

Roll No.

Total No. of Questions – 7

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 five questions from the remaining six questions.

Working notes should form part of the respective answers.

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1. (a) Sonic Ltd. issued 8% 5 year bonds of ₹ 1,000 each having a maturity of 3 years. The present rate of interest is 12% for one year tenure. It is expected that Forward rate of interest for one year tenure is going to fall by 75 basis points and further by 50 basis points for next year. This bond has a beta value of 1.02 and is more popular in the market due to less credit risk. **5**
- Calculate :
- (i) Intrinsic Value of bond.
- (ii) Expected price of bond in the market.
- (b) Eager Ltd. has a market capitalization of ₹ 1,500 crores and the current market price of its share is ₹ 1,500. It made a PAT of 200 crores and the Board is considering a proposal to buy back 20% of the shares at a premium of 10% to the current market price. It plans to fund this through a 16% bank loan. You are required to calculate the post buy back Earnings Per Share (EPS). The company's corporate tax rate is 30%. **5**

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- (c) Digital Exporters are holding an Export bill in United States Dollar (USD) 5,00,000 due after 60 days. They are worried about the falling USD value, which is currently at ₹ 75.60 per USD. The concerned Export Consignment has been priced on an Exchange rate of ₹ 75.50 per USD. The Firm's Bankers have quoted a 60-day forward rate of ₹ 75.20. Calculate :
- (i) Rate of discount quoted by the Bank, assuming 365 days in a year.
- (ii) The probable loss of operating profit if the forward sale is agreed to.
- (d) During the year 2017 an investor invested in a mutual fund. The capital gain and dividend for the year was ₹ 3.00 per unit, which were re-invested at the year end NAV of ₹ 23.75. The investor had total units of 26,750 as at the end of the year. The NAV had appreciated by 18.75% during the year and there was an entry load of ₹ 0.05 at the time when the investment was made.
- The investor lost his records and wants to find out the amount of investment made and the entry load in the mutual fund.
2. (a) Robust Tech, an IT company had purchased printers 5 years ago which are due for replacement. The cost of the printers was ₹ 75,00,000 and the company depreciates these class of assets on a straight-line basis for 10 years. The printers are expected to realize ₹ 7,50,000.

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There is a proposal to replace all the printers in the company and as a Finance Manager; you are presented with the following alternatives :

Proposal 1 : Purchase a new class of sophisticated network printers at a cost of ₹ 1,00,00,000 which would be depreciated over a period of 5 years and expected to realize ₹ 10,00,000 at the end. The purchase could either be funded through a loan at 14% repayable in 5 equal annual installments at the end of the year. PVAF at 14% for 5 years is 3.433

OR

Proposal 2 : Help Printers Ltd. had submitted a proposal to take over the existing printers and provide on rent the new class of sophisticated network printers for the next 5 years at an annual rental of ₹ 18,00,000 payable at the end of the year with a clause to increase the rentals by ₹ 2,00,000 on an annual basis.

You are required to suggest the best alternative to the management assuming the company's income rate is 50% and discount rate is 7%. You may ignore realization of scrap value and their short term capital gains/loss under both the options.

Year	1	2	3	4	5
PV @ 7%	0.935	0.873	0.816	0.763	0.713

- (b) Airborne Ltd. wants to take advantage of a new government scheme of connecting smaller towns and wants to purchase one-turboprop airplane at a cost of ₹ 5 crores. It has obtained permission to fly on 4 sectors.

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The company had provided the following estimates of its costs and revenues. The cost of capital is 16% and the company depreciates its assets over a period of 25 years on a straight-line basis. Currently it is operating in a 30% tax regime and under the new government scheme it enjoys a 100% tax waiver for the first 3 years.

- Passenger Capacity of the aircraft : 60 passengers
- Expected Operational Capacity : 80%
- Per aircraft no. of trips on a daily basis : 4

Amount in (₹)

Average realization per passenger	2,000
Annual Cost of Manpower	2,50,00,000
Airport handling charges – Fixed per day	10,000
Annual Repairs and Maintenance	5,00,00,000
Daily Operating Costs	75,000

The costs with the exception of Airport handling charges are expected to increase 10% year on year and the Operational Capacity would go up by 90% from Year 3.

The certainty of achieving the projected cash flows in the first five years are 0.8, 0.9, 0.75, 0.7 and 0.7 and PV at 16% are 0.862, 0.743, 0.641, 0.552, 0.476 respectively.

Advise the management on the feasibility of the project, assuming the aircraft operates on all the 365 days in a year.

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3. (a) Mr. Gupta is considering investment in the shares of R. Ltd. He has the following expectations of return on the stock and the market : 8

Probability	Return (%)	
	R. Ltd.	Market
0.35	30	25
0.30	25	20
0.15	40	30
0.20	20	10

You are required to :

- (i) Calculate the expected return, variance and standard deviation for R. Ltd.
 - (ii) Calculate the expected return variance and standard deviation for the market.
 - (iii) Find out the beta co-efficient for R. Ltd. shares.
- (b) A company has an EPS of ₹ 2.5 for the last year and the DPS of ₹ 1. 8
The earnings is expected to grow at 2% a year in long run. Currently it is trading at 7 times its earnings. If the required rate of return is 14%, compute the following :
- (i) An estimate of the P/E ratio using Gordon growth model.
 - (ii) The Long-term growth rate implied by the current P/E ratio.

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4. (a) As an investor you had purchased a 4 month call option on the equity shares of Z Ltd. of ₹ 10, of which the current market price is ₹ 132 and the exercise price ₹ 150. You expect the price to range between ₹ 120 to ₹ 190. The expected share price of Z Ltd. and related probability is given below :

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Expected Price (₹)	120	140	160	180	190
Probability	.05	.20	.50	.10	.15

Compute the following :

- Expected share price at the end of 4 months.
- Value of Call Option at the end of 4 months, if the exercise price prevails.
- In case the option is held to its maturity, what will be the expected value of the call option ?

- (b) A mutual fund raised ₹ 150 lakhs on April 1, 2018 by issue of 15 lakh units at ₹ 10 per unit. The fund invested in several capital market instruments to build a portfolio of ₹ 140 lakhs. Initial expenses amounted to ₹ 8 lakhs. During the month of April, the fund sold certain instruments costing ₹ 44.75 lakhs for ₹ 47 lakhs and used the proceeds to purchase certain other securities for ₹ 41.6 lakhs. The fund management expenses for the month amounted to ₹ 6 lakhs of which ₹ 50,000 was in arrears. The fund earned dividends amounting to ₹ 1.5 lakhs and it distributed 80% of the realized earnings. The market value of the portfolio on 30th April, 2018 was ₹ 147.85 lakhs. .
- An investor subscribed to 1000 units on April 1 and disposed it off at closing NAV on 30th April. Determine his annual rate of earnings.

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5. (a) The Treasury desk of a global bank incorporated in UK wants to invest GBP 200 million on 1st January, 2019 for a period of 6 months and has the following options :

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- (1) The Equity Trading desk in Japan wants to invest the entire GBP 200 million in high dividend yielding Japanese securities that would earn a dividend income of JPY 1,182 million. The dividends are declared and paid on 29th June. Post dividend, the securities are expected to quote at a 2% discount. The desk also plans to earn JPY 10 million on a stock borrow lending activity because of this investment. The securities are to be sold on June 29 with a T+1 settlement and the amount remitted back to the Treasury in London.
- (2) The Fixed Income desk of US proposed to invest the amount in 6 month G-Secs that provides a return of 5% p.a.

The exchange rates are as follows :

Currency Pair	1-Jan-2019 (Spot)	30-Jun-2019 (Forward)
GBP – JPY	148.0002	150.0000
GBP – USD	1.28000	1.30331

As a treasurer, advise the bank on the best investment option. What would be your decision from a risk perspective. You may ignore taxation.

- (b) Spot rate 1 US\$ = ₹ 68.50

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USD premium on a six month forward is 3%. The annualized interest in US is 4% and 9% in India.

Is there any arbitrage possibility? If yes, how a trader can take advantage of the situation if he is willing to borrow USD 3 million.

6. (a) C Ltd. & D Ltd. are contemplating a merger deal in which C Ltd. will acquire D Ltd. The relevant information about the firms are given as follows :

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	C Ltd.	D Ltd.
Total Earnings (E) (in millions)	₹ 96	₹ 30
Number of outstanding shares (S) (in millions)	20	14
Earnings per share (EPS) (₹)	4.8	2.143
Price earnings ratio (P/E)	8	7
Market Price per share (P) (₹)	38.4	15

- (i) What is the maximum exchange ratio acceptable to the shareholders of C Ltd., if the P/E ratio of the combined firm is 7 ?
- (ii) What is the minimum exchange ratio acceptable to the shareholders of D Ltd., if the P/E ratio of the combined firm is 9 ?

- (b) AMKO Limited has issued 75,000 equity shares of ₹ 10 each. The current market price per share is ₹ 36. The company has a plan to make a rights issue of one new equity share at a price of ₹ 24 for every four shares held.

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You are required to :

- (i) Calculate the theoretical post-rights price per share.
- (ii) Calculate the theoretical value of the right alone.

7. Write short notes on any **four** of the following :

4×4

=16

- (a) Enumerate 'Strategy' at different levels of hierarchy.
- (b) Benefits to the issuer of Commercial Paper.
- (c) Define any four Pre-conditions for an Efficient Money Market.
- (d) Distinguish between future contract and option contract.
- (e) What are the various reasons for demerger or divestment.