

Roll No.

Total No. of Questions – 6

Total No. of Printed Pages – 8

Time Allowed – 3 Hours

Maximum Marks – 100

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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.

Question No. 1 is compulsory.

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

In case, any candidate answers extra question(s)/sub-question(s) over and above the required number, then only the requisite number of questions first answered in the answer book shall be valued and subsequent extra question(s) answered shall be ignored.

Wherever necessary, suitable assumptions may be made and indicated in the answers by the candidate.

Working notes should form part of the respective answers.

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1. (a) Tatu Ltd. wants to takeover Mantu Ltd. and has offered a swap ratio of 1:2 (0.5 shares for every one share of Mantu Ltd.). Following information is provided :

	Tatu Ltd.	Mantu Ltd.
Profit after tax	₹ 24,00,000	₹ 4,80,000
Equity shares outstanding (Nos.)	8,00,000	2,40,000
EPS	₹ 3	₹ 2
PE Ratio	10 times	7 times
Market price per share	₹ 30	₹ 14

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You are required to calculate:

- (i) The number of equity shares to be issued by Tatu Ltd. for acquisition of Mantu Ltd.
- (ii) What is the EPS of Tatu Ltd. after the acquisition ?
- (iii) Determine the equivalent earnings per share of Mantu Ltd.
- (iv) What is the expected market price per share of Tatu Ltd. after the acquisition, assuming its PE multiple remains unchanged ?
- (v) Determine the market value of the merged firm.

(b) Following information is given :

8

Exchange rates : Canadian dollar 0.666 per DM (spot)

Canadian dollar 0.671 per DM (3-months)

Interest rates : DM 7.5% p.a.

Canadian Dollar – 9.5% p.a.

To take the possible arbitrage gains, what operations would be carried out ?

(c) Write a short note on Real Estate Regulatory Authority (RERA)

4

2. (a) Consider the following information on two stocks, X and Y.

10

Year	2016	2017
Return on X (%)	10	16
Return on Y (%)	12	18

You are required to calculate :

- (i) The expected return on a portfolio containing X and Y in the proportion of 40% and 60% respectively.
- (ii) The Standard Deviation of return from each of the two stocks.
- (iii) The Covariance of returns from the two stocks.
- (iv) The Correlation coefficient between the returns of the two stocks.
- (v) The risk of a portfolio containing X and Y in the proportion of 40% and 60%.

- (b) Sabanam Ltd. has issued convertible debentures with coupon rate 11%. 6

Each debenture has an option to convert to 16 equity shares at any time until the date of maturity. Debentures will be redeemed at ₹ 100 on maturity of 5 years. An investor generally requires a rate of return of 8% p.a. on a 5-year security. As an advisor, when will you advise the investor to exercise conversion for given market prices of the equity share of (i) ₹ 5, (ii) ₹ 6 and (iii) ₹ 7.10.

Cumulative PV factor for 8% for 5 years : 3.993

PV factor for 8% for year 5 : 0.681

- (c) Explain the interface of Financial Policy and Strategic Management. 4

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3. (a) Herbal World 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 lakh 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 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 in the books of Herbal World. Assuming Herbal's cost of capital being 14 percent, calculate its Economic Value Added (EVA).
- (b) SG Mutual Fund Company has the following assets under it on the close of business as on : 10

Company	No. of Shares	1 st August 2017	2 nd August 2017
		Market price per share (₹)	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) of the Fund.
- (ii) Following information is also given :
Assuming that Mr. Zubin, an investor, 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 case, what would be the position of the Fund ?
- (iii) Calculate new NAV of the Fund as on 2nd August 2017.

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(c) Discuss what you understand about Embedded Derivatives.

5

4. (a) An established company is going to be demerged in two separate entities. The valuation of the company is done by a well-known analyst. He has estimated a value of ₹ 5,000 lakhs, based on the expected free cash flow for next year of ₹ 200 lakhs and an expected growth rate of 5%. While going through the valuation procedure, it was found that the analyst has made the mistake of using the book values of debt and equity in his calculation. While you do not know the book value weights he used, you have been provided with the following information :

8

- (i) The market value of equity is 4 times the book value of equity, while the market value of debt is equal to the book value of debt,
- (ii) Company has a cost of equity of 12%,
- (iii) After tax cost of debt is 6%.

You are required to advise the correct value of the company.

(b) Mr. KK purchased a 3-month call option for 100 shares in PQR Ltd. at a premium of ₹ 40 per share, with an exercise price of ₹ 560. He also purchased a 3-month put option for 100 shares of the same company at a premium of ₹ 10 per share with an exercise price of ₹ 460. The market price of the share on the date of Mr. KK's purchase of options, is ₹ 500. Compute the profit or loss that Mr. KK would make assuming that the market price falls to ₹ 360 at the end of 3 months.

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- (c) Interpret the Capital Asset Pricing Model (CAPM) and its relevant assumptions. 4
- (d) Explain the difference between Islamic Finance and Conventional Finance. 4
5. (a) Closing values of BSE Sensex from 6th to 17th day of the month of January of the year 200 X were as follows : 8

Days	Date	Day	Sensex
1	6	THU	29522
2	7	FRI	29925
3	8	SAT	No Trading
4	9	SUN	No Trading
5	10	MON	30222
6	11	TUE	31000
7	12	WED	31400
8	13	THU	32000
9	14	FRI	No Trading
10	15	SAT	No Trading
11	16	SUN	No Trading
12	17	MON	33000

Compute Exponential Moving Average (EMA) of Sensex during the above period. The 30 days simple moving average of Sensex can be assumed as 30,000. The value of exponent for 30 days EMA is 0.062.

Provide detailed analysis on the basis of your calculations.

- (b) Punjab Bank has entered into a plain vanilla swap through on Overnight Index Swap (OIS) on a principal of ₹ 2 crore and agreed to receive MIBOR overnight floating rate for a fixed payment on the principal. The swap was entered into on Monday, 24th July, 2017 and was to commence on 25th July, 2017 and run for a period of 7 days.

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Respective MIBOR rates for Tuesday to Monday were :

8.70%, 9.10%, 9.12%, 8.95%, 8.98% and 9.10%.

If Punjab Bank received ₹ 507 net on settlement, calculate Fixed rate and interest under both legs.

Notes :

- (i) Sunday is a Holiday.
 - (ii) Workout in rounded rupees and avoid decimal working.
 - (iii) Consider a year consists of 365 days.
- (c) Explain the advantages of bringing venture capital in the company.

4

6. (a) Omega Ltd. is interested in expanding its operation and planning to install manufacturing plant at US. For the proposed project, it requires a fund of \$ 10 million (net of issue expenses or floatation cost). The estimated floatation cost is 2%. To finance this project, it proposes to issue GDRs.

8

As a financial consultant, you are requested to compute the number of GDRs to be issued and cost of the GDR with the help of following additional information :

- (i) Expected market price of share at the time of issue of GDR is ₹ 250 (Face Value being ₹ 100)

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- (ii) 2 shares shall underlay each GDR and shall be priced at 4% discount to market price.
- (iii) Expected exchange rate ₹ 64/\$
- (iv) Dividend expected to be paid is 15% with growth rate 12%.
- (b) Neel holds ₹ 1 crore shares of XY Ltd. whose market price standard deviation is 2% per day. Assuming 252 trading days in a year, determine maximum loss level over the period of 1 trading day and 10 trading days with 99% confidence level. Assuming share prices are normally for level of 99%, the equivalent Z score from Normal table of Cumulative Area shall be 2.33. 4
- (c) Discuss briefly the steps involved in the Securitization mechanism. 4

OR

Explain the benefits of Securitization from the perspective of both originator as well as the investor.

- (d) The risk free rate of return is 5%. The expected rate of return on the market portfolio is 11%. The expected rate of growth in dividend of X Ltd. is 8%. The last dividend paid was ₹ 2.00 per share. The beta of X Ltd. equity stock is 1.5. 4
- (i) What is the present price of the equity stock of X Ltd. ?
- (ii) How would the price change when :
- The inflation premium increases by 3%
 - The expected growth rate decreases by 3% and
 - The beta decreases to 1.3.

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