CA FINAL

Test Code – JK-SFM-22

(Date: 26-09-2020)

(Marks - 100)

Answers to questions are to be given only in English

Question No. 1 is compulsory

Candidates are required to answer any four questions from the remaining five questions.

Working notes should form part of the answer.

Q1. (a) Suppose a Dealer quotes 'All in cost' for a generic swap at 8% against six month LIBOR flat. If the notional principal amount of swap is ₹5,00,000.

1. Calculate Semi – Annual fixed payment
2. Find the floating rate payment for (1) above if the six month period from the effective date of swap to the settlement date compromises 181 days and that the corresponding LIBOR was 6% on the effective date of swap.
3. In 2 above, if settlement is on 'Net' basis, how much the fixed rate payer would pay to the floating rate payer?
4. Generic swap is based on 30/360 days basis.

(8 Marks)

(b) A Inc. and B Inc. intend to borrow $2,00,000 and $2,00,000 in ¥ respectively for a time horizon of one year. The prevalent interest rates are as follows:

Company	¥ Loan	$ Loan
A Inc	5%	9%
B Inc	8%	10%

The prevalent exchange rate is $1 = ¥120.

They entered in a currency swap under which it is agreed that B Inc will pay A Inc @1% over the ¥ Loan Interest Rate which the latter will have to pay as a result of the agreed currency swap whereas A Inc will reimburse interest to B Inc only to the extent of 9%. Keeping exchange rate invariant, quantify the opportunity gain or loss component of the ultimate outcome, resulting from the designed currency swap. **(8 Marks)**

(c) Write short note on factors affecting decision of investment in fixed income securities.

(4 Marks)

Q.2 (a) The equity share of SSC Ltd. is quoted at ₹310. A three month call option is available at a premium of ₹8 per share and a three month put option is available at a premium of ₹7 per share.

Ascertain the net payoffs to the option holder of a call option and a put option, considering that:

i. The strike price in both cases is ₹320; and

ii. The share price on the exercise day is ₹300, 310, 320, 330 and 340.

iii. Also indicate the price range at which the call and the put options may be gainfully exercised. **(10 Marks)**

(b) Your forex dealer had entered into a cross currency deal and had sold US $ 10,00,000 against Euro at US $ 1 = Euro 1.4400 for spot delivery. However later during the day, the market became volatile and the dealer in compliance with his management's guidelines had to square up the position when the quotations were –

Spot US $ 1	INR 31.4300/4500
1 Month Margin	25/20
2 Months Margin	45/35
Spot US $ 1	EURO 1.4400/4450
1 Month Forward	1.4425/4490
2 Months Forward	1.4460/4530

What will be the gain or loss in the transaction?

(6 Marks)

(c) Briefly explain the objectives of 'Portfolio Management'.

(4 Marks)

Q.3 (a) A Mutual Fund Co. has the following assets under it on the close of business as on:

Company	No. of Shares	1st Feb 2012 MPS	2nd Feb 2012 MPS
L Ltd.	20,000	20.00	20.50
M Ltd.	30,000	312.40	360.00
N Ltd.	20,000	361.20	383.10
P Ltd.	60,000	505.10	503.90

Total number of units 6,00,000.

(i) Calculate NAV of the Fund on 1st Feb, 2012

(ii) Following Information is given:

Assuming one Mr. A submits a cheque of ₹ 30,00,000 to the Mutual Fund and the Fund manager purchases 8,000 shares of M Ltd. and the balance amount is held in bank. In such a case, what would be the position of the Fund?

(iii) Find new NAV of the Fund as on 2nd February, 2012. **(8 Marks)**

(b) The CEO of a company thinks that shareholders always look for EPS. Therefore, he considers maximization of EPS as his company's objective. His company's current Net Profits are ₹80.00 lakhs and P/E multiple is 10.5. he wants to buy another firm which has current income of ₹15.75 lakhs & P/E multiple of 10.

What is the maximum exchange ratio which the CEO should offer so that he could keep EPS at the current level, given that the current market price of both the acquirer and the target company are ₹42 and ₹105 respectively?

If the CEO borrows funds at 15% and buys out Target Company by paying cash, how much should he offer to maintain his EPS? Assume tax rate of 30%. **(8 Marks)**

(c) Discuss the Capital Asset Pricing Model (CAPM) and its relevant assumptions.

(4 Marks)

Q.4 (a) Eagle Ltd. reported a profit of ₹77 lakhs after 30% tax for the financial year 2011-12. An analysis of the accounts revealed that the income included extraordinary items of ₹8 lakhs and an extraordinary loss of ₹10 lakhs. The existing operations, except for the extraordinary items, are expected to continue in the future. In addition, the results of the launch of a new product are expected to be as follows:

	₹ in lakhs
Sales	70
Material Costs	20
Labour Costs	12
Fixed Costs	10

You are required to:

(i) Calculate the value of the business, given that the capitalization rate is 14%.

(ii) Determine the market price per equity share, with Eagle Ltd.'s share capital being comprised of 1,00,000 13% preference shares of ₹100 each and 50,00,000 equity shares of ₹10 each and the P/E ratio being 10 times.

(8 Marks)

(b) On April 3,2016 , a Bank quotes the following:

Spot exchange Rate (US $ 1)	INR 66.2525	INR 67.5945
2 months swap points	70	90
3 months swap points	160	186

In a spot transaction, delivery is made after two days.

Assume spot date as April 5, 2016

Assume 1 swap point = 0.0001,

You are required to:

a. Ascertain swap points for 2 months and 15 days. (For June 20, 2016)

b. Determine foreign exchange rate for June 20, 2016, and

c. Compute the annual rate of premium/discount of US$ on INR, on an average rate.

(8 Marks)

(c) The price of a bond just before a year of maturity is $5,000. It's redemption value is $5,250 at the end of the said period. Interest is $350 p.a. The Dollar appreciates by 2% during the said period. Calculate the rate of return.

(4 Marks)

Q.5 (a) The following data relate to Anand Ltd.'s share price:

Current Price per share ₹1,800

6 months future's price/share ₹1,950

Assuming it is possible to borrow money in the market for transactions in securities at 12% per annum, you are required:

(i) To calculate the theoretical minimum price of a 6-month forward purchase; and

(ii) To explain arbitrage opportunity. **(8 Marks)**

(b) Based on the following data, estimate the Net Asset Value (NAV) on per unit basis of a Regular Income Scheme of a Mutual Fund on 31-3-2015:

	₹ (in lakhs)
Listed Equity shares at cost (ex-dividend)	40.00
Cash in hand (As on 1-4-2014)	5.00
Bonds & Debentures at cost	8.96
Of these, Bonds not listed & not quoted	2.50
Other fixed interest securities at cost	9.75
Dividend accrued	1.95
Amount payable on shares	13.54
Expenditure	1.76

Current realizable value of fixed income securities of face value of ₹100 is ₹96.50.

Number of Units (₹10 face value each): 275000

All the listed equity shares were purchased at a time when market portfolio index was 12,500. On NAV date, the market portfolio index is at 19,975.

There has been a diminution of 15% in unlisted bonds and debentures valuation.

Listed bonds and debentures carry a market value of ₹7. 5 lakhs, on NAV date.

Operating expenses paid during the year amounted to ₹2.24 lakhs.

(8 Marks)

(c) Explain how to establish a Mutual Fund. **(4 Marks)**

Q.6 (a) Given the following information-

BSE Index	5,000
Value of Portfolio	₹10,10,000
Risk Free Interest Rate	9% p.a.
Dividend Yield on Index	6% p.a.
Beta of Portfolio	1.5

We assume that a futures contract on the BSE index wth 4 months maturity is used to hedge the value of portfolio over next 3 months. One future contract is for delivery of 50 times the index. Based on the information, calculate –

(a) Price of futures contract,

(b) the gain on short futures position if index turns out to be 4,500 in 3 months.

(8 Marks)

(b) XYZ has substantial cash flows and until the surplus funds are utilized to meet the future capital expenditure, likely to happen after several months, are invested in a portfolio of short term equity investments, details for which are given below –

Investment	No. of shares	Beta	MPS	Expected Div Yield
I	60,000	1.16	4.29	19.50%
II	80,000	2.28	2.92	24.00%
III	1,00,000	0.90	2.17	17.50%
IV	1,25,000	1.50	3.14	26.00%

The current market return is 19% and the risk free rate is 11%.

Required to –

(a) Calculate the risk of XYZ's short term investment portfolio relative to that of the market,

(b) Whether XYZ should change the composition of its portfolio.

(8 Marks)

(c) What are the advantages of investing in Mutual Fund?

(4 Marks)