Roll No. ............................

Total No. of Questions – **7**

Total No. of Printed Pages – **11**

Time Allowed – **3** Hours

Maximum Marks – **100**

# PAC

Answers to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate has not opted for Hindi Medium, his/her answers in Hindi will not be valued.

Questions No. **1** is compulsory.

Candidates are also required to answer any **five** questions from the remaining **six** questions.

Working notes should form part of the respective answers.

**Marks**

1. (a) Summit Ltd., an All Equity Company, has a PAT of ₹ 300 Crores and 15,00,000 Shares of ₹ 10 each outstanding at the end of financial year. Its Cost of Capital is 13% and Rate of Return is 17%. Ascertain the Value of the Company under Walter's Model, if payout ratio is – (a) 15%, (b) 30%, (c) 60%, and (d) 90%. Also draw out the inference from the values obtained under different cases. **5**

Marks

(b) Sandy Ltd. has a book value per share of ₹ 140.00. Its return on equity is 16% and follows a policy of retaining 60 percent of its annual earnings. What is the price of its share now if the opportunity cost of capital is 18 percent ? 5

[Adopt perpetual growth model to arrive at the solution].

(c) English Bank Ltd. sold Hong Kong Dollar 10 Crores value spot to its customer at ₹ 9.70 and covered itself in the London market on the same day, when the exchange rates were US \$ 1 = HK \$ 7.7506 –7.7546. Local interbank market rates for US \$ were Spot US \$ 1 = ₹ 74.70 – 74.85. Calculate the cover rate and ascertain the profit or loss on the transaction. Ignore brokerage. 5

Figures are to be rounded off to 4 decimals.

(d) Herbal Box is a small but profitable producer of beauty cosmetics using the plant Aloe Vera. Though it is not a high-tech business, yet Herbal's earnings have averaged around ₹ 18.5 lakhs after tax, mainly on the strength of its patented beauty cream to remove the pimples. 5

The patent has nine years to run, and Herbal Box has been offered ₹ 50 lakhs for the patent rights. Herbal's assets include ₹ 50 lakhs of property, plant and equipment, and ₹ 25 lakhs of working capital. However, the patent is not shown on the books of Herbal Box. Assuming Herbal's cost of capital being 14 percent, calculate its Economic Value Added (EVA).

Marks

2. (a) Following information is available for consideration : 8

| | |
|---|---|
| BSE Index | 25,000 |
| Value of portfolio | ₹ 50,50,000 |
| Risk free interest rate | 9% p.a. |
| Dividend yield on Index | 6% p.a. |
| Beta of portfolio | 1.5 |

We assume that a future contract on the BSE index with 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 above information calculate :

(i) Price of future contract.

(ii) Gain on short futures position if index turns out to be 22,500 in 3 months.

Note : Daily compounding (exponential) formula is not required to be used.

Marks

(b) An importer booked a forward contract with his bank on 1st September, for US $ 5,00,000 due on 1st February @ ₹ 82.60. The bank covered its position in the market @ ₹ 80.90 — 8

The exchange rates for dollar in the interbank market on 1st February and 15th February were :

| | 1st February | 15th February |
|---|---|---|
| Spot USD 1= | ₹ 80.10/18 | ₹ 80.01/12 |
| Spot/February | ₹ 80.35/45 | ₹ 80. 10/30 |
| March | ₹ 80.55/65 | ₹ 80.45/55 |
| April | ₹ 80.70/80 | ₹ 80.65/75 |
| May | ₹ 80.85/95 | ₹ 80.80/90 |

Exchange margin is 0.18% and interest on outlay of funds is @ 15%. The importer requested on 15th February for the extension of contract with due date on 1st May.

Rates rounded to 2 decimals.

On 1st February, Bank swaps by selling spot and buying one month forward.

**Calculate :**

(i) Cancellation rate.

(ii) Amount payable on $5,00,000.

(iii) Swap loss.

(iv) Interest on outlay of funds, if any.

(v) New contract rate.

(vi) Total cost.

(Note : Assume 365 days in a Year)

Marks

3. (a) ACE Mutual Fund has the following assets under it on the close of business as on : 8

| Company | No. of Shares | 1st August, 2019 Market Price Per Share | 2nd August, 2019 Market Price Per Share |
|---|---|---|---|
| | | ₹ | ₹ |
| Q Ltd. | 2,000 | 200.00 | 205.00 |
| R Ltd. | 30,000 | 312.40 | 360.00 |
| S Ltd. | 40,000 | 180.60 | 191.55 |
| T Ltd. | 60,000 | 505.10 | 503.90 |

Total No. of Units issued by the Mutual Fund is 6,00,000.

(i) Calculate Net Assets Value (NAV) per Unit as on 1st August, 2019.

(ii) Following information is also given :

Assuming that Mr. Tarun, submits a cheque of ₹ 30,00,000 to the Mutual Fund and the Fund Manager of this entity purchases 8,000 shares of R Ltd. and the balance amount is held in Bank. In such a situation, what would be the position of the Fund ?

(iii) Find new NAV per Unit as on 2nd August, 2019.

Marks

(b) ABC Ltd. requires ₹ 15,00,000 for a project. Useful life of the project is 5 years. Salvage value is Nil. Depreciation Charge is ₹ 3,00,000 p.a. Expected revenue & costs (excluding depreciation) ignoring inflation are as under : 8

| Year | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Revenues | ₹ 8,00,000 | ₹ 9,00,000 | ₹ 10,00,000 | ₹ 11,00,000 | ₹ 12,00,000 |
| Costs | ₹ 3,00,000 | ₹ 4,00,000 | ₹ 5,00,000 | ₹ 6,00,000 | ₹ 6,00,000 |

Tax Rate @ 40%. Cost of Capital @ 12% (including inflation premium).

Calculate NPV of the project if inflation rates for revenues & costs are as follows :

| Year | Revenues | Costs |
|---|---|---|
| 1 | 12% | 14% |
| 2 | 11% | 13% |
| 3 | 10% | 12% |
| 4 | 9% | 11% |
| 5 | 8% | 10% |

(Round off the amount to nearest rupee)

PVF @ 12% is to be taken as :

| Year | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| | 0.893 | 0.797 | 0.712 | 0.636 | 0.567 |

4. (a) The credit sales and receivables of Decent Ltd. at the end of the year are estimated at ₹ 730 lakhs and ₹ 90 lakhs respectively. The variable overdraft interest rate at an average is 6% p.a. **8**

Decent Ltd. is considering a factoring proposal for its receivables on a non-recourse basis at an annual fee of 1.10% of credit sales.

As a result, Decent Ltd. will save ₹ 1.60 lakhs per annum in administrative cost and ₹ 5.60 lakhs per annum as bad debts.

The factor will maintain a receivables collection period of 30 days and will provide 80% of receivables as advance at an interest rate of 7.5% per annum. Assume 365 days in a year for the purpose of calculation of receivables.

You are required to evaluate the viability of the factoring proposal.

(b) MK Finance Ltd., a Leasing Company, has been approached by a prospective customer intending to acquire a machine having a cash down price of ₹ 800 lakhs. In order to leverage his tax position, the customer has requested a quote for a 3-year lease with rentals payable at the end of each year but in a diminishing manner such that they are in the ratio of 3 : 2 : 1. Depreciation is to be assumed to be on WDV basis at 25% and marginal tax rate of MK Finance is 35%. The target rate of return for MK Finance on the transaction is 12%. You are required to calculate the lease rents to be quoted for the lease for 3 years. **8**

Discounting factors @ 12% is to be taken as :

| **Year** | 1 | 2 | 3 |
|---|---|---|---|
| | 0.893 | 0.797 | 0.712 |

Marks

5. (a) Mayuri is interested to construct a Portfolio of Securities X and Y. She has collected the following information : 8

| | X | Y |
|---|---|---|
| Expected Return (ER) | 19% | 23% |
| Risk (σ) | 14% | 18% |

Mayuri has 5 Portfolio options of X and Y as follows :

(i) 50% of funds in each X and Y

(ii) 75% of funds in X and 25% in Y

(iii) 25% of funds in X and 75% in Y

(iv) 60% of funds in X and 40% in Y

(v) 35% of funds in X and 65% in Y

Co-efficient of correlation (r) between X and Y is 0.16. You are required to calculate :

(i) Expected Return under different Portfolio Options.

(ii) Risk Factor associated with these Portfolio Options.

(iii) Which Portfolio is best from the point of view of Risk ?

(iv) Which Portfolio is best from the point of view of Return ?

Marks

(b) Mr. P established the following spread on the Coastal Corporation's stock : 8

(i) Purchased one 3-month call option with a premium of ₹ 6.5 and an Exercise price of ₹ 110.

(ii) Purchased one 3-month put option with a premium of ₹ 10 and an Exercise price of ₹ 90.

Coastal Corporation's stock is currently selling at ₹ 100. Determine profit or loss, if the price of Coastal Corporation's stock :

(i) Remains at ₹ 100 after 3 months.

(ii) Falls at ₹ 70 after 3 months.

(iii) Rises to ₹ 138 after 3 months.

Assume the size of option is 1,000 shares of Coastal Corporation.

6. (a) The following information is provided relating to the acquiring company Efficient Ltd. and the target company Healthy Ltd. : 10

| Particulars | Efficient Ltd. | Healthy Ltd. |
|---|---|---|
| No. of Shares (FV ₹ 10 each) | 20 Lakhs | 15 Lakhs |
| Market Capitalization | ₹ 800 Lakhs | ₹ 1,200 Lakhs |
| P/E Ratio (times) | 10 | 5 |
| Reserves & Surplus | ₹ 400 Lakhs | ₹ 273 Lakhs |
| Promoter's Holding (No. of Shares) | 8.65 Lakhs | 9 Lakhs |

Marks

Board of Directors of both the companies have decided to give a fair deal to the shareholders and accordingly for swap ratio the weights are decided as 45%, 20% and 35% respectively for Earning, Book value and Market price of share of each company.

**Required :**

(i) Calculate the swap ratio and also calculate Promoter's holding % after acquisition.

(ii) What is the EPS of Efficient Ltd. after acquisition of Healthy Ltd. ?

(iii) What is the expected market price per share and market capitalization of Efficient Ltd. after acquisition, assuming P/E ratio of Efficient Ltd. remains unchanged ?

(iv) Calculate free float market capitalization of the merged firm.

(b) From the following information, compute the effective rate of interest per annum as well as the total cost of funds to Nirmal Ltd., which is planning a Commercial Paper (CP) issue : 6

| | |
|---|---|
| Issue Price of CP | ₹ 4,87,750 |
| Face Value | ₹ 5,00,000 |
| Maturity Period | 3 Months |
| Issue Expenses : | |
| Brokerage | 0.15% for 3 months |
| Rating Charges | 0.55% p.a. |
| Stamp Duty | 0.20% for 3 months |

Marks

7. Answer any **four** of the following : 4×4 =16

(a) Explain briefly, how financial policy is linked to strategic management.

(b) Distinguish between Investment Bank and Commercial Bank.

(c) Explain briefly the salient features of Foreign Currency Convertible Bonds (FCCBs).

(d) Discuss about Nostro, Vostro and Loro Accounts.

(e) Explain Synergy in the context of Mergers and Acquisitions.

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