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Sample Notes

Curated By:-

CA, CPA Vinod Kumar Agarwal

(AIR 2 - CA Foundation, AIR 4 - CA Inter, AIR 24 - CA Final)

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ABOUT

CA VINOD KUMAR AGARWAL

(AIR-2^{nd}, 4^{th} & 24^{th} IN FOUNDATION, INTER & FINAL RESPECTIVELY)

SUMMARY

Founder Member of A.S. Foundation, India's Leading Academy for C.A. Course, CA Vinod Kumar Agarwal is a fellow member of ICAI and a past member of the Board of Studies, ICAI. With a teaching experience of twenty years, he has guided more than 1,00,000 students and is ranked as one of the best teachers for Accounts and Financial Management at Intermediate level and Financial Reporting and SFM at Final Level.

He has authored books on Accounts, Advanced Auditing for CA Final, Auditing for Intermediate, Accounting Standards, Ind AS, Costing and Financial Management, and his books have sold more than 2,00,000 copies.

PUBLICATIONS AND ACHIEVEMENTS

- A merit holder in all the three levels of exams conducted by ICAI (2nd rank, 4th rank, and 24th rank in CA Foundation, CA Intermediate an CA Final respectively).
- Scored 99 marks in Accountancy in CA Foundation.
- Authored books on Accounts, Advanced Auditing for CA Final, Auditing for Intermediate, Accounting Standards, Ind AS, Costing and Financial Management.
- Complied a book "No Truth, Only Interpretations", a book on motivation, inspiration and guidance.
- Compiled a book, "Mind Candy", a book on motivation.
- Compiled a book, "Sweet Voice", a book on inspirational quotes.
- Working experience with India's top firms Firms like M/s. S.B. Billimoria and A.F. Ferguson (both member firm of Deloitte).
- Published article in the Students Newsletter of ICAI on "Valuation of Equity Shares" and "Stock Market Index".
- Presented a paper on "Corporate Governance and Role of Auditor" in National Students Conference held in Goa.

EDUCATION

- Passed the Certified Public Accountant (CPA) (USA) exam in 2007.
- Post-graduation from Pune University with First Class.
- Graduation from B.M.C.C, Pune with distinction.
- Passed the Diploma in Business Finance Conducted by ICFAI, Hyderabad.
- Passed the Derivative Module test conducted by National Stock Exchange.
- Also appeared for UPSC exam and cleared Mains twice.

TEACHING EXPERIENCE

- Teaches Accounts, Advanced Accountancy, Financial management and Economics for Finance at CA Intermediate Level and Financial Reporting and Advanced Financial Management (AFM) at CA Final level.
- Pioneer of creating and distributing video tutorials in pen drives/google drive among students.
- Produced All India Toppers (1st Rank) in CPT examination and final examination apart from more than 250 all India merit- holders.
- More than 30000 Facebook subscribers, more than 42000 YouTube subscribers.
- Sold more than 40000 video lectures in pen-drive and google-drive mode.
- In 2019, launched a brand VKNOW, to become a national brand for digital learning.

TEACHING APPROACH

- Simple and effective way of teaching through concept building, class-room practice, home-exercise, and power-point presentation.
- A large variety of problems are solved in the class to meet the examination requirements.
- Notes are updated frequently covering amendments and exam problems.

✱ CASE STUDY 1 ✱

- State National Bank is a scheduled commercial bank having branches all over India. The Balance Sheet of the bank is at INR 20,000 crore. Year 2019 was a positive year, where the deposits increased by 19% and significant improvement in Net Interest Earned (NEA) Ratio was achieved. This was the result of right mix of sector-based diversification and robust management of stressed cases.
- The strategy meeting of the Board of Directors was held in the last week of December 2019. The Board lauded the management for their performance in spite of challenging atmosphere in the domestic environment owing to slowdown in sectors like auto and real estate and growing uncertainty in the international market coupled with Brexit, Trade wars, Climate Change and other geo political events.
- The Board evaluated the strategy demonstrated by the senior managerial personnel on the growth plan for the year 2020. The plan stipulated aggressive growth in deposits and CASA (Current Account-Saving Account) balances through existing branch networks through competitive saving and term deposit rates. Further the strategy carved out an elaborate plan on exposure increase to Real Estate, Consumer loans, Credit Cards products and Personal Loans.
- After deliberate discussion, the Board opined that the bank should adopt a conservative approach for the year 2020. This approach will safeguard bank from riskier exposures to troubled sectors and any slowdown or recessionary headwinds that may arise during the year.
- However the Board was on keen on moving ahead with expansion of deposits and CASA base so as to strengthen the Balance sheet of the bank and also popularize the franchise in the investment space.
- The treasury head of the Bank, Anurjit Sen, however pointed out that the approach could lead to severe asset liability mismatches. On one hand, there would be growing deposits and CASA balances and on the other hand due to conservative approach there would not be enough loan opportunities for lending. The situation will give rise to high liquidity balances on the banks Balance Sheet.
- Anurjit also suggested that the surplus liquidity balances could be deployed in money market instruments to manage the asset liability gaps.
- The Board held further discussion over the risk as well as the solution submitted by Anurjit and agreed that the surplus liquidity be managed by using money market instruments.

The Board once again thanked the attendees and concluded the meeting with best wishes for year 2020

Multiple Choice Questions:

1. State National Bank acquires 6.45 GS 2029 on auction by RBI of Face value of INR 200 crores. The Bond was issued for a period of 10 years on 7 October 2019 with maturity date fixed as 7 October 2029. The coupon rate of the Bond was fixed at 6.45% per annum. Coupon to be paid semi annually on 7 October and 7 April each calender year.
   Determine the amount of interest to be received on the bond holding on the first coupon payment date.
   (a) 64,676,712.33 (b) 129,353,424.66 (c) 65,575,000.00 (d) 64,500,000.00

2 A 91 day Treasury bill was issued by Government of India on 8 January 2020 maturing on 9 April 2020. 2020 is a leap year i.e February 2020 has 29 days. The day convention for yield computation for this Treasury Bill is…………….
   (a) 364 (b) 365 (c) 360 (d) 366

3 Which of the below money market instrument is not issued on a front-ended negotiable, i.e issued atdiscount and payable at face value on maturity?
   (a) Commercial Paper (b) Certificate of Deposit (c) Short Term deposit (d) Treasury Bill

4 The State National Bank subscribed to the issue of a Certificate of Deposit issued by Gramin Commercial Bank for a period of 1 year. The CD with denominated face value of INR 100,000/- each was issued at a discount of 8.25%. 6 Months, hence, the Bank is considering to sell its Gramin Commercial Bank CD holdings in the secondary market.
   Determine the price at which the CD was issued and what amount shall the bank expect on sale on each CD assuming there has been no change in the market yield. (8.25% p.a.)
   (a) Issue price INR 95,875; expected saleprice 91,750 (b) Issue price INR 91,750; expected sale price 95,875
   (c) Issue price INR 95,875; expected saleprice 97,937 (d) Issue price INR 97,937; expected sale price 94,785

ANSWERS TO THE CASE STUDY - 1

1 (d) Principal amount of Bonds purchase for coupon computation = 200 croresRate of Interest = 6.45 % per annum

Coupon payment date = 7 April 2020.

No of days for coupon computation:

October 2019 - 23

November 2019 - 30

December 2019 - 30

January 2020 - 30

February 2020 - 30

March 2020 - 30

April 2020 - 7

Total = 180

(For Indian G sec bonds the day count convention is 30 / 360, thus number of days in amonth is taken as 30 and number of days in a year is takes in 360)

Interest amount = INR 200 crores x 6.45% x 180/360

= INR 64,500,000

2 . Option d

3. Option C

4. Option B

Reason : Issue price = Face value – (Face Value x Discount Yield x Duration of the CD in months /12)Issue Price = 100,000 (100,000 x 8.25% x 12 / 12)

Issue price = INR 91,750

Expected Sale price = Issue Price + (Face Value – Issue Price)/Duration of the CD in months) xNo of months passed the issue date

Expected Sale price = 91,750 + (100,000– 91,750)/12) x 6Expected Sale price = 91,750 + (8,250)/12) x 6

Expected Sale price = 91,750 + 4,125

Expected Sale price = INR 95,875

✱ CASE STUDY 2 ✱

- Three friends, Aman, Amar and Armaan, were meeting after a long time, enjoying coffee in Cafe Coffee Day. Aman is an IT consultant working with Tata Consultancy Services. Amar is a business man and runs a firm engaged in manufacturing and sale of toys. Armaan is a finance professional working with an investment firm.
- The casual talk over coffee suddenly turned into discussion on mutual funds. Both Aman and Amar were looking forward for investment in mutual funds. Being inclined to equity schemes, Amar has been constantly gathering knowledge about Mid-cap funds and ELSS schemes while Aman was inclined to hybrid schemes.
- Aman: "Amar, which category of scheme do you prefer?"
- Amar: "I prefer equity schemes. They deliver highest returns. I am particularly interested in Mid-cap Funds and ELSS schemes. As far as I know, Mid-Cap funds are open ended schemes and invests 55% or more of total assets in stocks of companies ranked between 50 and 100 by full market capitalisation. On the other hand, ELSS schemes offer tax benefit with a lock-in period of 5 years. And you ?"
- Aman : "To me, hybrid schemes are better. They invest equally in equity and debt instruments. A good example is Balanced Hybrid Fund. It allows arbitrage too. Amar, why don't you consider Equity Savings Scheme ? It is similar to ELSS Scheme. Armaan, which scheme do you like?"
- Armaan: '"Well, there is no such perfect scheme. To select a particular mutual fund, we need to consider various factors such as past performance, PE ratio, expense ratio, size and age of fund etc."
- Aman: "Fair enough. Armaan, I need some information. I heard in news about Kotak Nifty ETF. What exactly is an ETF? I heard Infrastructure Investment Trusts are like ETF in some sense. "
- Armaan: "An ETF stands for Exchange Traded Fund. It is a basket of securities that reflects the composition of an Index, like Nifty 50. Investors can trade ETFs throughout the trading day. Well Infrastructure Investment Trusts, INVITs as they are called, are like ETFin some sense. But they are entirely a different concept "
- Armaan received a call from office in mid of discussion and had to leave immediately for an urgent work in office. The two friends continued their discussion.
- Amar: "How about closed ended mutual fund schemes"?
- Aman: "Frankly, I don't know much about them. From hearsay, I know that unlike open ended schemes, they do not imply corpus size volatility for AMC."
- Amar: "Hmmm.. "
- Aman: "Hey, I just recall, the company where my wife Ananya works, Techvision has issued Commercial Paper and it is currently open for subscription. Do you think I should invest in it?"
- Amar: "Yes, you should. I too had invested before in a Commercial Paper few years ago. Why? Firstly, Commercial paper is freely negotiable just like a commercial bill. You know, I am in a business line. Daily, we have many transactions on credit. We draw bills of exchange and get them discounted. Similarly, you can endorse and deliver CP. Secondly, you can match your cash flow requirements. CP are generally issued for periods ranging from 15 days to one year. Only problem is that issuer has to pay higher stamp duty on CP if issued for a shorter period. Thirdly, CP are issued by high rated corporate entities and are secured. They are therefore safe investments. Lastly, the investment is quite liquid."
- Aman: "That's sounds convincing."
- While the two friends were still discussing, Armaan was called upon by his manager, Raman.
- Raman: "Armaan, we have been approached by Mr. Ramen. Mr Ramen, if you remember, aged 52 years, is our client with investment on mutual funds side. He is now looking for Government securities in money market that offer inflation linked returns. You contact Mr Ramen and advise him about such securities."
- Armaan: "Sure Sir."
- Raman: "Also, prepare a presentation on money market mutual funds. Refer RBI site for regulatory framework. We need this presentation for technical learning session."

Armaan: " Ok Sir, In case of any problem, I will approach you Based on above, answer the following:

MULTIPLE CHOICE QUESTIONS:

1. Based on advice from Armaan, Aman collected data for two mid-cap mutual funds ABC and XYZ from their annual reports for the financial year ended March 31, 2020:

Expenses	ABC Fund	XYZ Fund
Management fee	1,50,00,000	1,60,00,000

Trustee fees	12,00,000	10,00,000
GST on management fee and Trustee fees	29,16,000	30,60,000
Custodian service charges	18,00,000	21,00,000
Registrar Service Charges	6,00,000	5,50,000
Auditor's remuneration	6,74,485	7,86,453
Brokerage expense	40,97,740	38,75,497
Commission to distributors	82,14,723	75,64,219
Other operating expenses	2,38,564	3,92,137
Total	3,47,41,512	3,53,28,306
Net assets	ABC Fund	XYZ Fund
At 01/04/2019	80,42,10,196	81,50,90,257
At 31/03/2020	1,01,64,96,712	1,01,74,36,911

Expense ratio of a similar fund DEF is 3.33

In the light of above, which statement is correct in terms of expense ratio?

(a) If ABC had assets equal to XYZ, ABC would have underperformed XYZ.

(b) If XYZ had assets equal to ABC, XYZ would have outperformed ABC.

(c) DEF outperforms both ABC and XYZ.

2. Continuing his evaluation, Aman computed following statistical ratios to look at point to point returns:

Ratio	ABC Fund	XYZ Fund
Sharpe Ratio	0.54	0.58
Sortino Ratio	0.81	0.42
Jensen Alpha	0.40	-0.04
Annualised Return	7.50	7.36

Risk free rate is 5%. Market return is 8%. Which of the following conclusions by Aman is not correct?

(a) Negative volatility of XYZ returns exceeds its total volatility.

(b) If the annualised return of both ABC and XYZ is equal, total return variability is higher in case of ABC.

(c) ABC fund is more suitable for investment in terms of Treynor ratio.

(d) Systematic risk is higher in case of ABC fund.

3. Which of the following statements of Amar as to Commercial Paper is incorrect?

(a) Statement 1. (b) Statement 2. (c) Statement 3. (d) Statement 4.

4. Aman was curious to know more about ETF and INVITs. He dropped a message to Armaan seeking information about them. Armaan replied on email. Based on his reply, Aman called upon an AMFI Agent and asked to suggest ETFs and INVITs for investment. Which statements by AMFI agent is correct?

(a) "There are many options available for ETFs. They allow investors to have exposure to index similar to futures. You can directly buy ETF units on NSE F &O Segment."

(b) "You can invest in INVITs provided you meet the minimum investment amount requirements of SEBI. Why don't you invest in REITs? Just like INVITs, REITs invest in infrastructure assets."

(c) "The performance of PSR Realty Fund has been really impressive. PSR Realty fund is a real estate mutual fund. It invests in securities of companies having investments in properties. This way, it is similar to a REIT or INVIT. "

(d) If you looking for ETF, you can think considering closed ended mutual funds also. Similar to ETF, Closed ended funds trade on exchange intraday.

5. In his presentation, Armaan made following statements about money market mutual funds. Which of the following statements, do you think, will be only be accepted by his manager, Raman?

(a) Money Market Mutual Funds are closed ended debt schemes set up specifically for the purpose of mobilisation of short-term funds. The resources mobilised by MMMFs are invested exclusively in various money market instruments having maturity upto 1 year such as Treasury bills, Commercial Paper, call money, etc.

(b) Money market mutual fund provides principal preservation while yielding a high return. They are generally the safest and most secure of mutual fund investments. Akin to a high-yield bank account, they are entirely risk free.

(c) Money market mutual funds offer the advantage of high liquidity, expertise of a professional fund manager, access to capital markets and diversification of short term assets.

(d) Money market mutual funds set up by banks are subject to reserve requirements as these funds are invested in money market instruments

ANSWERS TO THE CASE STUDY - 2

(1) c

Reason : The Expense Ratio relates to the extent of assets used to run the Mutual Fund. It is inclusive of travel cost, management consultancy and advisory fees. It however excludes brokerage expenses for trading.

Accordingly expense ratio for ABC and XYZ can be computed as follows:

	ABC Fund	**XYZ Fund**
Total Expenses	3,47,41,512	3,53,28,306
Less: Brokerage expenses	40,97,740	38,75,497
Expenses for expense ratio (A)	3,06,43,772	3,14,52,809
Net assets as at 01/04/2019 (a)	80,42,10,196	81,50,90,257
Net assets as at 31/03/2020 (b)	1,01,64,96,712	1,01,74,36,911
Average Value of assets during the period (B)=(a+b)/2	91,03,53,454	91,62,63,584
Expense ratio (A/B)	3.3661	3.4327

ABC has outperformed XYZ as its expense ratio is lower. However, expense ratio of DEF is 3.32 which is lower than both ABC and XYZ. Hence DEF has outperformed both ABC and XYZ.

If ABC had assets equal to XYZ, expense ratio of ABC would have been 3.34 and it would have still outperformed XYZ. Hence statement a is incorrect

If XYZ had assets equal to ABC, expense ratio of XYZ would have 3.455 and it would have still underperformed ABC. Hence statement b is incorrect.

Statement d is incorrect as both a and b are incorrect.

(2) d

Statement a is correct.

Reason : Sharpe ratio is computed using standard deviation which is a measure of total volatility. It is equal to :

Sharpe ratio = (Annualised Return - Risk free eturn) / Annualised Standard Deviation

Sortino Ratio uses downside deviation which is a measure of negative volatility. It is equal to :

Sortino Ratio = (Annualised Return - Risk free eturn) / Downside Deviation

The numerator in both Sharpe and Sortino Ratio is same. Only denominator differs.

Since Sortino Ratio of XYZ (0.42) is less than Sharpe Ratio (0.58), numerator being equal, it implies that denominator is higher in case of Sortino Ratio which is nothing but negative volatility. Hence, Negative volatility of XYZ returns exceeds its total volatility.

Statement b is correct. If the annualised return of both ABC and XYZ is equal, the numerator becomes equal. Higher denominator leads to lower Sharpe Ratio for ABC. Higher denominator is nothing but higher standard deviation which is a measure of total return variability.

Statement c is correct. Treynor Ratio measures excess return generated per unit of systematic risk in the portfolio. It is similar to Sharpe ratio except that denominator is portfolio beta which is a measure of systematic risk.

Treynor Ratio = (Annualised Return - Risk free eturn) / Portfolio Beta

We need to use Jensen Alpha statistics to compute fund beta. Jensen Alpha is the difference between a fund's actual return and those that could have been made on a benchmark portfolio with the same risk- i.e. beta

Therefore Jensen Alpha = Return of Portfolio - Expected Return where

Expected return = Risk Free Return + Portfolio Beta (Market Return - Risk Free Return)

Accordingly

	ABC Fund	**XYZ Fund**
Risk free Rate (given) (A)	5.00	5.00
Market return (given) (B)	8.00	8.00
Excess Return (C) = (B-A)	3.00	3.00
Jensen Alpha (given) (D)	0.40	-0.04
Annualised Return (given) (E)	7.50	7.36
Expected Return (F)=(E-D)	7.10	7.40
Fund Beta (G)=(F - A)/C	0.70	0.80
Treynor Ratio (E-A)/G	3.57	2.95

Since the Treynor Ratio of ABC Fund is higher, ABC fund is more suitable for investment in terms of Treynor ratio.

(3) c

Reason : Statement 3 is incorrect because Commercial Paper are unsecured, though issued by high rated corporate entities.

(4) d

Reason : Statement d is correct. It is true that both ETF and closed ended funds trade on exchange intraday.

Statement a is incorrect. Though ETFs allow investors to have exposure to index similar to futures, they trade on cash market of NSE and one can buy ETF units on NSE Capital segment.

Statement b is incorrect. It is true that an individual can invest in INVITs provided the minimum investment amount requirements of SEBI are met. However, REITs invest in revenue generating real estate assets and not infrastructure assets."

Statement c is incorrect. REIT or INVIT do not invest in securities of companies. Rather, they invest in revenue generating real estate assets and or infrastructure assets directly or indirectly through a Special Purpose Vehicle (SPV).

(5) d

Reason : Statement a is incorrect. Money Market Mutual Funds are not closed ended debt schemes. Rather they are open ended schemes.

Statement b is incorrect. Its true that money market mutual fund provides principal preservation but they yield a modest return. They are very much safer but they are not entirely risk free.

Statement c is incorrect. Money market mutual funds offer the advantage of access to money markets and not capital markets.

✱ CASE STUDY 3 ✱

- Prime Tea Private Limited (PTPL) was established in 1938, headquartered in Kolkata. The company is privately owned by the Triboovandas family members, who have been in the tea business for the past 3 generations.
- PTPL chooses to pursue vertical integration by acquiring thetea plantation of a neighbouring country, 'SL'.
- To fund the investment of ~$85 million in SL's 200-acre plantation, PTPL plans to raise $30 million through debt. With the intention of maintaining certainty in future interest payments, PTPL aims tosecure a fixed interest rate. PTPL can borrow for one year at a fixedrate of 6% or at a floating rate of 2% above SOFR. Management of PTPL decides to enter into a swap arrangement with Company Tima. Company Tima also wishes to raise $30 Million. To take advantage of any fall in interest rates Tima is interested in borrowing funds at Floating Rate. However, it can only borrow funds at fixed rate of 7% p.a. or at SOFR +4%, because of lower credit rating in comparison of PTPL.

MULTIPLE CHOICE QUESTIONS

1. What effective rate will each end up paying if both have agreed toenter into a Swap agreement and split the resultant gain equally.

   (a) PTPL: 7% and Tima: SOFR +2%
   (c) PTPL: SOFR +2% and Tima: 7%
   (b) PTPL: 5.5% and Tima: SOFR +3.5%
   (d) PTPL: SOFR +3.5% and Tima: 5.5%

2 Which of the following is/are underlying instrument(s) in a Forward Rate Agreement?

   (a) Interest rate
   (c) Inflation rate
   (b) Exchange rate
   (d) Both (a) and (c) of the above

3 Plain vanilla interest rate swaps involved

   (a) Fixed to fixed rate swap
   (c) Floating to floating rate swap
   (b) Fixed to floating rate swap
   (d) Currency swap

4 Which of the following is a category of swaption?

   (a) Jamaican Swaption
   (c) British Swaption
   (b) Bermudan Swaption
   (d) Cuban Swaption

5 The entity is contemplating to borrow an amount of`60 crores for a Period of 3 months in the coming 6 month's time from now. The current rate of interest is 9% p.a., but it may group in 6 month's time. The company wants to hedge itself against the likely increase in interest rate.

   The Company's Bankers quoted an FRA (Forward Rate Agreement) at 9.30%p.a. What will be the Final settlement amount, if the actual rate of interest after 6 months happens to be (i) 9.60% p.a

   (a) 4,09,453 (b) 4,19,453 (c) 4,39,453 (d) 4,93,453

6 Parker & Co. is contemplating to borrow an amount of`60 crores for a Period of 3 months in the coming 6 month's time from now. The current rate of interest is 9% p.a., but it may go up in 6 month's time. The company wants to hedge itself against the likely increase in interest rate.

   The Company's Bankers quoted an FRA (Forward Rate Agreement) at 9.30%p.a

   What will be the Final settlement amount, if the actual rate of interest after 6 months happens to be (ii) 8.80% p.a.?

   (a) 7,33,855 (b) 7,33,555 (c) 7,33,505 (d) 7,31,855

ANSWERS TO THE CASE STUDY - 3

1. (b) PTPL: 5.5% and Tima: SOFR +3.5%.

Reason : There is bigger difference in the variable rate so to take advantage of this, Tima will borrow fixed and PTPL then has to borrow at a variable rate. Accordingly, Swap arrangement shall be carried out as follows:

Working

	Tima	PTPL	Difference
Fixed	7%	6%	1%
Floating	S + 4%	S + 2%	2%
Absolute Difference			1%
Split of gain equally	+0.5%	+0.5%	-1%
Net Interest	S + 3.5%	5.5%	

2. (a)
3. (b)
4. (b)
5. (c) Reason: If actual rate of interest after 6 months happens to be 9.60%

$$= \frac{(60\text{ crore})(0.096 - 0.093)\left(\frac{3}{12}\right)}{\left[1 + 0.096\left(\frac{3}{12}\right)\right]}$$

$$= \frac{(60\text{ crore})(0.00075)}{1.024} = 4{,}39{,}453$$

Thus, banker will pay the company a sum of Rs 4,39,453.

6. (a) : Reason: If actual rate of interest after 6 months happens to be 8.80%

$$= \frac{(60\text{ crore})(0.088\text{-}0.093)\left(\frac{3}{12}\right)}{\left[1 + 0.088\left(\frac{3}{12}\right)\right]}$$

$$= \frac{(60\text{ crore})(-0.00125)}{1.022} = 7{,}33{,}855$$

Thus the company will pay banker a sum of Rs 7,33,855

✱ CASE STUDY 4 ✱

– M/s HK & Co., based in New Delhi, is a leading firm of Chartered Accountants having clients from all verticals of business and service industry. Firm has 20 partners having professional experience of more than three decades.
– During the month of July 2022, different engagement teams handled various assignments. and CA H Kumar has been asked to review and guide the engagement teams in the following assignment.

Assignment with the firm: JK Limited (JKL)

– JK Limited is interested in acquiring the running enterprise rather than starting a new project. The company has its interest in one of the divisions of M/s ARP Limited (a listed entity) (ARP). M/s ARP Limited is a multi-industry company having its presence from auto components to textile mills to food processing business. All these businesses are under the same roof i.e. ARP Limited. Shares of ARP Limited are actively traded and current market price is ` 15 per share. Summarized Balance sheets of ARP Limited and JK Limited are as follows: (Amount in rupees thousands)

	ARP Limited	JK Limited
Non-Current Assets	1000	600
Current Assets:		
Trade Receivables	500	100
Cash and Cash Equivalents	500	50
Total	2000	750
Shareholders' Funds	800	500
Long Term Debt	200	50
Current Liabilities and Provisions	1000	200
Total	2000	750

- Shareholders' funds of ARP Limited represent 70,000 shares of ` 10 each and rest is retained earnings/reserves and surplus. Data pertains to the entire company and not of a particular division. Segment wise valuation will lead to higher valuation of the company. Hardware division of the ARP Limited will be bought for ` 60 Crores and for this acquisition, funds will be borrowed by the management of JK Limited.
- One of the verticals of JKL is engaged in export of gold jewellery and ornaments. JKL has a paid up Equity share capital of ` 4 lakh divided into 40 thousand equity shares of ` 10 each. Results for half year ended 30th September 2022 has indicated 15% growth in revenue and 20% in profits as compared to results of half year ended 30th September 2021. Order book of the company is strong enough to maintain this growth for next five years.

Another vertical of JKL is engaged in the manufacturing and exports of drilling machinery.

Further another vertical of JKL is engaged in agricultural operations.

MULTIPLE CHOICE QUESTIONS

1. Which approach can be used by JK Limited (JKL) to value division of ARP Limited considering the fact that segment wise valuation of ARP Limited will lead to overall higher valuation of the company?
   (a) Valuation using Net Book Value.
   (b) Valuation by multiples.
   (c) Valuation using Chop Shop method.
   (d) Valuation using balance sheet approach.
2. The Following data are available for JK Limited (JKL).

Particulars	2024	2025	2026	2027	2028
Net Income (Rs. crore):.	35	39	44	52	61
Net Income Margin (%)	5.8	6.0	6.3	6.7	7.4
EPS 2.16	2.46	2.84	3.38	4.08	
DPS 0.54	0.62	0.74	0.88	1.10	
Pay-out Ratio	25%o	25.0	26.1	26.0	27%

   The earning are to grow in the next 2 years. at the annual componence growth rate of the four years :
   Applying industries P/E of 15 times to JK Limited the projected share price of JK Limited is approx. _______ next year.
   (a) Rs. 71.7
   (b) Rs.82.0
   (c) Rs.91.5
   (d) Rs.16.2
   (e) Rs. 85.0.
3. Earnings per share of ARP Ltd. expected in the year 2021 is Rs.20.00. The earnings per share in the year 2020 is Rs.16.07. The required rate of return is 30% p.a. and the dividend pay-out ratio is 35% which is expected to remain constant. The value of the share of the company is

(a) Rs 69.37
(b) Rs. 70.00
(c) Rs. 71.00
(d) Rs. 89.00
(e) Rs. 91.00.

4 In a valuation model for a loss making company highest weightage should be given to

(a) Projected cash Flows
(b) Book value
(c) Market price
(d) Equal weights to project cash flows, book value and market price
(e) Accumulated losses.

5 The Income approach for Valuation of Shares includes the models/Techniques:

(a) Discounted Cash Flow
(b) Dividend Discount Model
(c) Maintainable Profits Basis
(d) All of the above

ANSWERS TO THE CASE STUDY - 4

1. (c)
2. (a) : Reason :
   Growth rate = $(1.1388 \times 1.15447 \times 1.19014 \times 1.2071)^{1/4}$ = (1.17231)
   EPS (1999) = 4.08(1.17231) = 4.78
   Price = P/E x EPS = 15x4.78 = 71.7.
3. (b) : Reason:
   DPS = EPS x Dividend pay-out ratio = 20 x 0.35 = 7 (in 2021)
   = 16.67 x 0.35 = 5.8345 (in 2020)
   g = (7 - 5.8345)/5.8345 = 0.19976.
   $P_0 = D_1/(k_e - g)$ = 7/(0.30 - g) = 7/(0.30 - 0.19976) = 69.83 (or) 70.
4. (b) Reason : For a loss-making firm, valuation techniques will be bit harsh on the valuation. Hence, in a valuation model for a loss making company highest weightage should be given to book value.
5. (d)

✱ CASE STUDY 5 ✱

– Make in India initiative of Government of India has attracted investments from various corporates around the world and has given impetus to the indigenous entrepreneurs . Inspired by this initiative and a change in government policies, Mr. Shyam, Mr. Abraham and Ms. Kavita who have studied together in IIT, had formed a company SAK Private Limited (SAK). SAK has been in the business of manufacturing and export of foot wear including premium sports shoes. It has become a known name in the last decade and is on a growth trajectory. Ms. Devika, Chartered Accountant, has been their CFO since the Company was founded and was a trusted advisor of the founder promoters. While finalizing accounts for the financial year 2022-23, she has doubts in respect of certain matters and approached you for your opinion.

– Meanwhile, Shyam reached out to CFO with a personal query. His son Rohan wanted to pursue post graduate degree in hotel management from a leading university A in Switzerland.

– With his efforts, he was able to secure admission in other university B and response from university A was awaited. As per rules of University A, if Rohan gets admission he will be required to deposit the first year fee by December 1, 2023. Shyam got forward contract from BAZ Bank Limited on September 1, 2023 for fee amount i.e. 8,000 Swiss Francs @ of ` 30.00 expiring on December 1, 2023. On November 1, 2023, Rohan got news that University A has not given admission to him. Though he was disappointed but was happy with University B. Shyam now went to bank and cancelled the forward contract on November 1, 2023. The rates prevailing were

		November 1, 2023	December 1, 2023
Spot	CHF 1 =	` 30.30	` 30.35
One-month forward	` 30.45	` 30.55	

MULTIPLE CHOICE QUESTIONS

1. What would be the loss incurred by Shyam on cancellation of the forward contract on November 1, 2023.

   (a) ` 3,600 (b) ` 2,800 (c) ` 4,400 (d) ` 2,400

2 If the value of the Canadian Dollar is worth $ 0.65 and the Swiss Franc (Sf) is worth $ 0.90, then the value of the Swiss Franc in Canadian Dollars (C$) is

(a) 1.38 (b) 0.72 (c) 0.59 (d) 0.40 (e) 0.35

3 __________Rs./$ 46.10 / 46.20 Rs./Euro 55.00 / 55.60 If an Indian exporter requires Euro for $, the rate quoted to him is

(a) $/Euro 1.1905
(b) $/Euro 1.1931
(c) $/Euro 1.2035
(d) $/Euro 1.2061
(e) None of the above.

4 Consider the following rates :

Spot Rs./$ 44.60/65

$/Euro 0.9562/65

An Indian importer requires euro. The rate quoted to him is

(a) Rs. 42.65 / $
(b) Rs. 42.66 / $
(c) Rs. 42.69 / $
(d) Rs. 42.71 / $
(e) None of the above

5 Assume that the spot rate of the Swiss Franc is $ 0.90 and the expected spot rate one year from now is $ 0.85. This change reflects

(a) A 5.56% appreciation of the Swiss Franc
(b) A 5.56% depreciation of the Swiss Franc
(c) A 5.88% appreciation of the Swiss Franc
(d) A 5.88% depreciation of the Swiss Franc
(e) None of the above

ANSWERS TO THE CASE STUDY - 5

1. (a)
2. (a)

Reason :

Can $/Sf = 0.65

Sf/$ = 0.90

Sf/Can $ = Sf/$ x 1/(Can$/Sf) = 0.90 x 1/0.65 = 1.3846

3. (d)

Reason: Rs./$ - 46.10 / 46.20 Rs./€ = 55.00 / 55.60

$/ask = $(1/Rs./\$)_{bid}$ x $(Rs./\$)_{ask}$ = 1/46.10 x 55.60 = 1.2061

4. (d) :

Reason : $(A/C)_{ask} = (A/B)_{ask} \times (B/C)_{ask}$

Rs./€ = 44.65 x 0.9565 = Rs. 42.707/ €

5. (b)

Reason : Depreciation = $\frac{\text{Forward - Spot}}{\text{Spot}} \times 100$

Depreciation = $\frac{0.85 - 0.9}{0.9} \times 100$ = - 5.56%.

∴ There is a 5.56% depreciation the Swiss Franc.

✱ CASE STUDY 6 ✱

– Subham Ltd., incorporated in 1999, is a public unlisted company headquartered in Surat, Gujarat, India. It has carved a niche for itself in the production of high-quality industrial spare parts catering to a diverse clientele across the manufacturing, construction, and allied industries.
– Subham Ltd. boasts a cutting-edge manufacturing facility equipped with advanced machinery and technology. Their production process prioritizes rigorous quality checks, ensuring their spare parts meet the highest standards of durability, functionality, and efficiency. The company's passion for excellence has earned them the devotion of their customers, establishing them as a reliable and dependable supplier in the industry.
– Driven by a customer-centric approach, Subham Ltd. maintains a wide inventory of spare parts to cater to the diverse needs of their clients. Their product portfolio encompasses a comprehensive range of parts, including bearings, gears, seals, and various other components critical for the smooth operation of machinery and equipment. Additionally, they offer custom-made solutions to cater to specific client requirements, ensuring their parts seamlessly integrate into existing machinery.
– Looking ahead, Subham Ltd. is committed to continuous innovation and expansion. They actively invest in research and development to stay abreast of the latest advancements in materials and manufacturing techniques. The company also plans to broaden its geographic reach by establishing alliances and linkages, strengthening its position as a leading player in the industrial spare parts industry.
– A new finance manager, CA Manoj Desai, joined Subham Ltd. before the financial year ending 31st March, 2024 and was engaged in the review of financial statements to prepare for the upcoming audit and to begin making a loan application to finance the new technology.
– CA Manoj kindly requested Ms. Disha, the managing director, to call for a meeting of the Board of the company to consider for the investment of surplus funds amounting to ` 10 crores of the company. Out of the total strength of six Directors of the company, five attended the said Board Meeting called by Ms. Disha.
– The investment of the said amount was to be made in a project of associate company of Subham Ltd. The risk-free rate of return is 7%. Risk premium expected by CA Manoj is 7%. The life of the project is 5 years.
– Following are the cash flows that are estimated over the life of the project:

Year	Cash flows (` in lakhs)
1	250
2	600
3	750
4	800
5	650

MULTIPLE CHOICE QUESTIONS

1. With respect to information given in Issue 3, approximately the Net Present Value of the project proposed for making investment based on Risk free rate is:
   (a) ` 2443.50 lakhs (b) ` 1443.50 lakhs (c) ` 997.85 lakhs (d) ` 1997.85 lakhs
2. With respect to information given in Issue 3, approximately the Net Present Value of the project proposed for making investment on the basis of Risks adjusted discount rate is:
   (a) ` 2443.50 lakhs (b) ` 1443.50 lakhs (c) ` 997.85 lakhs (d) ` 1997.85 lakhs
3. If nominal discounting rate is 15%, inflation rate is 5%, then real discounting rate will be_________________
   (a) 9.52% (b) 9.25% (c) 10.25% (d) 10.52%
4. If project cost = ` 12,000, Annual cash flow = ` 4,500 Cost of capital = 14%, life = 4 years, PVIFA (14%, 4) = 2.9137, then the sensitivity with respect to the project cost is______________
   (a) 9.27% (b) 10.27% (c) 9.72% (d) 10.72%
5. If expected NPV = ₹ 1,20,000 and S.D = ₹ 30,000, then coefficient of variation will be_________
   (a) 25% (c) 30%
   (b) 20% (d) *50%*

ANSWERS TO THE CASE STUDY - 6

1. (b) The Present Value of the Cash Flows for all the years by discounting the cash flow at 7% is calculated as below:

Year	Cash flows (` in lakhs)	Discounting Factor@ 7%	Present value of Cash Flows (₹ in lakhs)
1	250	0.935	233.8
2	600	0.873	523.8
3	750	0.816	612.0
4	800	0.763	610.4
5	650	0.713	463.5
Total of Present value of Cash flows			2443.5
Less: Initial investment			1000.00
Net Present Value (NPV)			1443.5

2. (c) When the risk-free rate is 7% and the risk premium expected by the Management is 7%, then risk adjusted discount rate is 7% + 7% = 14%.

Discounting the cash flows using the Risk Adjusted Discount Rate would be as below:

Year	Cash flows (` in lakhs)	Discounting Factor @ 14%	Present value of Cash Flows (` in lakhs)
1	250	0.877	219.3
2	600	0.769	461.4
3	750	0.675	506.3
4	800	0.592	473.6
5	650	0.519	337.4
Total of Present value of Cash flows			1998
Less: Initial investment			1000
Net Present Value (NPV)			998

3 (a) : Real discount rate = (1.15 / 1.05) – 1 = 0.0952 = 9.52%

4 (a) : NPV = (4500 x 2.9137) – 12,000 = 1111.65.

Sensitivity% = 1111.65 / 12,000 = 9.27%

5. (a): coefficient of variation = SD / Expected NPV = 30,000/120,000 = 0.25 = 25%

✱ CASE STUDY 7 ✱

- XYZ Mutual Fund is a professionally managed investment fund that pools money from many investors to purchase securities. Within a short span of time it becomes very popular amongst various investors. It provides comprehensive suite of savings and investment products across asset classes, which provide income and wealth creation opportunities to large retail and institutional customer.
- The single most important factor that drives XYZ Mutual Fund is its belief to give the investors the chance to profitably invest in the financial market, without constantly worrying about the market swings. To realize this belief, XYZ Mutual Fund has set up the infrastructure required to conduct all the fundamental research and backit up with effective analysis. Their strong emphasis on managing and controlling portfolio risk avoids chasing thelatest "fads" and trends.
- ABC Ltd. has entrusted a sum of ` 10 Lakh as the initial contribution towards the corpus of the Mutual Fund. PQR limited looks after the operation and investment of Mutual Fund. PQR limited may undertake any other business activities including activities in the nature of management and advisory services to offshore funds, financial consultancy and exchange of research on commercial basis etc., subject to receipt of necessary regulatory approvals.
- It has launched its new scheme recently. This scheme mainly invest (appx. 85%) its funds in equity & equity related instruments of top 100 company in terms of full market capitalization.
- XYZ mutual fund is willing to buy back ("redeem") their shares from their investor at the net asset value (NAV) computed that day based upon the prices of the securities owned by the fund. The cut-off timing for the redemption is 3:00 PM.

MULTIPLE CHOICE QUESTIONS

1 The following information is extracted from MF, a mutual fund scheme of XYZ. NAV on 01-11- 2019 is ₹65.78, annualized return is 15%. Distributions of income and capital gains were ₹0.50 and ₹0.30 per unit in the month. What is the NAV on 30-11-2019?

(a) ₹67.50 (b) ₹66.14 (c) ₹65.80 (d) ₹66.96

2 An investor has invested in a XYZ mutual fund when the NAV was ₹15.50 per unit. After 90 days the NAV was ₹14.45 per unit. During the period the investor got a cash dividend of ₹1.35 per unit and capital gain distribution of Re. 0.20. The annualized return based on 360 days year count will be

(a) 3.23% (b) 12.92% (c) 0.8075% (d) 16.45%

3 A XYZ mutual fund scheme that had a net asset value of ₹20 at the beginning of a month, made income and capital gain distribution of ₹0.06 and ₹0.04 respectively per unit during the month and then ended the month with a net asset value of ₹20.25. The monthly return is:

(a) 2.25% (b) 1.75% (c) 1.25% (d) 1.65%

4 The following information is available for XYZ mutual fund: Return 13% Risk (S.D. i.e. σ) 16% Beta (β) 0.90 Risk Free Rate 10% Treynor's Ratio of the mutual fund is:

(a) 3.85 (b) 4.43 (c) 3.33 (d) 3.73

5 How much money would you need to purchase 400 shares of XYZ mutual fund with a NAV of ` 55 per share and a 3% load?

(a) `22,000
(b) `21,450
(c) `23,200
(d) `22,660

ANSWERS TO THE CASE STUDY - 7

1. (C) :

   Reason : Monthly return = 15/12 = 1.25%

   1.25%= (NAV – 65.78 + 0.5 + 0.3)/65.78

   0.82225 = NAV — 64.98

   NAV = 65.80225 = 65.80

2. (B)

   Reason :

   - 15.50 + 14.45 +1.35 + 0.20 = +0.50

   Annualized return = 0.50 / 15.5 x (360/90) = 12.92%

3. (B)

   Reason :

   Capital Appreciation = Closing NAV – Opening NAV = ₹20.25 – ₹20 = ₹0.25

   Total return = Capital Appreciation + Income + Capital Gain = 0.25 + 0.06 + 0.04 = ₹0.35

   Monthly Return = Total Return/Opening NAV = 0.35/20 = 0.0175 = 1.75%

4. (C)

   Reason :

   Treynor's Ratio = (Rp – Rf)/β = (13 – 10)/0.90 = 3.33

   Where, Rp = Return; Rf = Risk Free Rate of Return; β = Beta

5. (D)

   Reason :

   Amount required = (55 x 1.03) x 400 units = 22,660

✱ CASE STUDY 8 ✱

Fiduciary Asset Management Company launched two new open ended schemes under the flag ship fundFiduciary Mutual Fund. The extract of the fund information document is laid below.

Name of the Scheme	Fiduciary Equity Growth Fund	Fiduciary Active Bond Fund
Issue size	INR 100 crores	INR 200 Crores
Theme	Equity	Debt
Plans	(i) Growth (ii) Dividend	Growth
Entry Load	Nil	Nil
Exit Load	Nil	Nil
Expense Ratio	2%	1.75%
Switch option	Yes	Not Applicable
Face Value of Unit	` 10/-	` 10/-
Risk	Moderately High	Low

Disclaimer: Please refer to the Scheme Information Document (SID) for the detailed asset allocation andinvestment strategy. Portfolio allocation is based on prevailing market conditions and is subject to change depending on funds manager's view of the equity markets. Fiduciary

Asset Management Company is not liable for loss or shortfall resulting from the operation of the schemes.

Long Term Capital gains on equity-oriented fund are taxed at 10% on gains greater than ` 1 lakh without indexation subject to payment of STT.

Mutual Fund Investments are subject to market risks, read all the scheme related documents carefully.

Mutual Fund does not assure a profit or guarantee protection against loss in a declining market. The Prospectus mentioned above is not based on any judgments of the future return of the debt and equity markets / sectorsor of any individual security and should not be construed as promise on minimum returns and/or safeguard of capital. Information gathered and material used for the prospectus is believed to be from reliable sources. Fiduciary Asset Management Company however does not warrant the accuracy, reasonableness and/or completeness of any such information. The illustration do not purport to represent the performance of any security or investments. Nothing contained herein shall amount to an offer, invitation, advertisement, promotion or sponsor of any product or services. In view of individual nature of tax consequences, each investoris advised to consult his/her own professional tax advisor before taking any investment decision. Lastly, Mutual Fund does not assure profits.

The launch was successful, and both the schemes received positive response from the investors. The investor funds was duly received in the bank accounts. Leading market brokers were empanelled for market investment activity. ICICI Securities was appointed as custodian for holding the scheme portfolio. Fund accounting was outsourced to Intelenet Global Services.

MULTIPLE CHOICE QUESTIONS

1. Mr Rajiv enrolled for a SIP saving programme out of his monthly savings for an amount of ` 5000/- month at the beginning of every month in a growth scheme of a leading mutual fund. The NAV of the scheme at the beginning of each month is given as below:

   Month NAV in INR at the beginning of the month

   1 10
   2 10.22
   3 10.35
   4 10.56
   5 11.1

   NAV at the end of the 5th month is ` 11.15

   What is the value of the scheme holding of Mr. Rajiv at the end of five months under this SIP saving plan.

   (a) ` 25,000.00 (b) ` 30,536.65 (c) ` 26,718.34 (d) ` 22,324.44

2. In case of (1) above, what is the annualised rate of return at the end of the fifth month on the scheme unit holdings of Mr. Rajiv assuming that an investment of INR 25000/- was made at the beginning of the first month instead of monthly SIP of INR 5000/-

   (a) 27.6% (b) 25.4% (c) 11.5% (d) 22.8%

3. What is the minimum lock in period for an open ended equity linked saving scheme (ELSS) with taxbenefit?

(a) Six Months (b) One Year (c) Three Years (d) Five Years

4. For which of the following funds, the NAV is published on Sunday as well?

(a) Equity Fund (b) Debt Fund (c) Index Fund (d) Liquid Fund

5. Mr. Khanna is evaluating investment in equity scheme of a mutual fund and want to evaluate his choicebased on the risk reward ratio offered by various schemes available in market.

Four schemes as indicated below were proposed by his investment advisor:

	Scheme		**Magnum Growth**	
	Fund Active India	**Growth Fund**	**Middleton Opportunity Fund**	**Advantage India**
Fund Annual return (%)	15	12.5	13	14
Beta	1.2	0.8	0.9	1.1

The equity market gave a return on 13.5%. Currently sovereign yields are running at 7%.

Determine which scheme offers the best Alpha (Jenson Alpha) for Mr. Khanna

(a) Magnum Growth Fund

(b) Active India Growth Fund

(c) Middleton Opportunity Fund

(d) Advantage India Fund

ANSWERS TO THE CASE STUDY - 8

1. (c) The unit holding from the amount invested every month at the respective NAV canbe computed as below

Month (1)	Investment in INR (2)	NAV (3)	No of Units (4) [2 /3]
1	5,000	10	500.00
2	5,000	10.22	489.24
3	5,000	10.35	483.09
4	5,000	10.56	473.48
5	5,000	11.1	450.45
Total	25,000		2,396.26

Value of the scheme holding = No of units x closing NAV

= 2,396.26 x 11.15

= 26,718.30

2. (a) Change in NAV from the date of investment to the end of the fifth month = ` 1.15(11.15-10).

Return for 5 months = 1.15/10

= 11.5%

Annualised return = Return for 5 months x 12/5

= 11.5% x 12/5 = 27.6%

3. (c)
4. (d)
5. (b) Jenson's Alpha = Actual Return – Expected Return

Expected Return = Risk Free Return – Beta (Market Return-Risk Free Return)

The expected return for each of the fund and resultant jenson's alpha is calculatedas below

Scheme	Magnum Growth Fund	Active India Growth Fund	Middleton Opportunity Fund	Advantage India Fund
Annual return	15	12.5	13	14
Beta	1.2	0.8	0.9	1.1
Market Return	13.5	13.5	13.5	13.5
Risk Free Return	7	7	7	7
Expected Return	14.8	12.2	12.85	14.15
Jenson's Alpha	0.2	0.3	0.15	-0.15
Thus, Active Growth Fund has the best alpha.				

✱ CASE STUDY 9 ✱

– Rajesh and Vijay run a plastic manufacturing company at Manesar in Haryana. The company is named RV Plastics Ltd. (RVPL) and it sells its products to leading car manufacturers in India. Both Rajesh and Vijay hold 80% of equity shares in the Company in equal proportion and the remaining equity shares are held by others. The Company has been consistently recording double digit growth both in topline and bottom line.

Treasury Management

– RVPL' s treasury is focused on providing liquidity to the business at the optimal risk-adjusted cost. There is a system of frequent monitoring of the financial markets to assess financing and investment opportunities to raise fund at optimized costs and deliver superior returns. The treasury of RVPL regularly calculates the forward rates. The information gathered from the market indicates the following rates:

- One year and two-year treasury rates of 6 % and 7% respectively.

– One of the juniors working in the treasury has decided to go for few years in a bank's treasury in order to get a full exposure. He is preparing for the written exam. He has approached you for your help in understanding computation of the dirty price. Relevant information in this respect is given as under:

– Bharat Bank of India enters into a Repo for 30 days with Hindustan Bank of India in I0% GOI bond at a rate of 6.25% for INR 10 crores. The quoted clean price is INR 98.50, initial margin is 3%, and days of accrued interest is 250.

Multiple Choice Questions

1. Based on the information given in the Case Study, what is the one year forward Treasury rate?
   (a) 7.5% (b) 7.8% (c) 8.01% (d) 8.8% **(2 Marks)**
2. Based on the information given in the Case Study, what would be the dirty price of the transaction between Bharat Bank of India and Hindustan Bank of India? (Assume 30/360 convention).
   (a) INR 104.44 (b) INR 105.44 (c) INR 103.44 (d) INR 106.44 **(2 Marks)**
3. It is given that ₹/£ quote is ₹100.68 – 102.95 and ₹/$ quote is ₹61.86 – 62.87. What would be the $/£ quote?
   (a) $1.6014-$1.6642(quote) (c) $1.6014-$6352(quote)
   (b) $1.6014-$1.6542(quote) (d) $1.6014-$6252(quote)
   (2 Marks)
4. The following various currency quotes are available from the State Bank of India: ₹/£ 81.31/81.33; £/$ 0.6491/0.6498; $/¥ 0.01098/0.01102. The rate at which yen (¥) can be purchased with rupees will be:
   (a) 1.5270
   (b) 1.5890
   (c) 0.5824
   (d) 0.7824

   (2 Marks)

ANSWERS TO THE CASE STUDY - 9

1. (c)
2. (b)
3. (a) : Reason

   The synthetic rate for \$ / £ is to be calculated. Here, rupee, the price currency (i.e. common currency)is the cheapest among the three currencies involved in the quotes. The formula is:

   \$ / £ = [(₹/ £bid)/ (₹/ \$ask)]: [(₹/ £ask)/ (₹/ \$bid)]

   = [100.68/ 62.87]: [102.95/61.86]

   = 1.6014:1.6642;

   So, \$/£ = \$1.6014 - \$ 1.6642 (quote).
4. (c)

   Reason : To purchase ¥, we need to have a quote of ¥ in terms of ₹. We need only the 'ask' quote

   Ask (₹/¥) = Ask (₹/£) × Ask (£/\$) × Ask (\$/¥)

   = 81.33 × 0.6498 × 0.01102 = 0.5824

CASE STUDY 10 ✱

Auto Components Company (ACC)

– ACC was founded in 1980. It is a privately owned and independently operated auto component manufacturing company. ACC manufactures pistons, bearings, and gears. Over the years, automobile sales and the demand for auto components have skyrocketed globally. At ACC, the Company ensures that they always succeed in delivering the required products to the customers on time with the promised quality.
– PharmBig : PharmBig is a listed subsidiary of ACC. It is a mid-size manufacturer of pharmaceuticals located in Indore. It could not grow its business due to financial constraints. Particularly, PharmBig needs help for financing its permanent as well as temporary working capital needs. It is facing growth constraints as result of working capital problem.
– PharmBig has issued a 90-day Commercial Paper with a face value of INR 10,00,000. The Commercial Paper is sold at a discount of INR 9,75,000. The management objective always has been to offer yield to the investors at least equal to what competitors are offering.
– It has come to the notice of the management of PharmBig that a company XYZ is offering a rights issue to its existing shareholders. The details of the rights issue are as follows:
– Market Price of Company XYZ's Stock during the ex-right period: INR 50 per share
– Subscription Price for Right Share: INR 40 per share
– The ratio of Right Share to Existing Shares: 1 Right Share for every two shares held

MULTIPLE CHOICE QUESTIONS

1. Which of the following is the correct yield on the Commercial Paper discussed in the Case Study? (Use 360 days in a year as a convention)
(a) 10% (b) 10.26% (c) 9.26% (d) 11.26% **(2 Marks)**

2. Which one of the following is correct regarding the theoretical value of a right based on the information given in the Case Study?
(a) INR 10.00 (b) INR 5.00 (c) INR 5.50 (d) None of the above **(2 Marks)**

3. If the spot rate is 39.00 / 39.50 and the swap points are 150 / 200, what is the forward quote?
(a) 38.85 / 39.25
(b) 39.15 / 39.75
(c) 38.85 / 39.75
(d) 39.15 / 39.25
(e) 40.50 / 41.50 **(2 Marks)**

4. If US inflation is persistently more than German inflation, which of the following is likely to hold good over a period of time?
(a) The dollar will appreciate against the euro
(b) The dollar will depreciate against other currencies
(c) The Euro will appreciate against the dollar
(d) The Euro will appreciate against other currencies.
(e) None of the above **(2 Marks)**

5 An investor has three alternatives of varying investment values. The data available for each of these alternatives are given below:

Alternative	Expected Return (%)	Standard Deviation of Return
I	23	8.00
II	20	9.50
III	18	5.00

Which alternative would be the best if coefficient of variation is used?
(a) Alternative III is the best as its co-efficient of variation is the lowest
(b) Alternative II is the best as its co-efficient of variation is the lowest
(c) Alternative I is the best as its co-efficient of variation is the lowest
(d) None

ANSWERS TO THE CASE STUDY - 10

1. (b)
2. (b)
3. (e)

   Reason : When the swap points are in low / high order the forward rate is obtained by adding the swap points to the spot rate. Hence, the forward quote is 40.5 / 41.5.
4. (c)

   Reason : According to the relative form of purchasing power parity changes in the spot rate over a period of time reflect the changes in the price levels over the same period in the concerned economies. It follows that a country facing a higher inflation rate would see its currency depreciating. Hence, the Euro will appreciate against the US$.
5. (a)

   Reason: Alternative III is the best as its co-efficient of variation is the lowest

   The Co-efficient of Variation is the ratio of standard deviation to mean.

Alternative	Expected Return (%)	Standard Deviation of Return	Co-efficient of Variation
I	23	8.00	0.35
II	20	9.50	0.48
III	18	5.00	0.28

✱ CASE STUDY 11 ✱

– FinEX gold and diamonds is a brand owned by Fine Quality Gold Limited (FQGL) with a legacy of over two decades. The promoters of FQGL are well known in the gold and diamond market in India. The Company was incorporated in 2003 in Hyderabad and it is known for its innovative designs and gold quality. The Company imports gold from Switzerland but is invoiced in USD. As per the demand forecast, it requires 5,000 ounces of gold (oz) for its jewelry manufacturing unit in the next three months.

CDO

– Mr. Ashav who is son of MD & CEO of FQGL has interest in debt market. He has no interest in the commodity market and therefore he has not joined FQGL even after obtaining an MBA degree from a leading B-School in the USA. On the advice of MD & CEO he joined as a Credit Analyst in a Credit Rating firm. During the orientation program, he was introduced to practical elements of CDO. One of the instructors explained about the CDO as under:

➡ CDOs are structured Asset-Backed Security (ABS) that allow for pooling various types of debt, such as mortgages, auto loans, credit card debt, and more.

➡ CDOs are meant to create a diversified portfolio; different types of debt are collected and pooled together as a pool of debt.

➡ The pooled debt is divided into different tranches based on risk characteristics.

➡ As the underlying debt generates cash flows, those cash flows are used to pay the investors in the different tranches.

– The junior, mezzanine, and senior debt tranches receive interest and principal proceeds in the order of their seniority. Most senior tranche holders receive their payments first, more junior tranche investors receive payments only if more prioritized payments are in line with the documentation of the structure.

– Mr. Ashav needs clarification about the importance of correlations among defaults of the underlying assets and how such correlations affect the value of the tranches.

Estimation of Credit Risk

– Mr. Ashay is tasked with analyzing the credit risk of GSP Limited which is a steel manufacturing company located in Chhattisgarh State.

– Recently, many mid-sized steel manufacturing firms defaulted on loans, leading to debate on the credit risk steel industry. Like any other industry, the steel industry also faces credit risk. However, the credit risk of steel manufacturing firms has been on the rise due to various reasons.

MULTIPLE CHOICE QUESTIONS

1. Type of risks along with their explanations are listed below.

	List - 1		List - 2
(i)	Market Risk	(a)	Associated with the efficiency with which a firm conducts its operations within the broader environment imposed upon it.
(ii)	Financial Risk	(b)	Arises due to change in operating conditions conditions thrust upon the firm which are beyond its control.
(iii)	External Business Risk	(c)	Variations in price sparked off due to real, social, political and economic events.
(iv)	Internal Business Risk	(d)	Associated with the capital structure of a firm.

Which one of the following combination is correct?

(a) (1)-(a), (ii)-(b), (iii)-(c), (iv)-(d) (b) (1)-(c), (ii)-(d), (iii)-(b), (iv)-(a)

(c) (1)-(c), (ii)-(a), (iii)-(b), (iv)-(d) (d) (i)-(d), (ii)-(c), (iii)-(a), (iv)-(b) **(2 Marks)**

2. Mezzanine financing is (i)___ and its default risk is (ii)___

(A) (i) is unsecured subordinated debt (ii) low (B) (i) is unsecured subordinated debt (ii) high

(C) (i) secured subordinated debt (ii) high (D) (i) subordinated debt (ii) low **(2 Marks)**

3. You are given the following information of a stock:

Strike Price	₹400
Current stock price	₹370
Risk free rate of interest	5%

Theoretical minimum price of a European 6 months put option after six months is

(a) ₹9.37 (b) ₹20.12 (c) ₹30.76 (d) ₹20.63

(2 Marks)

4. Presently, a company's share price is ₹120. After 6 months, the price will be either ₹ 150 with a probability of 0.8 or ₹110 with a probability of 0.2. A call option exists with an exercise price of ₹130. What will be the expected value of call option at maturity date?

   (a) ₹20 (b) ₹16 (c) ₹12 (d) ₹10

(2 Marks)

5. An investor is bullish about X Ltd. which trades in the spot market at ₹1,150. He buys two call option contracts with three months (one contract is 100 shares) with a strike price of ₹1,195 at a premium of ₹35 per share. Three months later, the share is selling at ₹1,240.

   Net profit/loss of the investor on the position will be

   (a) ₹1,000
   (b) ₹16,000
   (c) ₹11,000
   (d) ₹2,000

ANSWERS TO THE CASE STUDY - 11

1. (b)
2. (b)
3. (b) Reason

   Spot price today = 370; Strike price = 400

   $= 400 \times e^{-5\% \times \frac{6}{12}}$

   $= 400 \times e^{\frac{-0.05}{2}}$

   $= 400 \times e^{-.025}$

   $= \frac{400}{1.02532}$

   = 390.12

   Put option value = 390.12 – 370

   = 20.12
4. (b)

   Expected value of call option:

Expected share price (₹)	Exercise price (₹)	Call value (₹)	Probability	Call option value (₹)
150	130	20	0.8	16
110	130	0	0.2	0
				16

5. (c)

   Reason :

   Investor's Profit = (Spot Price – Strike Price – Premium) × No of Contracts × Lot Size

   = ₹ (1,240 – 1,195 – 35) × 2 × 100

   = ₹ 2,000

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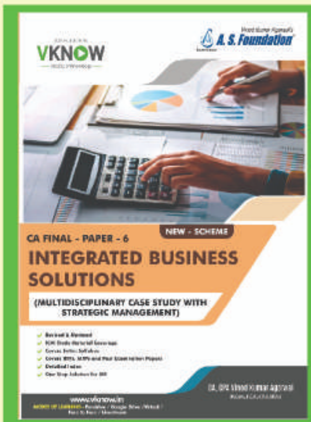

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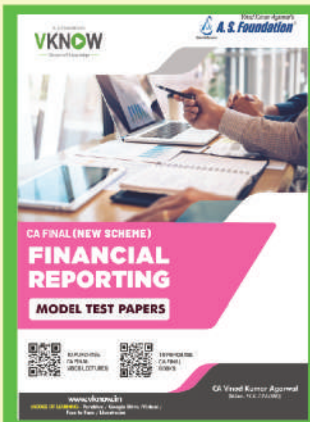

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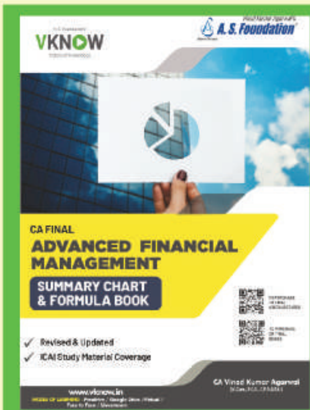

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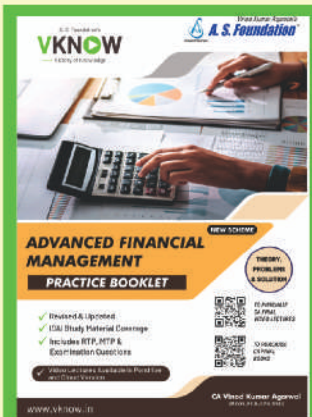

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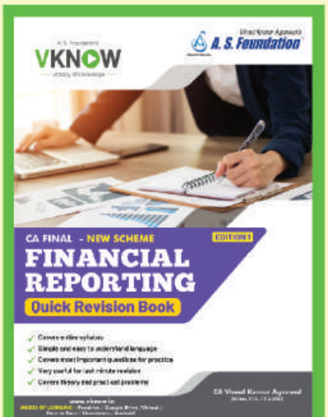

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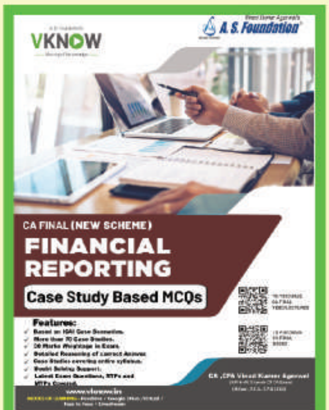

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CA VINOD KUMAR AGARWAL'S STUDENTS

FEEDBACK

Hii, Want to share my result
I have taken classes from Vinod Kumar Agarwal sir,
I got 63 in SFM which is very tough paper in May 2023.
I would like to thank VK sir
Thank you soo much sir

-Nagasai Parasupakam

I want to express my heartfelt gratitude to sir for his valuable guidance due to which I successfully cleared my CA Final group 2.

Even though the risk management paper was tough still i am able to score exemption in the subject.

Thank you so much sir

-Mansi Mittal

Good evening sir
I'm Sagar Sainani one of your lucky student who cleared both groups of CA Inter in 1st attempt
I bought FM-ECO lectures from you which helped me to score 56 marks in the same.
I was able to score just because of your guidance and techniques which you thought in the class.
Your revision lectures also helped me to recall the concepts very quickly.
Thank you sir for your mentorship and the way you thought to study the subject.

-Sagar Sainani

Hello Sir, I'm Harshita Golhani from Chhindwara.
Sir, your lectures are very good and easy to understand. I am learning a lot from those lectures.
Sir, I liked your way of understanding and your book is also very good and helps in understanding the topic...
Thank you very much sir for providing us lectures for free.
Once again thank you.

-Harshita Golhani

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