

Roll No.

Total No. of Case Study Questions – 5

Total No. of Printed Pages – 24

Time Allowed – 4 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.

The Question Paper comprises five case study questions.

The candidates are required to answer any four case study questions out of five.

Answer in respect of Multiple-Choice Questions (MCQs) are to be marked on the OMR Answer Sheet as given on the Cover Page of the answer book.

Answer to MCQs, if written inside the descriptive answer book, will not be evaluated.

Candidates should answer the Case Study Questions as selected by them in totality i.e., MCQ as well as descriptive Question of the same Case Study Questions.

Candidates are not permitted to answer MCQs of one Case Study Question and the descriptive questions of another Case Study Question and vice-versa.

Candidates may use calculator.

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CASE STUDY : 1

Deep inside the dense forests of the Western Ghats, there is a small hill station which is rich in natural beauty, full of clean water streams and some breath-taking valley views. It is believed that the place was the abode of Monkey King Vali, and since it looks like a beautiful garden hanging in mid-air, the place has been nick-named as “The Hanging Gardens of Vali”.

The tourism department of one of India’s western states believes that the place can be developed as an eco-tourism resort, and hence has invited proposals from various organisations. The mandate is to build a luxury resort with all modern day facilities along with a road to the hill station without tampering with the nature and environment of the place. On the road to be built, only horses and battery operated cars shall ply from a nearby plain area to the resort built at the top of the hill.

The developer will bear all the costs of construction of the resort as well as the road. It is estimated that the entire project will cost INR 1,200 crores, including the cost of Electric Vehicles (EVs), and it will take 5 years to complete the project. The State Government will grant the land for the project on an “as is where is” basis at zero cost and would ensure all necessary approvals are in place, but it will not spend any money on the project. The developer will be given exclusive rights to run the battery operated cars and the luxury resort for a period of 15 years, so as to recover investment and also earn a decent return on its investment. The project qualifies for a tax holiday scheme of the Central Government, wherein no taxes are payable for the first 15 years after completion of the project. Finally, at the end of the period of 15 years, the developer can either retain the right to run the resort, or hand it over to the State Government for INR 1,000 crores.

Ananth Infrastructure Limited (AIL) is one of the largest and most experienced organizations with expertise in execution of such projects. AIL has tangible net assets of at least INR 50 crores in the last five years with not more than 50% of the same held in monetary assets. It also has an average operating profits of INR 50 crores in the last four years and net worth of at least INR 10 crores in the last five years.

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AIL estimates that the cash outflows in relation to the project, including working capital requirements but excluding interest during execution of the project, will be as under :

Year	1	2	3	4	5
Infrastructure Costs (INR crores)	200	250	400	200	150

AIL plans to create a 100% Subsidiary called Ananth Exotic Resorts Ltd (AERL) for execution of this project. AIL will pump in equity of INR 300 crores into AERL, the balance will be raised in the form of a loan. AERL appoints Shailesh Capital, an Investment Banker, as their Project Consultants, to do a loan syndication by tapping various potential lenders. Shailesh Capital charges annual fee of 1% fee on the amount raised, which is also included in the infrastructure costs stated above. The loan amount has been syndicated by Shailesh Capital on the following terms:

- Interest at 14% p.a. on outstanding balance which will be added to the principal till completion of the project.
- Repayment can be done either by way of bullet payment of all dues at the end of Year 6, or converting into secured term loan at a 12% p.a. rate of interest, the principal being repayable in 15 equal instalments, starting at the end of Year 6.

It is further estimated that the Net Cash Revenue, after deducting operating and maintenance costs and related expenditure, will be as under :

Year	6	7	8	9	10	11	12	13
INR crores	120	185	200	215	230	250	260	280

Year	14	15	16	17	18	19	20
INR crores	300	320	340	375	400	450	500

At the end of Year 6, when the project starts yielding revenues, Shyam Capital suggests AERL to repay the entire loan by raising funds from the general public by issuing 10-year bonds at 10% per annum interest payable annually, repayment being done in one shot at the end of 10 years, with an escrow account created to ensure that cash flows are first used to pay interest and repay the principal. However, AIL will have to get the Credit Rating of the bonds done, which Shyam Capital is to organize. AERL is also considering securitization as a solution to manage its finances.

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BQW**Marks****2×5****=10****Multiple Choice Questions :**

- 1.1 As per the information given in the case study, which one of the following is the most appropriate categorization of alternative sources of funding in increasing order of risk (lowest risk first).

	Least Risky	Medium Risky	Most Risky
A	Project Finance	Term Loan	Bonds
B	Term Loan	Bonds	Project Finance
C	Bonds	Project Finance	Term Loan
D	Bonds	Term Loan	Project Finance

- 1.2 Assuming all funding for the year is raised on day-1 of the year, what would be the amount of interest payable by AERL by the end of Year 6 ?
 (A) INR 630.26 crores (B) INR 377.66 crores
 (C) INR 556.63 crores (D) INR 900.45 crores
- 1.3 If Debt/Equity ratio is defined as amount of long-term debt over Shareholders' Funds, what would be the Debt/ Equity ratio of AERL at the end of Year 5 ?
 (A) 4
 (B) 4.26
 (C) 4.85
 (D) Insufficient information to calculate
- 1.4 Which of the following activities is taken up by an Investment Banker ?
 (A) Underwriting (B) Syndication
 (C) Financial Structuring (D) All the above activities
- 1.5 For AERL, what would be the most suitable source of funding the project?
 (A) Go for an IPO for INR 1200 crores
 (B) Approach an Infrastructure Investment Trust (InVIT) to fund the project to the extent of INR 900 crores, with INR 300 crores coming in the form of equity from AIL
 (C) Issue Convertible Bonds of INR 1200 crores
 (D) Projected Cash Flows do not justify above mentioned sources of funding [i.e. (A), (B), (C)]

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| 1.6 | Should the AERL go for a 12% term loan repayment over 15 years or issue 10 year bonds at 10%? Evaluate two options of repaying the debt based on the incremental cash flows. | 6 |
| 1.7 | Given the projected Cash flows of the Company and other information available with you, in your opinion, would AERL be able to get the highest credit rating for its Bonds? Why or Why not ? | 4 |
| 1.8 | Suppose you are hired by AERL to explore the case for Securitization. Can AERL use Securitization as a solution to managing its finances ? | 3 |
| 1.9 | Based on SEBI (ICDR) Regulations 2018, is it possible for AERL or AIL to go for a public issue to raise at least a part of INR 300 crores that it plans to infuse as equity ? Why or Why Not ? | 2 |

CASE STUDY : 2

- (1) Samar Industries Limited (SIL) is a listed company engaged in the manufacturing of fancy digital watches. It has five subsidiaries which includes a listed subsidiary. The marketing manager, Ms. Tanmayi, has submitted a report to the top management of SIL that the youth are looking for watches that have lots of features, other than just showing time. She feels that the watches can be used to play games, track health parameters such as SPO2 levels, number of steps walked by the user, heart rate, etc. In addition, watches can be programmed to change the base appearance with the help of an App, which she believes is a super cool idea. In other words, the watch can have a base that can be changed just like a person can change the display picture of his/her Whatsapp Id. Having these features will not only increase the sales volume, but will help SIL play with prices, as different combination of features can be priced differently. SIL will need to use a special computer with software to build the above features into the digital watches. The procurement manager, Mr. Abhinav informs the Management that the price of the special computer including taxes, freight, insurance, works out to INR 10 lakhs. The finance manager, Mr. Siddhanth, says that Neeraj Bank with which SIL has a banking relationship, can fund 80% of the cost by way of a loan. The bank will waive off all other charges, except interest at 12% p.a. SIL can pay the balance in 7 instalments of INR 1,75,295 at the end of each year.

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- (2) Ms. Riya, who assists Mr Siddhanth, suggests that Mr Arun of Saahil Leasing and Finance Ltd had called, and offered to lease the computer. The lease rentals are payable as under :

Beginning of Year 1	4,00,000
Beginning of Year 2	3,00,000
Beginning of Year 3	2,00,000
Beginning of Year 4	1,50,000
Beginning of Year 5	75,000

SIL will have the right to buy the computer at the end of 5th year at INR 42,000. The lease would be irrevocable and costs of maintenance of the computer will have to be borne by SIL. The computer has a life of 8 years, and can be depreciated on a straight line basis. The residual value at the end of 8 years is likely to be negligible.

- (3) Ms. Tanmayi has also suggested to the Management that the new product should be made available on credit to all its dealers. Ms. Tanmayi expects annual sales of these new watches to be around INR 30 lakhs over the next 12 months. She feels that dealers should be given credit period of 60 days to encourage them to stock and sell these new innovative products. The finance manager, Mr. Ravindra, is not comfortable blocking so much of funds in the receivables. He feels SIL must opt for factoring services to ease its working capital position. XYZ Factors has made the following proposal in this respect.

- (i) Non-Recourse Factoring.
- (ii) Bad Debts : 1.5% of credit sales
- (iii) The factor will pay 80% of receivables
- (iv) Factoring Commission will be 1%
- (v) Administration costs towards collection of receivables : INR 2,000 per month.
- (vi) Interest : 12% p.a.

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- (4) SIL has a listed subsidiary named Ketan Industries Ltd (KIL). Association for Promotion of Indian Arts and Culture (APIAC) is an NGO which regularly conducts events. The events include performances by various eminent artists on every 3 weekends and felicitation of cultural ambassadors by eminent personalities on the 4th weekend. In July 2022, APIAC decided to felicitate Mr Ram Acharya, who has been a great champion of Indian culture and traditions. Mr. Chaitanya, the President of APIAC approached Mr Sridhar, the CEO of KIL, to honour Mr. Ram on behalf of APIAC, to which, Mr Sridhar agreed. The event was planned on 24th July 2022. During the event, Mr Chaitanya casually asked Mr. Sridhar if KIL has been able to recover from the setback it had received on account of Covid-19 related lockdowns. Not wanting to create negative publicity for KIL, Mr Sridhar said that the Company is doing really well, turnover is up by more than 60% Year on Year, and they are likely to announce a 1:1 bonus issue and a 100% dividend to shareholders along with declaration of quarterly results, that are due to be declared on 12th August 2022. Although it was a casual conversation and Mr Sridhar forgot about it, Mr Chaitanya purchased 1000 shares of KIL at INR 72 per share on 25th July 2022 through Mr. Deepak, a stock-broker, hoping to sell them after announcement of results on 12th August 2022. Mr Deepak also bought 500 shares on his own account on 25th July 2022. On 12th August 2022, KIL announced quarterly results, which were very disappointing. Profits had dipped by 20% even though there was a spike in revenues. There was no announcement of either bonus or special dividend. Shares of KIL fell to INR 57, resulting in a huge loss to both Mr. Chaitanya and Mr. Deepak.

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- (5) Mr Sridhar felt that the markets are over-reacting. The CFO of KIL, Mr. Shastri, suggests that KIL can buy-back the shares to the extent of 2.5% of issued capital, either by way of a tender offer, or through the stock market route, at a price not exceeding INR 65 per share. Promoters are also interested in participating in the buy-back process.
- (6) Based on the direction of the Board of SIL, the CFO of SIL has made investment in number of liquid instruments. As the investment amount has gone up substantially, the CFO wants to implement Value-at-Risk (VaR) concept for risk management and has sought your help in the implementation VaR.
- (7) SIL has a very prominent brand called "ARTSE" that is being used by number of group companies. The Board of SIL has asked details of last three years royalty received by SIL from the CFO. The next agenda in the Board is to consider allowing use of "ARTSE" by a newly created subsidiary PQ.

Multiple Choice Questions :

**2×5
=10**

- 2.1 Assuming SIL opts for buying the computer by taking a term loan, what would be the amount of principal outstanding (rounded off to nearest thousand) at the beginning of 4th year (after 3rd instalment of loan has been paid) ?
- (A) INR 6,32,000 (B) INR 5,32,000
(C) INR 4,21,000 (D) INR 8,76,000
- 2.2 Given that SIL can raise debt at 12% p.a., which one of the following is correct with respect to financial advantage of leasing ?
- (A) INR 2,77,360 (B) INR 5,559
(C) (-)5,559 (D) INR 1,67,000

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2.3 The CFO of SIL has asked you to respond whether the royalty to be received by SIL from PQ would be considered material. Which one of the following is correct in this respect ?

- (A) The transaction to be taken individually or taken together with previous transactions during a financial year exceeds 5% of the consolidated turnover of SIL as per the last audited financial.
- (B) The transaction to be taken individually or taken together with previous transactions during a financial year exceeds 10% of the consolidated turnover of SIL as per the last audited financial.
- (C) The transaction to be taken individually or taken together with previous transactions during a financial year exceeds 20% of the consolidated turnover of SIL as per the last audited financial.
- (D) The transaction to be taken individually or taken together with previous transactions during a financial year exceeds 15% of the consolidated turnover of SIL as per the last audited financial.

2.4 Based on the data given in the case study, which one of the following is correct regarding the effective cost of leasing ?

- (A) 12%
- (B) 12.5%
- (C) 11.5%
- (D) It cannot be calculated from the available information

2.5 The CFO of SIL has sought your help in implementing VaR. In this respect, which one of the following is not the component needed for computation of VaR ?

- (A) Z-score
- (B) Time period
- (C) Confidence level
- (D) Loss in percentage or Amount

2.6 Assuming 360 days in a year, evaluate the Factoring proposal given by XYZ for SIL ?

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- 2.7 As both Mr. Chaitanya and Mr Deepak suffered losses by acting on information provided by Mr Sridhar and hence there is no violation of insider trading regulations. Similarly, Mr Sridhar believes that there is no violation of the insider trading on his part as information shared was without any bad intention and aforementioned persons have not made any profits. Do you agree with the positions taken by three individuals? Give reasoned answer. **4**
- 2.8 What is your view on the suggestion made by Mr. Shastri regarding the buyback of equity shares of KIL, and which alternative, between open market and tender offer, is more appropriate for KIL ? **5**

CASE STUDY : 3

- (1) Preksha Pravek Asset Management Company (PPAMC) is one of the top Asset Management companies in India. As on July1, 2022, the AMC was managing assets (Assets Under Management, or AUM) to the tune of INR 150,000 crores across various schemes. It has 3 Equity Schemes, based on market capitalisation, namely Large Cap, Mid Cap and Small Cap. Its flagship scheme is “Shining India Focussed 50 Fund”, which invests primarily in the top 100 companies in India by market capitalization and has AUM of INR 75,000 crores, while there are two other equity oriented Funds, namely “Emerging India Fund” focussed on Mid-Caps and “Little Gems Small Cap Fund”, managing approximately INR 50,000 crores and INR 25,000 crores respectively.

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Over the last few months, PPAMC has seen a steady decline in the AUM across all 3 funds on account of redemptions and a continuous fall in equity markets. The NAV of the 3 funds as on October 1, 2021 and June 30, 2022, are provided below :

MF Scheme	NAV	NAV
	(October 1, 2021)	(June 30, 2022)
	INR	INR
Shining India Focussed 50 Fund	263.9243	229.6142
Emerging India Fund	56.6797	47.0454
Little Gems Small Cap Fund	81.6221	64.4822

The figures of some of the Indices for the given period are also tabulated below :

Index	Value	Value
	(October 1, 2021)	(June 30, 2022)
Nifty 50	17,532	15,780
Nifty Small-Cap 100	10,904	8,445
Nifty Mid-Cap 100	30,397	26,453

PPAMC charges 2% of the AUM as an Asset Management Fee and after accounting for expenses, including commission to distributors at 1% of the AUM, it earns roughly 0.2% of the average AUM. The net profit of PPAMC has declined by 12% quarter on quarter, falling from INR 360 crores in quarter ended March 31, 2022 to INR 315 crores by June 30, 2022.

- (2) It has been observed by the management of PPAMC that investors are redeeming their units and probably investing in the schemes of other AMCs who are offering Funds that are not invested in equity. This has prompted the Management to think of launching new funds, so that the AUM can be enhanced, which can lead to higher revenues and hence higher profits.

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The management of PPAMC is considering the launch of the following schemes :

Scheme 1 : "PP Long Term Equity Fund"- this Fund would invest in Large Cap Funds. The main reason for launching this fund is that PPAMC has expertise and a very good track record in equity. Investors consider Large Caps to be safer and hence, are likely to invest in a Large Cap Fund. Moreover, equity markets are likely to rebound after a prolonged fall. Investors are therefore likely to earn better returns by investing in equities.

Scheme 2 : "PP Gilt Fund"- this Fund would invest in dated Central Government Securities and Treasury Bills, so that investors looking for safety of capital can move their funds into this fund and when they feel comfortable, invest the money back into any of the three equity Funds.

Scheme 3 : "PP Foreign Equity Fund"- this Fund will provide diversification to investors and help them benefit from investing in globally renowned companies. This will be in line with PPAMC focussing only on equity investments.

As you are an expert in the capital markets, you have been approached by PPAMC to help them resolve the above situation.

Further, one of the investors has asked the marketing team of PPAMC to explain the difference between the IPO of a company and the NFO of a Mutual Fund.

Multiple Choice Questions :

**2×5
=10**

3.1 Which of the following statement is not true ?

- (A) Nifty Mid-Cap 100 is the benchmark index for Emerging India Fund
- (B) Shining India Focussed 50 Fund has outperformed its Benchmark
- (C) Investors have lost value during the 9-month period from October1, 2021 to June30, 2022
- (D) Shining India Focussed 50 Fund is the best performing fund of PPAMC

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3.2 Which one of the following is correct regarding the AUM under the Little Gems Small Cap Fund on October 1, 2022 ?

- (A) INR 25,000 crores
- (B) INR 31,645 crores
- (C) INR 32,279 crores
- (D) Cannot be calculated due to insufficient data

3.3 Given that the number of units issued by PPAMC in respect of Shining India Focussed 50 Fund, as on October 1, 2021, were 322,05,53,250 which one of the following is correct regarding the net investments into / redemptions out of the Scheme ?

- (A) Net Redemptions of INR 9998 crores
- (B) Net Investments of INR 9998 crores
- (C) Net Redemptions of INR 11,200 crores
- (D) Net Investments of INR 11,200 crores

3.4 If PPAMC decides to launch an ETF, which one of the following statement will be applicable to PPAMC as per SEBI (LODR) Regulations 2015 ?

- (A) Disclosure of Daily movement in unit capital of the ETF to the Exchange
- (B) Disclosure of NAV to the Exchange on a daily basis
- (C) Daily Disclosure of Portfolio of the scheme
- (D) All of the above

3.5 Which of the following statements do you agree with ?

- (A) A Large Cap fund must invest 100% of its funds in Large-Cap companies only.
- (B) PPAMC can launch a Mid and Small Cap Fund to attract investors with high risk appetite
- (C) Only one Fund can be launched by one AMC in one category
- (D) All of the above statements are true

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| 3.6 | Analyse the three proposals regarding the proposed Schemes and make the appropriate suggestions to the Management of PPAMC ? | 5 |
| 3.7 | Given the current market situation with inflation inching up and INR depreciating against USD, how will a change in interest rate impact the proposed Gilt Fund ? | 2 |
| 3.8 | Mutual fund Investments are subject to market risks. How does this statement apply to the proposed Foreign Equity Fund and Gilt Fund ? | 3 |
| 3.9 | Assuming that PPAMC decides to launch a Gilt Fund, how does it approach the public for investing their money in that particular scheme ? You have been asked to list out important differences between the IPO of a company and the NFO of a Mutual Fund. | 5 |

CASE STUDY : 4

- (1) Pankaj Pande and Mamta Mishra are veterans in the Financial Services industry. Pankaj Pande has worked for more than 30 years, starting as a management trainee in a private sector bank and is now the CFO of ICUCVC, a large Non-Banking Finance Company (NBFC) having leadership in various fund and non-fund based businesses such as vehicle finance, home Loan, gold loan, personal loan, apart from having interests in mutual fund distribution, insurance, etc. Mamta Mishra, a rank holder in one of the premier B-schools, started her career by joining a large brokerage firm as a research analyst and then became the Head of Treasury for a large corporate with an active portfolio of investments across asset classes.

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- (2) Both Pankaj and Mamta shared common values and believed in being client centric. They decided to float a Fintech start-up that would use Artificial Intelligence (AI) to provide solutions to common problems faced by investors and other consumers of the Financial Services industry. To start their operations they identified three areas, namely home loans, investment advisory and peer-to-peer loans. They incorporated PPMM FinServ Ltd (PPMMFSL) as a private limited company. The paid up capital of PPMMFSL is INR 90 crores, constituting 9 crores equity shares of INR 10 each, with Pankaj Pande and Mamta Mishra each subscribing to 4.5 crores equity shares.
- (3) PPMMFSL proposes a unique model for providing home loans. The company will not charge any interest on the home loans advanced to various home buyers. The revenue model is based on the principle of sharing of benefits. For example, when a company gives a home loan, all monthly instalments for the first 5 years are used to reduce the principal resulting in zero interest costs for the borrower. However, at the end of 5th year, appreciation in the property value is evaluated based on a Housing Price Index and 25% of the increase in value is payable by the borrower to PPMM FSL. This is paid off by the borrower in addition to instalment of that year. For the next 5 years, all monthly payments are again deducted from outstanding principal amount. This process is repeated every 5 years till the entire loan is paid off. Applicant eligibility is assessed by the AI system, keeping track of property prices across all geographies and pulling out credit history based on the PAN of the applicants.

- (4) Investment advisory services are provided with the help of the AI system of PPMMFSL. The system keeps reading daily market data across the globe. The Company has tied up with brokers who can execute orders of clients across geographies and asset classes. The AI powered system is such that the client has to just specify the amount of investment, the period for which he/she intends to invest, the geography of choice and the system comes up with a specific investment recommendation. PPMMFSL charges a fee of INR10,000 per annum from any person who wishes to subscribe to their offer. A total of 12 recommendations can be taken by a subscriber. Revenue from the investment advisory segment is likely to grow at a CAGR of 54% going forward.

Similarly, peer-to-peer lending is completely driven by the AI. The system has access to various databases that can help the Company to evaluate the ability and willingness of an individual to borrow, and the likelihood of the person to repay the borrowed amount. The Company has consciously chosen to restrict peer-to-peer lending for short periods of 1 year or less.

- (5) As home loan is a fund-based activity, PPMMFSL is looking for funding to the tune of INR 150 crores. Home loans are granted for a period of 15, 20 or 25 years. While disbursements will happen rather quickly, over a 1-year period since sanction, repayments will happen over a long period of time. This will mean a lot of money getting blocked for a long period of time. PPMMFSL anticipates that its home loan book will be INR 10 crores in the first year, and is likely to grow at 20% over the first year loan book for the next 4 years. Growth rates are likely to slow down and stabilize at 10% thereafter. This effectively means that the Company will need funds for growth, even after accounting for repayments. The Company expects property prices to grow at an average annual rate of 15% over the next 15 years and the consumer price index (CPI) to increase by 20% in the first 5 years.

- (6) Both investment advisory and peer-to-peer lending are activities that are driven by the AI. This requires a lot of investment in not just building the system, but also enhancing its features on a regular basis. PPMMFSL estimates that it requires INR 100 crores to fully develop the AI system, and annual expenses of about INR 20 crores for the next 5 years except the first year for the system to be fully updated and functional. Thereafter, the system will largely be self-sustaining, and expenses towards its maintenance and upgrade can be part of the regular Opex of the Company.
- (7) While investment advisory is fee based, peer-to-peer lending is a fund-based activity, although the period of lending is small. The Company anticipates that it will facilitate loans of average ticket size of INR 50,000 with an average repayment term of 6 months. The company expects to serve 1000 borrowers in the first year, with this number growing 50% per annum for the next 5 years. The average ticket size will also grow by 20% every year. PPMMFSL is ensuring that its AI, built for investment advisory, will also serve the requirements of peer-to-peer evaluation. In the initial years, the company expects to meet 50% of the fund requirement from its own funds, as lenders may not join their system. However, by the end of 5 years, the company expects that 100% of the funding will come from the lenders, with PPMMFSL serving as a facilitator and charging a fee of 1% on the loan amount. For the first 5 years, the company will not charge the facilitation fee to promote the platform, passing on all interest payable by the borrowers to the lenders. PPMMFSL is also considering guaranteeing repayment to lenders, as the AI system is predicting a default of only 2% by the borrowers. PPMMFSL will also earn interest to the extent of funds provided from its capital. The average rate for borrowers across credit categories is expected to be 11.5% p.a.

- (8) Given that the nature of business is different from the traditional practice, it is looking at all possible sources of funding such as Bank loan, Venture Capital/ Private Equity and even Private placement of structured securities to meet its fund requirements. Recently, PPMFSL has approached Deep Dive Private Equity LLP (DDPEL) with a proposal to participate in its equity for a 25% stake by investing INR 300 crores and the initial discussion in this respect is encouraging.
- (9) At the initial stage entire INR 300 crores would not be needed in the business and hence some portion of the same can be invested in a listed convertible bonds. Details of the listed convertible bond issued by BL Ltd are as under :

Face Value	INR 5000
No of Shares per bond	50
Coupon Rate	10%
Market price per share	INR 95
Market price of Convertible Bond	INR 5200
Straight value of Convertible bond	INR 4800

Your inputs have been sought by the promoters on the above convertible bond before they decide to buy the convertible bond.

- (10) Pankaj also provides consulting services related to debt instruments. As he is occupied in the operations of PPMFSL he sought your help in doing some calculation related to zero coupon bonds (ZCBs) for one of his clients. Relevant details are given below:

Yields on ZCBs having a face value of INR 1000 are :

Years	Yield to Maturity (YTM)
1	10%
2	11%
3	12%

Multiple Choice Questions**2×5****=10**

4.1 How much funding would be required (rounded off to INR in crores) by PPMMFSL for supporting all the three businesses for the first 5 years of its operations, ignoring repayments and revenues ?

- (A) INR 300 crores (B) INR 282 crores
(C) INR 350 crores (D) Cannot be ascertained

4.2 Assuming that the Company is open to fund different businesses from different sources, which of the businesses is likely to be funded by a Venture Capitalist ?

- (A) Home loan business
(B) Investment advisory business
(C) Peer-to-peer lending
(D) VC will not fund a specific business

4.3 Assuming that the CPI has gone up by 30% (as against the original estimated increase of 20%) in the first 5 years, what will be the impact on the profits of PPMMFSL ?

- (A) There will be no impact of the CPI on profitability of PPMMFSL as the two are not related.
(B) PPMMFSL will suffer losses as increase in the CPI will mean increase in inflation.
(C) PPMMFSL will earn a higher nominal return on its investments.
(D) There will be an impact of change in the CPI on profits of PPMMFSL, but it cannot be said whether it will be beneficial or adverse.

- 4.4 The risk categorisation of the three segments of the business of PPMMFSL based on business profile (not based on the amount of exposure) has been tabulated below. In your opinion which categorisation is the most appropriate in order of risk (highest risk first) ?

	Most Risky	Medium Risky	Least Risky
A	Home Loan	Investment Advisory	Peer-to-Peer Lending
B	Investment Advisory	Peer-to-Peer Lending	Home-Loan
C	Peer-to-Peer Lending	Home Loan	Investment Advisory
D	Peer-to-Peer Lending	Investment Advisory	Home Loan

- 4.5 Which of the following methods can be considered by PPMMFSL to protect itself against the risk of default by borrowers who borrowed on the peer-to-peer platform ?
- (A) Full Factoring (B) Forfaiting
(C) Credit Default Swaps (D) Risk Premium
- 4.6 If you are the chief analyst at DDPEL, how would you evaluate the proposal of PPMMFSL? Your answer must include calculation of Pre-Money and Post-Money Valuation, number of shares to be issued to DDPEL for a 25% stake, total number of shares post investment by DDPEL, possible reasons for such valuation, and likely exit route that DDPEL would take, if it decides to invest in PPMMFSL. 6
- 4.7 Based on the inputs given in the case study, answer the following questions.
- (i) Conversion value of the convertible bond 1
(ii) The percentage of downside risk 1
(iii) The conversion premium 1
(iv) Conversion parity price of the stock. Also interpret the results 2
- 4.8 Based on the information given in the case study, and assuming that the term structure of interest rate will remain the same, answer the following questions ?
- (i) Calculate the implied one year forward rates 2
(ii) Expected YTM and prices of one year and two year ZCBs at end of the first year. 2

CASE STUDY : 5

Mr. Steffan Jolly has recently joined Cyber Digi Tech Ltd (CDTL), as its Chief Financial Officer (CFO). He has been given additional charge of statutory compliances. CDTL is a multi-million dollar public limited company listed on both BSE and NSE. Headquartered at Chennai, India CDTL is engaged in customer software development, web application development, web content management system, design services, online marketing services, testing services etc., and is one of the key companies closely monitored by the equity analysts and other stake holders.

(1) The Board members have been regularly raising issues of compliances in every meeting. The Managing Director (MD) of CDTL Mr. Suresh Saravanan wants that Mr. Jolly should give adequate time on the statutory compliances, to ensure that the Company is free of any non-compliance, penalties and strictures given the multiple challenges impacting the organization, besides day-to-day activities of managing finances and safe guarding the assets and investments of the Company. The promoters of CDTL have more than twenty listed and unlisted companies and hence compliance is a big challenge. Mr. Jolly has been assured of the best in class infra-structures and man power to carry out his duties very efficiently. Mr. Jolly has been asked to review the status of compliances and with a focus on associate companies, related party transactions, governance, and unlisted subsidiaries. The Board has raised number of issues some of which are briefly discussed below :

- Compliances pertaining to the associate companies and related party
- Signing of the compliance certificate submitted to the Board
- Compliance pertaining to the significant transactions and arrangement of a material subsidiary
- Criterion adopted for determining material subsidiary for the purpose of Regulation 30(9)

- (2) Currently CDTL does not have a system of tracking economic issues and as a result of this in the past they have made number of errors in decision making. The management is planning to recruit a full-time economist. You have been approached in the meantime to answer issues related to monetary and fiscal policies, open market operation of the RBI and impact on the economy of quantitative easing.
- (3) CDTL has a robust treasury department and has 15 employees. The treasury department is led by a Chief Treasury Officer, Mr. Whitehat. Mr. Suman has recently joined as a trainee in the treasury department and has been assigned work related to back office. Initially, his job is restricted to support functions in the accounting area. However, he has been promised by Mr. Whitehat that he will be hired in dealing including option trading and risk management segment of the treasury operations, if he shows proficiency in a simulated environment. Mr. Suman within six months of joining has impressed everyone in the treasury department. The CFO has given him following tasks and he has been told that he will be involved in complex segment of the treasury operations if he performs well. The information needed for the tasks are given below.
- (i) CDTL has made investment in the following two mutual funds

Mutual Fund	Star	Blue
Jensen Alpha	1.10%	1.50%
Annual Return	8.50%	9.10%

Mr. Suman has also been informed that funds are benchmarked against SENSEX for performance measurement. The return on the SENSEX is 10% and risk free return is 6%.

- (ii) CDTL has made investment in Collateralized Debt Obligation (CDO). The CFO asked Mr. Suman to project cash flow from the CDO based on the following information.

The CDO trust holds INR 1000 crores in bonds with a coupon rate of 9%. The CDO has three tranches: Tranche A has 800 crores with a coupon of 9% , Tranche B has 100 crores with a coupon of 10%, and the Tranche C is equity Tranche of 100 crores with a coupon of 12%. CDTL has made investment in Tranche C.

(23)

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- (iii) The treasury has taken position on call option on LAX Bank which has the delta of 0.70. The CFO wants Mr. Suman to estimate delta of an equivalent put option.
- (iv) The CFO wants to understand from Mr. Suman about requirements of same person/entity making investment through FDI and Qualified Foreign Investors (QFI) routes.

You are a friend of Mr. Suman and has agreed to help in completing the tasks given by the CFO.

Multiple Choice Questions :

**2×5
=10**

- 5.1 Based on the information given in the case study, which one of the following is the closest to the annual cash flows that CDTL can expect to receive from Tranche C of the CDO ?
- (A) 12 crores (B) 8 crores
(C) Zero (D) 10 crores
- 5.2 What would be the delta of an equivalent put option, given the delta of the call option in the case study ?
- (A) 0.70 (B) (-) 0.30
(C) 0.30 (D) (-) 0.70
- 5.3 Which one of the following is incorrect with respect to monetary policy ?
- (A) The monetary policy is least likely to include inflation target
(B) The monetary policy is least likely to include changing repo rate
(C) The monetary policy is least likely to include changing bank rate
(D) The monetary policy is least likely to include transfer payment program
- 5.4 The RBI has carried out repeatedly open market purchases of government bonds. Which one of the following is correct with respect to such actions of the RBI ?
- (A) Decrease the money supply
(B) Prohibited by the RBI Act, 1934
(C) Are inconsistent with an expansionary monetary policy
(D) Are consistent with an expansionary monetary policy

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- 5.5 Which one of the following is correct with respect to quantitative easing ?
- (A) Its impact is neutral on the economy
 - (B) It is an expansionary monetary policy
 - (C) It leads to contraction of the economy
 - (D) It leads to contraction in short term and expansion in medium term
- 5.6 Based on the issues raised in the case study by the Board, following questions have been framed by the CFO. Give your reasoned answers :
- (i) SEBI (LODR) defines the term “associate company”. For classifying an “associate company” is it necessary that both conditions under the Companies Act, 2013 and applicable accounting standards have been met or either of the two is sufficient ? **2**
 - (ii) SEBI (LODR) defines the term “Related Party”. For classifying a “Related Party” is it necessary that both conditions under the Companies Act, 2013 and applicable accounting standards have been met or either of the two is sufficient ? **2**
 - (iii) SEBI (LODR) requires a compliance certificate to the Board of Directors by the CEO or CFO. Can the Managing Director or Whole Time Director certify the compliance certificate knowing that CDTL has not designated a CEO ? **1**
 - (iv) Can the Board of CDTL review all significant transactions and arrangements entered into by only material unlisted subsidiaries ? **1**
 - (v) The Explanation to Regulation 16(1)(c) states that the listed entity shall formulate a policy for determining material subsidiary. Can CDTL adopt a different criterion for determining material subsidiary for the purpose of Regulation 30(9) ? **2**
- 5.7 Based on the information given in the case study, answer the following questions.
- (i) What would be the Beta of two mutual funds ? **4**
 - (ii) Which mutual fund has performed better based on the Treynor’s Ratio ? **1**
- 5.8 Can the same person/entity make investments through FDI and QFI routes ? **2**
Give reasoned answer.

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