

Roll No.

Total No. of Questions – 6

Total No. of Printed Pages – 11

Time Allowed – 3 Hours

Maximum Marks – 100

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Answer to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate who 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.

Working notes should form part of the respective answers.

- | | Marks |
|--|-------|
| 1. (a) High Growth Ltd. (HGL) was having an excellent growth over a number of years. The Board of Directors is considering a proposal to reward its shareholders by buying back 20% shares at a premium. The premium is to be paid by raising a loan from the Bank. The interest on loan is to be serviced by internal accruals as supported by the financials of HGL. The company has a market capitalization of ₹ 15,000 crore and the current Earnings Per Share (EPS) is ₹ 600 with a Price Earnings Ratio (PER) of 25. The Board expects a post buy back Market Price per Share (MPS) of ₹ 10,000. The PER, post buy back, will remain the same. The loan can be availed at an interest rate of 16 % p.a. | 10 |
| Applicable corporate tax rate is 30 %. | |
| You are required to calculate | |
| (i) The interest amount which can be paid for availing the bank loan. | |
| (ii) The loan amount to be raised. | |
| (iii) Buy back premium per share. | |



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- (b) Export Ltd., an export oriented unit invoices in the currency of the importer. It is expecting a receipt of USD 2,40,000 on 1st August, 2022 for the goods exported on 1st May, 2022.

The following information is available as on 1st May, 2022 :

Exchange Rates		Currency Futures		Contract Size ₹ 6,40,000/-
USD/INR		USD/INR		
Spot	0.0125	May	0.0126	
1 Month Forward	0.0124	July	0.0125	
3 Months Forward	0.0123			

Initial Margin		Interest Rates in India
May	₹ 15,000	9 %
August	₹ 26,000	8.5%

On 1st August, 2022 the spot rate USD/INR is 0.0126 and currency future rate is 0.0125.

Suggest a suitable approach to Export Ltd. that would be most advantageous out of the following methods.

- (i) Forward Contract
- (ii) Currency Futures
- (iii) No hedge

Assume that the variation in margin would be settled on the maturity of the futures contract.

- (c) Swaptions can be applied for speculation purposes or to hedge a portion of their swap books. What are the other areas of its application?

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2. (a) Mr. Bull is a rational risk taker. He takes his position in a single stock for 4 days in a week. He does not take a position on Friday to avoid weekend effect and takes position only for four days in a week i.e. Monday to Thursday. He transfers the amount on Monday morning and withdraws the balance on Friday morning. He desires to make a maximum investment where Value At Risk (VAR) should not exceed the balance lying in his bank account. The position by his manager, as per standing instructions, is taken on the free balance lying in the bank account in the morning on each Monday.

On Monday morning (before opening of the capital market) he has transferred an amount of ₹ 11 Crore to his bank account. A fixed deposit also matured on this Monday. The maturity amount of ₹ 63,42,560 was also credited to his account by the bank in the morning of the Monday. However, Mr. Bull received the intimation of the same in the evening. The bank needs a minimum balance of ₹ 1,000 all the time. The value of Z score, at the required confidence level of 99 percent is 2.33.

The other information with respect to stocks X and Y, which are under consideration for this week, is as under :

X		Y	
Return	Probability	Return	Probability
6	0.10	4	0.10
7	0.25	6	0.20
8	0.30	8	0.40
9	0.25	10	0.20
10	0.10	12	0.10

You are required to recommend a single stock, where maximum investment can be made,

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- (b) An investor is considering purchasing equity shares of Alpha Ltd., whose current Market price is ₹ 172.45. The company is proposing a dividend of ₹ 6 for the year ending 31st March, 2024. Alpha Ltd. is expected to grow @ 20 percent per annum for the next four years. Thereafter, the growth, over the next three years, will decline linearly by 100 basis points per annum. Thereafter, it will stabilize at a certain growth rate per annum infinitely. The required rate of return for the investor is 20%.

Dividend value is to be taken in 2 decimal points only.

You are required :

- (i) To calculate the stable growth rate of Alpha Ltd. after the end of 7 years.
- (ii) To advise whether it is worth to purchase the share at this price if the investor has a stable target growth rate of 15% per annum.

Period	1	2	3	4	5	6	7
PVIF(20%,n)	0.8333	0.6944	0.5787	0.4823	0.4019	0.3349	0.2791

- (c) 'Pay through securities' are in the nature of participation certificates that enable the investors to take a direct exposure on the performance of the securitized assets. 'Pass Through Certificates', on the other hand, gives investors only a charge against the securitized assets. Do you agree with the statement ? Justify your stand.

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3. (a) IF an Indian firm has its subsidiary in Singapore and SF a Singapore firm has its subsidiary in India and face the following interest rates :

Company	IF	SF
INR Floating Rate	BPLR+ 0.5%	BPLR + 1.5%
SGD (fixed rate)	3%	3.50%

SF wishes to borrow Rupee loan at a floating rate and IF wishes to borrow SGD at a fixed rate. The amount of loan required by both the companies is same at the current exchange rate. A Bank arranges a swap and requires 50 basis points as its commission, which is to be shared equally. IF requires a minimum gain of 20 basis points and SF requires a minimum gain of 10 basis points for structuring the deal. The Bank is very keen to structure the deal, even if, it has to forego a part of its commission.

You are required to find out

- Whether there are any advantages available to IF and SF ?
- Whether a swap can be arranged which may be beneficial to both the firms ?
- What rate of interest will they end up paying ? Show detailed working.

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- (b) Mr. V is a commodity trader and specialized himself in trading of rice. He has 24,000 Kg. of rice. The following details are available as on date :

Spot price	₹/Kg.	70
3 month's future is trading at	₹/Kg.	68
Expected Lower price after 3 months	₹/Kg.	64
Contract size		500 Kg./ contract

You are required to advise to Mr. V :

- How to mitigate the risk of fall in price.
- How to use the futures market.
- What will be the effective realized price for his sales if, after 3 months, spot price is ₹ 69/ Kg. and the 3 months future contract price is
 - ₹ 72/ Kg.
 - ₹ 67/ Kg.

- (c) What makes an organization financially sustainable ? Discuss.

4. (a) An investor, in the beginning of 2022, has purchased substantial number of 8 year 7.50% ₹ 1000 bond with 5 % premium on maturity at a required Yield to Maturity (YTM) of 8.50 %. However, due to the continuing war in Europe, the inflation is running very high in the economies of the countries. The yield on the bonds is decreasing. The risk averse investor wants to protect himself from further loss and decides to sell the bonds in 2023. He has got a proposal from another investor who is willing to purchase these bonds by shelling out a maximum amount of ₹ 797.50 per bond.

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Investor follows intrinsic value method for valuation of the Bonds.

You are required to determine -

- (i) The Market price, Duration and Volatility of the bond.
- (ii) Will it be a right decision of the new investor if he is looking for Required Yield to Maturity (YTM) as 12% p.a. ?

Period	1	2	3	4	5	6	7
PVIF(8.50%,n)	0.9217	0.8495	0.7829	0.7216	0.6650	0.6129	0.5649

- (b) Hopeful Ltd., an Indian MNC is executing a plant in Nepal. It has raised ₹ 400 Billion. Half of the amount will be required after six months' time. Hopeful Ltd. is looking for an opportunity to invest this amount for a period of six months. It is considering following two options :

Market	UK	Europe
Nature of Investment	Index Fund (GBP)	Treasury Bills (Euro)
Dividend (GBP in Billions)	0.1369	-
Income from stock lending (GBP in Billions)	0.0007	-
Discount on the investment value at the end	2 %	-
Interest	-	7.8 percent per annum
Exchange Rate (Spot)	GBP/ INR 0.0099	EUR/INR 0.011
Exchange Rate (6 month Forward)	GBP/ INR 0.0100	EUR/INR 0.011

As an investment manager advise the best option to invest.

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- (c) Personal Financing is one of the innovative ways to finance a startup. Discuss any four other methods.

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5. (a) M/S. Promising, an AMC, on 01.04.2018 has floated two schemes viz. Dividend Reinvestment Plan and Bonus Plan. Mr. X, an investor has invested in both the schemes. Mr. X, while submitting the tax papers, returned a capital loss on both the plans. Tax officials, suspicious on the claim of Mr. X, decided to launch an investigation and were able to collect the following details (except the issue price) :

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Date	Dividend (%)	Bonus Ratio	NAV (₹)	
			Dividend Reinvestment Plan	Bonus Plan
01.04.2018			?	?
31.12.2019		1:5	58	70
31.03.2020	12		60	72
31.03.2021	10		68	75
31.12.2022		1:3	70	60
31.03.2022	15		75	66
31.03.2023			80	71

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Additional details	Dividend Reinvestment Plan	Bonus Plan
Investment (₹)	₹ 10,80,000	₹ 10,00,000
Average Profit (₹)	₹ 1,21,824	
Average Yield (%)		8.40 %

Assume face value of unit as ₹ 10.

You are required to assist the tax officials to calculate the issue price of both the schemes as on 01.04.2018.

- (b) Mr. Potential has made investments in two mutual funds. The following information is available :

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Mutual Fund	Smart	Growth
Jensen Alpha	1.10%	1.50%
Treynor's Ratio	0.0714	0.0775
Actual Return	8.50%	9.10%
Risk Premium	4%	

You are required to calculate :

- Beta (β) for both the funds
- Risk free Rate
- Security Market Line

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- (c) "A Limited Partnership Entity, in India, is not recognized for the purpose of Venture Capital Fund." Do you agree? Briefly explain the structure of Venture Capital Fund in India. 4

6. (a) Big Ltd. (BL), a listed company, is enjoying a price earnings ratio (PER) of 15 on an Earnings Per Share (EPS) of ₹ 5. The Total number of outstanding shares are 2,00,000. 8

BL is proposing to acquire Small Pvt. Ltd. (SPL) an unlisted company by issuing shares in the ratio 4:5 i.e. for 5 shares of SPL 4 shares of BL will be issued. The outstanding shares of SPL are 50,000. SPL will be listed before the actual merger to discover its value. The EPS of the merged entity will be 5.5.

No other information is available for SPL.

You are required to calculate :

- (i) Pre-merger EPS of SPL.
(ii) Expected Market Price per Share of SPL at the time of listing, if it expects a PER of 10 and,
(iii) Number of shares of BL to be issued to SPL if pre-merger EPS of BL is to be maintained.

- (b) An Investor is proposing to invest ₹ 10,000/- in two Portfolios A and B in the ratio of 3:2. The Portfolios have three securities each with following weights : 8

	W_x	W_y	W_z
Portfolio A	0.30	0.25	0.45
Portfolio B	0.20	0.45	0.35

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You are required to

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- (i) Calculate the weight of each stock.
 - (ii) Calculate the amount allocated to B and C if half of the funds are allocated to security X.
- (c) "The commodity characteristic approach defines feasible commodities for derivatives trading based on an extensive list of required commodity attributes." What are the required attributes ?

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OR

Index Funds is one of the Special Funds. What are other funds in Special Funds category ?

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