is this type of order called?

A Market order.
B Stop-loss order.
C Limit order.
D Spread order.

<27>.
In July, a fund manager holds a broad portfolio of Hong Kong stocks weighted to match the performance of the Hang Seng Index (HSI) which is currently trading at the level of 11,020. The portfolio is valued at HKD100 million. The fund manager believes the stock market will decline over the next four months. The fund manager wishes to hedge the position using HSI futures. Which of the following trades will provide the **BEST** hedge?

A Buy 178 HSI futures contracts.
B Buy 181 HSI futures contracts.
C Sell 178 HSI futures contracts.
D Sell 181 HSI futures contracts.

<28>.
In September, a fund manager holds a portfolio of assets that is equally weighted between fixed-interest debt securities and constituent stocks of the Hang Seng Index (HSI). The fund manager believes the equity investments will outperform debt investments over the next 3 months. Which of the following derivative strategies would enable the fund manager to adjust the portfolio according to this view?

A Buy December HSI futures contracts and sell December Exchange Fund Note futures contracts.
B Buy an equity-linked debt investment.
C Enter a swap to pay fixed rate of interest and receive a return on HSI.
D Sell over-the-counter HSI call options and sell interest rate floors.

<29>.
What exposure does the writer of a put option have when the option is exercised?

A The obligation to buy the asset at a specified price.
B The obligation to sell the asset at a specified price.
C The right to buy the asset at a specified price.
D The right to sell the asset at a specified price.

<30>.
What is a broker prohibited from doing once he/she has received an order from a client?

A Taking an opposite order from another client.
B Giving advice on the market to another client.
C Trading on his/her own account ahead of the client.
D Executing the order after confirming with the client.

<31>.
What is the present value of a 3-month HIBOR futures contract trading at 96.80?

A HKD4,960,317
B HKD4,960,857
C HKD14,880,952
D HKD14,882,570

<32>.
What is the name given to an agreement to buy or sell a quantity of currency for delivery at sometime in the future at an exchange rate fixed at the time of the agreement?

A Currency forward.
B Foreign exchange swap.
C Currency swap.
D Currency option.

<33>.
Which of the following statements is **CORRECT**?

A All in-the-money options are profitable.
B All out-of-the-money option will be showing an unrealised loss.
C All options have intrinsic and time value before expiry.
D All at-the-money options only have time value.

<34>.
Which of the following products does **NOT** belong to energy category in commodity derivatives?

A Batteries.
B Electricity.
C Gasoline oil.
D Natural gas.

<35>.
A company seeking to lock in an interest rate obtains a quote of 5.00% for a 3-6 Forward Rate Agreement (FRA) from their bank. What does this FRA offer the company?

A 5.00% fixed interest rate starting in 3 months for a 3-month period.
B 5.00% fixed interest rate starting in 6 months for a 3-month period.
C 5.00% fixed interest rate starting in 3 months for a 6-month period.
D 5.00% fixed interest rate starting in 3 months for a 9-month period.

<36>.
Two companies enter into a spot to forward date foreign exchange (FX) swap. One leg is to sell HKD10,000,000 worth of US Dollars today. Which of the following could be the other leg of this FX swap?

A Buy USD10,000,000 worth of HK Dollars today.
B Buy HKD10,000,000 worth of Japanese Yen today.
C Sell HKD10,000,000 worth of US Dollars in one month’s time.
D Buy HKD10,000,000 worth of US Dollars in one month’s time.

<37>.
Which of the following statements are **CORRECT**?

I A bull call-spread entails a long and short position in call options, with a lower strike on the short call.
II A bear call-spread entails a long and short position in call options, with a higher strike on the long call.
III A bull put-spread entails a long and short position in put options with a higher strike on the short put.
IV Spreads are an effective means of capturing some upside potential for a relatively low premium.

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

<38>.
Which of the following statements is **INCORRECT** in relation to a stop-loss/gain order?

A Stop-loss orders are commonly used for risk management purposes.
B Stop-loss orders must be executed at exactly the price instructed.
C Stop-gain orders will be executed at the best price available once the market price reaches the specified level.
D Stop-gain orders can be used to lock in profit before market movements erode the profit.

<39>.
Which of the following derivatives trades would protect a borrower against rising interest rates?

A Buying a floor.
B Selling a floor.
C Buying a cap.
D Selling a cap.

<40>.
Which of the following outcomes **CANNOT** be achieved by using a currency swap?

A Access borrowed funds in a foreign currency.
B Convert existing borrowing into a foreign currency denominated debt.
C Access borrowings at a cheaper interest rate than available domestically.
D Improve the credit rating of a company.

~End of the Examination Paper~

Answers

Question No.	Answer	Question No.	Answer
1	C	21	A
2	B	22	B
3	C	23	A
4	A	24	D
5	B	25	B
6	C	26	C
7	A	27	D
8	C	28	C
9	B	29	A
10	D	30	C
11	A	31	B
12	B	32	A
13	D	33	D
14	A	34	A
15	B	35	A
16	D	36	D
17	B	37	D
18	A	38	B
19	C	39	C
20	D	40	D