

Roll No. No.....

Total No. of Questions – 7

Total No. of Printed Pages – 12

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 five questions from the remaining six questions.

Working notes should form part of the respective answers.

Marks

1. (a) The Nominal value of 10% Bonds issued at par by M/s. SK Ltd. is ₹ 100. The bonds are redeemable at ₹ 110 at the end of year 5. 5
- (I) Determine the value of the bond if required yield is :
- (i) 8% ✓
- (ii) 9%
- (iii) 10% *PC*
- (iv) 11%
- (II) When will the value of the bond be highest ?

Given below are Present Value Factors :

Year	1	2	3	4	5
PV Factor @ 8%	0.926	0.857	0.794	0.735	0.681
PV Factor @ 9%	0.917	0.842	0.772	0.708	0.650
PV Factor @ 10%	0.909	0.826	0.751	0.683	0.621
PV Factor @ 11%	0.901	0.812	0.731	0.659	0.593

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- (b) A German subsidiary of an US based MNC has to mobilize 100000 Euro's working capital for the next 12 months. It has the following options :

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Loan from German Bank : @ 5% p.a.

Loan from US Parent Bank : @ 4% p.a.

Loan from Swiss Bank : @ 3% p.a.

Banks in Germany charge an additional 0.25% p.a. towards loan servicing. Loans from outside Germany attract withholding tax of 8% on interest payments. If the interest rates given above are market determined, examine which loan is the most attractive using interest rate differential.

- (c) XY Ltd., a Cement manufacturing Company has hired you as a financial consultant of the company. The Cement Industry has been very stable for some time and the cement companies SK Ltd. & AS Ltd. are similar in size and have similar product market mix characteristic. Use comparable method to value the equity of XY Ltd. In performing analysis, use the following ratios :

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- (i) Market to book value
- (ii) Market to replacement cost
- (iii) Market to sales
- (iv) Market to Net Income

The following data are available for your analysis :

(Amount in ₹)

	SK Ltd.	AS Ltd.	XY Ltd.
Market Value	450	400	400
Book Value	400	300	250
Replacement Cost	600	550	500
Sales	550	450	500
Net Income	18	16	14

- (d) M/s. Swastik Enterprises wants to invest in a new project. The following information are available with regard to the new project. 5

Initial Outlay of project	₹ 80,000
Annual revenues (without inflation)	₹ 60,000
Annual costs excluding depreciation (without inflation)	₹ 20,000
Useful life	4 years
Salvage value	Nil
Tax Rate	50%
Cost of Capital	12%
The expected annual rate of inflation	10%

Determine NPV using Cash flows with inflation and decide whether the new project can be accepted or not.

Your calculations are to be rounded off to 2 decimals.

The PV factors are given below :

Years	1	2	3	4
PVIF @ 12%	0.893	0.797	0.712	0.635

2. (a) The current EPS of M/s VEE Ltd. is ₹ 4. The company has shown an extraordinary growth of 40% in its earnings in the last few years. This high growth rate is likely to continue for the next 5 years after which growth rate in earnings will decline from 40% to 10% during the next 5 years and remain stable at 10% thereafter. The decline in the growth rate during the five year transition period will be equal and linear. Currently, the company's pay-out ratio is 10%. It is likely to remain the same for the next five years and from the beginning of the sixth year till the end of the 10th year, the pay-out will linearly increase and stabilize at 50% at the end of the 10th year. The post tax cost of capital is 17% and the PV factors are given below :

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Years	1	2	3	4	5	6	7	8	9	10
PVIF @17%	0.855	0.731	0.625	0.534	0.456	0.390	0.333	0.285	0.244	0.209

You are required to calculate the intrinsic value of the company's stock based on expected dividend. If the current market price of the stock is ₹ 125, suggest if it is advisable for the investor to invest in the company's stock or not.

- (b) With the following data available, compute the Break Even Lease Rental, before tax, that ABC Ltd. should charge from lessee.

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Cost of Machine	₹ 150 lakh
Expected Useful life	5 year
Salvage value of machine at the end of 5 years	₹ 10 lakh
Rate of Depreciation (WDV)	25%
Cost of Capital	14%
Applicable Tax Rate	35%

The machine will constitute a separate block for depreciation. Assume the cost of negotiation, lease administration as Nil and the lease rental is payable on the last day of each year.

Given below are the PV factors @ 14%.

Years	1	2	3	4	5
PVIF @ 14%	0.877	0.769	0.675	0.592	0.519

3. (a) M/s. Vasavi Enterprises, a garment manufacturing company is considering the introduction of a new line of manufacturing of Jeans pants with an expected life of five years. In the past the firm has been quite conservative in its investment in new projects, sticking primarily to standard garments. The new project is going to be setup in the New Industrial Area and enjoys Income Tax Holiday of 5 years.

The CEO of the company is of the opinion that the normal required rate of return for the company of 12% is not sufficient. Therefore, the minimum acceptable rate of return of this project should be 18%.

The initial outlay of the project is ₹ 10,00,000. The expected free cash flows from the project and the present value factors are given below :

Years	1	2	3	4	5
Cash flows	2,00,000	3,00,000	4,00,000	3,00,000	2,00,000
PVIF @ 12%	0.893	0.797	0.712	0.636	0.567
PVIF @ 18%	0.847	0.718	0.609	0.516	0.437

(i) As CFO of the company, justify, whether the project can be accepted ?

(ii) Will your decision change if the Government gives GST tax breaks for the first 5 years, which results in increasing cash inflows of the company by 8% and also reduces initial cash outflow by 8% ?

(b) The NSE-50 Index futures are traded with rupee value being ₹ 100 per index point. On 15th September, the index closed at 1195 and December futures (last trading day December 15) were trading at 1225. The historical dividend yield on the index has been 3% per annum and the borrowing rate was 9.5% per annum. 8

(i) Determine whether on September 15, the December futures were underpriced or overpriced ?

(ii) What arbitrage transaction is possible to gain out this mispricing ?

(iii) Calculate the gains and losses if the index on 15th December closes at (a) 1260 (b) 1175.

Assume 365 days in a year for your calculations.

4. (a) The returns of a portfolio A and market portfolio for the last 12 months are indicated as follows :

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Month	Portfolio A	Market Portfolio
January	- 0.52	0.82
February	2.20	0.04
March	2.17	2.80
April	4.17	1.72
May	2.04	0.27
June	3.00	0.39
July	1.99	1.95
August	4.00	0.64
September	- 1.38	1.53
October	2.67	2.70
November	3.99	2.52
December	1.86	2.09
Standard Deviation (σ)	1.6223	0.9498

- (i) You are required to find out the monthly returns attributable to the sheer skill of the Portfolio Manager.
- (ii) What part of the monthly return is attributable to the higher risk assumed by the Portfolio Manager ?

Assume that the risk-free rate of return is 12% per annum and the portfolio is fully diversified.

- (b) You are interested in buying some equity stocks of RK Ltd. The company has 3 divisions operating in different industries. Division A captures 10% of its industries sales which is forecasted to be ₹ 50 crore for the industry. Division B and C captures 30% and 2% of their respective industry's sales, which are expected to be ₹ 20 crore and ₹ 8.5 crore respectively. Division A traditionally had a 5% net income margin, whereas divisions B and C had 8% and 10% net income margin respectively. RK Ltd. has 3,00,000 shares of equity stock outstanding, which sell at ₹ 250.

The company has not paid dividend since it started its business 10 years ago. However from the market sources you come to know that RK Ltd. will start paying dividend in 3 years time and the pay-out ratio is 30%. Expecting this dividend, you would like to hold the stock for 5 years. By analysing the past financial statements, you have determined that RK Ltd's required rate of return is 18% and that P/E ratio of 10 for the next year and on ending P/E ratio of 20 at the end of the fifth year are appropriate.

Required :

- Would you purchase RK Ltd. equity at this time based on your one year forecast ?
- If you expect earnings to grow @ 15% continuously, how much are you willing to pay for the stock of RK Ltd ?

Ignore taxation.

PV factors are given below :

Years	1	2	3	4	5
PVIF @ 18%	0.847	0.718	0.609	0.516	0.437

5. (a) Mr. Alex, a practicing Chartered Accountant, can earn a return of 15 percent by investing in equity shares on his own. He is considering a recently announced equity based mutual fund scheme in which initial expenses are 6 percent and annual recurring expenses are 2 percent.

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(i) How much should the mutual fund earn to provide Mr. Alex a return of 15 percent per annum?

(ii) Mr. Alex's current Annual Professional Income is ₹ 40 Lakhs.

His portfolio value is ₹ 50 Lakhs and now he is spending 10% of his time to manage his portfolio. If he spends this time on profession, his professional income will go up in same proportion. He is thinking to invest his entire portfolio into a Multicap Fund, assuming the fund's NAV will grow at 13% per annum (including dividend).

You are requested to advise Mr. Alex, whether he can invest the portfolio into Multicap Funds? If so, what is the net financial benefit?

- (b) H Ltd. is an Indian firm exporting handicrafts to North America. All the exports are invoiced in US\$. The firm is considering the use of money market or forward market to cover the receivable of \$50,000 expected to be realized in 3 months time and has the following information from its banker:

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	Exchange Rates
Spot	₹/\$ 72.65/73
3-m forward	₹/\$ 72.95/73.40

The borrowing rates in US and India are 6 % and 12% p.a and the deposit rates are 4% and 9% p.a. respectively.

- (i) Which option is better for H Ltd ?
- (ii) Assume that H Ltd. anticipates the spot exchange rate in 3-months time to be equal to the current 3-months forward rate. After 3-months the spot exchange rate turned out to be ₹/\$: 73/73.42. What is the foreign exchange exposure and risk of H Ltd. ?

6. (a) ABC Ltd. is a company operating in the software industry. It is considering the acquisition of XYZ Ltd. which is also into software industry. The following information are available for the companies :

	ABC Ltd.	XYZ Ltd.
Earnings after tax (₹)	9,00,000	2,40,000
Number of equity shares	1,50,000	60,000
P/E ratio (no. of times)	14	10

ABC Ltd. is planning to offer a premium of 25% over the market price of XYZ Ltd. Required :

- (i) What is the swap ratio based on current market price ?
- (ii) Find the number of shares to be issued by ABC Ltd. to the shareholders of XYZ Ltd.
- (iii) Compute the new EPS of ABC Ltd. after merger and comment on the impact of merger.

- (iv) Determine the market price of the share when P/E ratio remains unchanged.
- (v) Compute the market price when P/E declines to 12 and comment on the results.

Figures are to be rounded off to 2 decimals.

(b) The US Dollar is selling in India at ₹ 72.50. If the interest rate for a 3 months borrowing in India is 6% per annum and the corresponding rate in USA is 2.75%.

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- (i) Do you expect that US dollar will be at a premium or at discount in the Indian Forex Market ?
- (ii) What will be the expected 3-months forward rate for US dollar in India ?
- (iii) What will be the rate of forward premium or discount ?

7. Answer any **four** of the following :

4 × 4
=16

- (a) Write a note on buy-back of shares by companies and what is the impact on P/E Ratio upon buy-back of shares ?
- (b) What is take over by reverse bid or Reverse Merger ? When does it take place ?

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- (c) Explain the different methods for evaluating the performance of a mutual fund.
 - (d) What is money market and what are its features ?
 - (e) What is the meaning of NBFC ? What are the differences between a bank and NBFC ?
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