Anwer to both parts (Some candidates showed it as one answer, some did not divide it exactly as asked BUT all got marks if they covered the points) It was possible to use a diagram)
The answer could cover

- A **synthetic agreement for forward exchange (SAFE)** is a transaction between parties seeking to protect themselves against future movements in foreign exchange swap spreads.
- A SAFE can either be an exchange rate agreement (ERA) or a forward exchange agreement (FXA).
- ERAs and FXAs were developed by Barclays Bank and Midland Montagu, respectively, to overcome the capital adequacy problems of foreign exchange forwards highlighted by Bank for International Settlements regulations.
- Safes are treated as interest rate, rather than foreign exchange, instruments in BIS regulations, so banks have to provide less capital to support outstandings.
- FXAs are settled with reference to both the spot rate and the forward premium/discounts; ERAs with reference only to the forward.
- A SAFE is a variation on the short-term currency swap, in which there is no actual exchange of principal at inception or at maturity, the arrangement being a contract for differences based on notional cash sums.
- In this case, large notional sums may be referenced in the swap agreement but the resulting cash flow may be relatively small, especially if there has been only a slight variation between the rates at the time of inception and at the time of maturity.
- When the two parties agree to execute a SAFE, they agree the exchange rates at which the notional deals will be executed at inception and maturity. At maturity, one party pays to the other the difference in the value of the secondary currency between the rate originally contracted and the rate actually prevailing. In essence, this is exactly how a CFD works for any asset purchase
- Aspects of protecting a portfolio eg, mention concept of hedging
- illustrations of hedging against foreign loss
- Speculation could also be covered

c) He is worried about reports that the BRIC economies are not necessarily such good investments as they once were thought to be. Briefly discuss the attractiveness and subsequent worries about the BRIC economies. Marks 10

Answer could discuss aspects of the following PLUS any up to date information that the candidate wanted to introduce.

- B = Brazil, R = Russia, I = India, C = China
- Invest via emerging markets fund, costs, risk
- Emerging markets have seen GDP growth rates which are far in excess of those seen in the developed economies,
- Eg in 2010 this was even more in evidence.
- The BRIC economies, in particular, have enjoyed strong economic growth, with
- China leading the way at an annual rate of nearly 10 per cent.
- India, too, has a large and growing middle class is making large investment in capital infrastructure.

- Russia's wealth is very dependent on oil and gas prices but its economy has enjoyed fairly consistent growth in recent years (Can mention recent sanctions)
- Brazil benefits from strong demand for its agriculture and commodities from countries such as China.
- However, there are negatives to consider. In all four BRIC nations there are some indications that growth has brought about inflationary pressures and 'overheating'
- and there are concerns over the future political direction of Russia and China in particular.
- The equity markets in the BRIC countries and other emerging economies can also be very volatile,
- for example, the Chinese stock market in mid 2010 fell by about 60% from its peak in 2007.
- Current problem with Russian rouble – Putin/Ukraine v Nato, dependency on gas/oil
- World oil price slump to current $70 per barrel – v $110 = 40% drop in exchange rate of rouble
- Brazil = high inflation – economic/social issues – political fallout – economic slowdown
- China – economy slowing down
- Issue of world economic slowdown which is affecting BRIC – are BRIC funds as attractive as previous?

Q8 Mr Mason has been informed that a company in his portfolio intends to initiate a " reverse stock split" and that this will have no effect on his overall position. He does not understand what this means and has asked you for information.

a) Explain what a "reverse stock split" is and the reasons why a company might choose to do this. (Marks 3)

Answer would explain the following

- A reverse stock split, or consolidation, reduces the number of shares and increases the share price proportionately. For example, if you own 10,000 shares of a company and it declares a one for ten reverse split, you will own a total of 1,000 shares after the split.
- A reverse stock split has no effect on the value of what shareholders own.
- Companies often split their stock when they believe the price of their stock is too low to attract investors to buy their stock.
- Some reverse stock splits cause small shareholders to be **cashed out** so that they no longer own the company's shares.
- A company's board of directors may declare a reverse stock split without shareholder approval.
- The company's share capital remains the same at £1 million but the stock price would have effectively doubled as there are now only half the shares outstanding compared to those before the reverse split.

b) The efficient market hypothesis (EMH) says that a reverse stock split would have no effect on overall value. Discuss why this may not be the case

(Marks 10)

Answer would cover at least some of the following although other points also got marks

- What EMH is (inc the 3 forms) and its assumptions
- Empirical analyses have consistently found problems with the efficient market hypothesis, the most consistent being that stocks with low price to earnings (and similarly, low price to cash-flow or book value) outperform other stocks. Warren Buffett, whose investment strategy focuses on undervalued stocks, has made billions of dollars for himself and his co-investors. There are portfolio managers who have better track records than others, and there are investment houses with more renowned research analysis than others. So how can performance be random when people are clearly profiting from and beating the market?
- Studies in behavioural finance, which look into the effects of investor psychology on stock prices, also reveal that there are some predictable patterns in the stock market. Investors tend to buy undervalued stocks and sell overvalued stocks and, in a market of many participants, the result can be anything but efficient. Advocates of behavioural finance have proposed that cognitive biases also cause markets to be inefficient, leading investors to purchase overpriced growth stocks rather than value stocks.
- The tendency of returns to reverse over long horizons (ie, for losers or under-performing stocks to eventually become winners) is yet another contradiction of EMH. Losers would have to have much higher betas than winners in order to justify the return difference. The study showed that the beta difference required to save the EMH is just not there.
- Speculative economic bubbles are an obvious anomaly, in that the market often appears to be driven by buyers operating on irrational exuberance, who take little notice of underlying value. These bubbles are typically followed by an overreaction of frantic selling, allowing shrewd investors to buy stocks at bargain prices. Rational investors have difficulty profiting by taking up short positions in irrational bubbles because, as John Maynard Keynes commented, '*Markets can remain irrational longer than you can remain solvent*'.
- Sudden market crashes, as happened in October 1987, and to a lesser extent in October 2008 are mysterious from the perspective of efficient markets, but might possibly be treated as a rare statistical event under the weak-form of EMH. Paul Krugman, MIT economics professor, and a recent Nobel laureate, has suggested that because of the **herding** mentality often exhibited by short-term shareholders, investors pull in and out of the latest and hottest stocks. As a consequence prices no longer reflect all available information in the market.
- A corollary, view is that many large traders are practicing strategies which are based on a form of **market timing** which according to the EMH is not a viable approach to investing since there would be no discernible basis on which to 'time' the market. Professor Andrew Lo, currently at MIT and Craig MacKinlay published *A Non-random Walk Down Wall Street* in 2001 in which very convincing arguments were presented that asset prices do not follow a random walk and many academics have now become persuaded that even if a version of the EMH is valid that to go the extra distance and talk about prices and asset returns behaving randomly just does not fit the facts.
- The 2008/09 global financial crisis has led to renewed scrutiny and criticism of the hypothesis. Market strategist Jeremy Grantham has stated flatly that EMH is responsible for the current financial crisis, claiming that belief in the

hypothesis caused financial leaders to have a 'chronic underestimation of the dangers of asset bubbles breaking'.
- A noted author, Roger Lowenstein, who wrote a definitive account of the long-term capital management debacle of 1998, declared in early 2009 '*The upside of the current Great Recession is that it could drive a stake through the heart of the academic nostrum known as the efficient-market hypothesis'*.
- Information is not just financial news and research but also political, economic and social events , combined with how investors perceive such information

c) He wonders if a "share repurchase" might be better for him and the company. Discuss the implications of a repurchase (including the impact on any financial ratios). (Marks 7)

Total Marks 20

Answer would discuss aspects of the following
- What is a share repurchase
- What are the rules eg A company can purchase its own shares provided that it is authorised to do so by its Articles of Association
- Companies do this when they believe them to be undervalued
- Theoretically when a company repurchases, the market price(cap) will be below net asset value
- Repurchasing increases earning capacity and net asset backing of the remaining shares i.e. does not have to pay out dividends in short term
- Benefit for shareholders in form of capital gain which may have tax advantage for some
- Longer term benefit of increased dividends on lesser share holding
- Income from repurchasing can allow mason to invest in alternatives
- How can it be done eg market, percentage etc
- Tax implications for shareholders
- Ratios which use equity, assets, EPS etc could all be mentioned

Section C Answer the whole question for 40 marks

9- Ms Hart owns 100,000 shares in Ocset Plc, which have a market price of £2.25. The dividend is 14.7p and the growth rate is 2%. She has seen that the value of Ocset Plc's shares have been falling recently and believes that they will continue to fall for the near future. She is aware that she can take advantage of this potentially falling market price by using derivative solutions.

a) Explain how, in her review of the share price, she can evaluate the variability of its returns (marks 5)

Answer would consider a discussion of
- Standard Deviation (possibly inc diagram)
- How it is calculated
- Problems with it
- Uses

b) Critically discuss which derivative instruments Ms Hart could **best** use to benefit from the projected share price movement. (Marks 12)

Answer can consider any of the following

Futures
Options
Swaps
CFDs
Etc

All answers have to explain how they work, how they meet her remit and any problems, assumption s being made etc
i.e Student can argue for any strategy that meets the criteria

Ms Hart has seen that she could purchase an Ocset issued 10 year Convertible Bond which allows her to convert to shares at a rate of £2.50 per share and pays a coupon of 6.5% (she would wish to receive a return of at least 7.5% on all of her investments). It is trading today at £90, having just pad its last coupon yesterday.

c) Using the dividend growth model, what should the share price be? Show your working (Marks 5)

Answer
Last Dividend 14.7p
Therefore next dividend is 14.7*1.02 = 14.994p (rounding is acceptable)
Formula is next Dividend/required return –growth rate)
So 14.994/ .075-.02
14.994/.055
Price is therefore £2.726 (again rounding is acceptable)

d) Discuss how she could price the convertible bond to see if the current market price would allow her to make her desired return Marks 8

Answer would discuss the methods of convertible bond pricing

- Dividend valuation model
- Crossover method
- Option/Warrant method

e) Ms Hart thinks that the entire market may be going to go through a volatile period for a few years and is therefore considering investing in a hedge fund, in distressed companies or infrastructure funds. Critically appraise these potential investments for her (marks 10)

Answer should include
Explanation of hedge funds ie what they are, how they operate etc
Also discussion of
Distressed company funds
And Infrastructure funds
Ie what are they, what do they invest in, how do they operate, advantages/disadvantages/risks etc