FINAL- NOVEMBER 2023 - EXAM.
PAPER - 6A. RISK MANAGEMENT

A.

Roll No. ....

11/11/2023
06:05 PM

Total No. of Case Study Questions – 5

Total No. of Printed Pages – 31

Time Allowed – 4 Hours

Maximum Marks – 100

DNF

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 evaluated.

The Question Paper comprises five case study questions.

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

Answers 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.

Answers to MCQs, if written inside the description 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 Questions of the same Case Study Question.

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.

Marks

CASE STUDY : 1

Automobile Parts Manufacturing Sector

Automobile spare parts manufacturing is crucial in the automobile sector. It comprises of manufacturing various components and accessories that ensure functionality, safety, and performance of the vehicles. Manufacturers are pivotal in supplying replacement parts, enhancing the efficiency and reliability of the automobiles.

Famous Auto Limited (FAL)

FAL is a reputable automobile spare parts manufacturer located in Noida, Uttar Pradesh. They manufacture and supply spare parts to various car manufacturers across the country. If the customer's order contains spare parts that are not manufactured by FAL, they source them from outside dealers and supply according to the specifications of such customer. They produce 5% extra of each spare part in case a quality defect is discovered later on which requires replacement.

There are several potential risks that need to be managed to ensure a successful manufacturing process. FAL is manufacturing and supplying clutch plates, which is one of the critical components to ensure the safety of a vehicle, to car manufacturers. The Quality Assurance (QA) team is responsible for making sure that the spare parts manufactured meet the highest standards of both quality and safety.

Additional Strategic Objectives Proposed

In line with the current trends of the automobile spare parts manufacturing industry, the Managing Director (MD) proposes to include the following additional strategic objectives, which are designed to contribute to the FAL's overall growth, competitiveness, and ability to adapt to industry trends and customer needs, in the existing long-term strategic objectives of FAL :

(i) Market Expansion – To expand into new unexplored geographic markets to increase market share and revenue.

(ii) Product Innovation – To address the emerging trends in the automobile spare parts manufacturing industry by developing innovative spare parts that offer superior quality and performance.

(iii) Cost Efficiency – To reduce production costs by improving the manufacturing processes and better supply chain management.

Issues Highlighted

(a) During December 2022, there was a liquidity crunch due to which; FAL could not pay i) its statutory taxes dues on time under various Acts and ii) there was stoppage of further consignments by its main suppliers for not making prompt payments. Normally FAL paid its suppliers within 15 days of receipt of the supplies.

(b) There was a sudden demand to supply a particular critical spare part (Part C) from a car manufacturer. FAL did not have enough stock of raw material to manufacture Part C. FAL's regular supplier of the above raw material could not supply the same in time due to supply chains delays. The production manager decided to utilise a new and untested material for manufacturing Part C.

(c) M/s. R & Co., a Car manufacturer, ordered 10,000 nos. of Part K which FAL is not manufacturing. Hence, FAL ordered Part K from one of its trusted suppliers. During transit, the entire lot of the above part was damaged and in turn, FAL could not supply the part in a timely manner to M/s. R & Co.

(d) The Plant Manager, Mr. Raj submitted a project proposal for upgrading some machinery in the Plant on urgent basis.

To address these issues a Risk Committee (RC) was formed and directed to act in accordance with the terms of reference specified in writing by the Board.

Investment Section

FAL is having an Investment Section. It has invested in Mutual Fund AB which yielded 11% over the past year and had a standard deviation of 9%.

The Investment Manager is analysing the risk of shares investment with a 1-day VaR of ₹ 2,50,000 at a 90% confidence level.

Project to be taken up

FAL wants to manufacture some new spare parts. In this regard, FAL has two alternatives i.e., to pursue Project M or Project N. The following are the data for both the Projects with five possible events :

Possible Event	Project M		Project N	
	Cash Flow (₹ 000)	Probability	Cash Flow (₹ 000)	Probability
A	15,000	0.16	32,000	0.18
B	17,000	0.21	26,000	0.19
C	20,000	0.24	27,000	0.22
D	21,000	0.25	31,000	0.26
E	24,000	0.14	18,000	0.15

Based on the above, you are requested to answer the following questions :

Marks

Multiple Choice Questions 2×5 =10

Choose the most appropriate answer from the given options.

(1.1) If the risk-free return over the time period is 6%, the Sharpe Ratio (rounded off to two digits) for Mutual Fund AB would be :

(A) 0.27

(B) 0.33

(C) 0.56

(D) 0.65

(1.2) Which one of the following is the primary risk associated with inadequate quality control in the manufacturing of clutch plates for vehicles ?

(A) Higher production costs

(B) Decreased manufacturing speed

(C) Reduced product lifespan

(D) Increased employee turnover

(1.3) In the proposal submitted by Mr. Raj, which of the following risks will be associated with the project ?

(A) Control Risks

(B) Opportunity Risks

(C) Interest Rate Risks

(D) Environmental Risks

Marks

(1.4) In the analysis of Investment Manager, what does the VaR value represent ?

(A) The minimum potential loss the shares may experience with a 90% probability over the next day.

(B) The maximum potential loss the shares may experience with a 10% probability over the next day.

(C) The minimum potential loss the shares may experience with a 10% probability over the next day.

(D) The maximum potential loss the shares may experience with a 90% probability over the next day.

(1.5) The decision by the production manager to utilise a new and untested material for manufacturing Part C is most likely to primarily result in the emergence of which of the following risks ?

(A) Financial risk due to increased material costs.

(B) Quality risk due to potential material failure.

(C) Supply chain risk due to delays in material delivery.

(D) Market risk due to changes in consumer preferences.

Descriptive Questions

(1.6) Briefly explain the critical disruptions in business processes of FAL with examples drawn from the Case Study. 3

(1.7) Explain the composition and functions of the RC which was directed to act in accordance with the terms of reference specified in writing by the Board with specific reference to FAL. 3

(1.8) You are requested to provide practical illustrations that can be considered under the respective additional long-term strategic objectives, as proposed to be included by the MD. The illustrations are meant to be aligned with the proposed additional long-term strategic objectives put forth by the MD. 3

(1.9) Calculate Coefficient of variation of Project M and Project N and suggest which Project should be undertaken by the FAL. Show your workings. 6

Marks

CASE STUDY : 2

Indian Jewellery Export Sector

The Indian Jewellery Export Sector is an important contributor to the nation's economy. With a heritage rooted in skilled jewellery artisanship, India has risen as a global leader in jewellery exports. Its prominent position among the world's foremost exporters is largely attributed to the presence of unique designs and exceptional artisanship.

However, the Indian Jewellery Exporters have realised that (i) they have to constantly change the designs in order to thrive in the market, (ii) the prices of precious metals, gemstones, and other materials used in jewellery manufacturing keep on changing very often (iii) the exchange rate fluctuations affect the pricing of the finished products and (iv) they are facing severe competition at the international level also.

SGJ Exports Limited (SGJ)

Ten years ago, SGJ commenced its gold jewellery manufacturing and export business in Ahmedabad (Gujarat). They employ in-house artisans for manufacturing while also outsourcing some tasks. The artisans are well trained in modern jewellery-making techniques, design, and quality control and their skills are regularly updated through training programmes.

Business Proposals :

(i) A similar gold jewellery export manufacturer offered its entire business to be taken over by SGJ. The Managing Director (MD) proposes to engage in leveraged buyout of that company. The Chief Executive Officer (CEO) cautioned the MD that such buyouts typically took on large quantities of short-term debt, which would made SGJ vulnerable to financial distress in the event of a rise in interest rates. Instead, the CEO suggested to buy Interest-Rate Caps (IRC) to reduce the risk of financial distress.

Marks

(ii) SGJ proposes to incorporate significant changes in its information systems, and the IT Department of the company is given that task.

(iii) SGJ proposes to make an investment of ₹ 60 lakhs, expecting a risk-free rate of 8%.

Causes of concern :

- Competition from South-East Asian countries caused SGJ to experience a decline of 15% in its customer base compared to last year.
- Twenty-five key employees have left SGJ and joined competitors in the recent past.
- The profit from the customers in the American region was significantly lower compared to other regions as customers are very much conscious about the quality and purity of the jewellery purchased by them.
- Amidst growing challenges and severe competition within foreign exchange market, investors and traders require active tools to effectively choose and analyse relevant data from the extensively available information to aid in making informed decisions. The organisations must engage in exchange rate forecasting to make correct choices related to hedging, short-term financing, brief investments, capital budgeting, earnings evaluation, and long-term financing. With the afore-mentioned considerations, the MD asked the Chief Accounts Manager (CAM) to provide a clear explanation of the diverse techniques used in Exchange Rate Forecasting (ERF) which would facilitate in making well-informed decisions.

(iv) The auditor, Mr. Arun, during the course of the statutory audit, obtained confirmation of balances from randomly selected receivables but he concluded that confirming recorded receivables cannot be relied on to reveal unrecorded receivables.

Marks

Proposal to implement Enterprise Risk Management (ERM)

The Risk Manager (RM) suggested to implement ERM by SGJ and explained that ERM represents a leading methodological approach for capably overseeing and enhancing business occurrences that carry the potential to influence the corporate goals as well as the vulnerabilities it might face. Adopting an ERM approach would empower SGJ to gauge the tolerable levels of uncertainty and take risk within.

RM assured that he would help the Board to address some of the recognized barriers and resistance points to ERM adoption. He described to the Board that SGJ can start with a simple process and build from there using incremental steps rather than trying to make a quantum leap to fully implement a complete ERM process.

Based on the above, you are requested to answer the following questions :

Multiple Choice Questions **2×5 =10**

Choose the most appropriate answer from the given options.

(2.1) The CEO suggested to the MD to buy IRC. An IRC is characterized by the following, except :

(A) an interest rate benchmark say LIBOR, MIBOR, PLR etc. for typically some specified maturity period.

(B) the period of the agreement, including payment dates and interest rate reset dates.

(C) notional interest payments upon which principal amount is based.

(D) a cap rate, which is equivalent to a strike or exercise price of an option.

Marks

(2.2) The conclusion of Mr. Arun is a :

(A) Sampling risk.

(B) Non-sampling risk.

(C) Balance risk.

(D) Control risk.

(2.3) SGJ's strategic business functions relate to the achievement of long-term strategic objectives of the entity. They can be chiefly affected by the following except :

(A) availability of capital.

(B) abuse of intellectual property.

(C) country and political risks.

(D) legal and regulatory changes.

(2.4) The task given to the IT Department most likely would result in which of the following ?

(A) change the risk associated with internal control.

(B) result in changes in supervision.

(C) affect risks in preparing financial statements.

(D) result in changes in competitive pressures.

Marks

(2.5) Which of the following is most likely to be achieved in the description of RM to the Board ?

(A) Start organisation's ERM effort without any specific enabling technology or automated tools.

(B) Existing functions such as internal audit, compliance, ethics, and other support function could be leveraged to build on the ERM blocks and activities.

(C) ERM practices, processes and information continue to evolve..

(D) Identify and implement key practices to achieve immediate, tangible results.

Descriptive Questions

(2.6) You are required to calculate the net present value of the proposal of investment under Certainty Equivalent Technique, given the following information : 3

Year	Expected Cash Flow (in ₹)	Certainty Equivalent Coefficient
1	16,00,000	0.83
2	19,00,000	0.85
3	24,00,000	0.94
4	28,00,000	0.86

Write the formula and show your workings.

(2.7) Explain the business performance indicators that could reveal the associated risk profile of SGJ. 3

(2.8) What would be the Chief Accounts Manager's response to the MD regarding ERF ? 4

(2.9) Based on the Case Study, what are the key challenges faced by Indian jewellery exporters in general and specific key challenges faced by SGJ ? Provide your reasoned answer. 5

Marks

CASE STUDY - 3

About the Company

SSS Limited (the company) is an MNC Company, engaged in the manufacture of fertilisers. The Company has been carrying out business for over five decades in India, Sri Lanka and South East Asian Countries. In India, this is one of the largest private sector company having fertiliser manufacturing units across three states and four divisional marketing offices, and more than 300 stock points across South India. The present turnover of the company is more than ₹ 10,000 Crores.

Since 90% of the raw materials are imported, the manufacturing units are set up next to major ports. Cyclones & storms are inherent risks and the unit is geared with emergency response plans. Also, since the production process involves in handling hazardous materials, the workmen are adequately trained and wearing of safety gear is made mandatory to all workmen who are engaged in the production activities.

Fertiliser sector in India is a regulated sector. The Central Government decides the distributional priorities and mandates all the Companies to prioritise dispatch to the designated states, where there is a shortage of fertilisers. However, due to complete ban on chemical fertilisers in Sri Lanka, the sale of chemical fertiliser was affected four years back and the Company had to launch organic fertilisers in Sri Lanka. Due to cost considerations, the off-take of organic fertilisers was not encouraging in Sri Lanka.

Exports to other South East Asian Countries mainly comprised on Speciality Nutrients and such sales constitute 10% of the overall sales volume.

Corporate Governance

The Company's Board comprised of elite professionals from different sectors, who provide value added guidance to the Senior Management team. The Board has an Audit Committee & Risk Management Committee under the chairmanship of independent directors. They are experts in the fields of finance, audit and risk management. The Internal Audit and Risk Management functions of the Company reports to these Committees which have an oversight over the internal controls and risk management processes respectively.

It is also ensured that the risk management is integrated with operations covering procurement of the raw materials, production activities, marketing & collections, Corporate Governance etc. Various digital tools and dash boards are in place for monitoring controls and risks.

The Risk Management Committee adopts various quantitative techniques to classify the risks and ensures adequate mitigation steps are in place to respond to critical and high risks. During the course of Risk Management Committee meeting recently there was a discussion with regard to impact on sales in Sri Lanka, due to government regulations and country related risks.

Important concerns highlighted

1. Major raw materials are sourced through imports. Due to prevailing political conditions in some of the countries and continued Russia-Ukraine war, the prices of raw materials have significantly increased, and sourcing of the same is affected. The Company hedges only fifty percent of the imports and considered the same adequate to mitigate the risks of foreign currency fluctuations.

Marks

2. During the year, there was an anonymous whistleblower complaint, who raised certain bribery matters against the commercial manager. A detailed investigation was carried out by the Internal Audit Team which concluded with identification of a fraud in the commercial department due to certain gaps in internal controls. Two of the executives were taking bribes from the domestic vendors, for placing raw material supply orders. Based on the investigation report, the Board of Directors, have decided to further strengthen the existing manual controls by making it to automated controls and advised the Chief Risk Officer (CRO) and the IT Head to implement the same.

3. During the current year, due to erratic climatic conditions, the Company was not able to sell the budgeted volumes of fertilisers and there was piling of inventory at the stock points. Also, the receivables were piling up as the dealers and the large famers were not able to meet the payment obligations. The Company was planning to levy interest charges on the overdue. Due to huge pile up of stocks and outstanding, there was a stress on working capital management, due to which the Company was not able to meet payment due dates for the import suppliers.

Business expansion by the Company

1. The Company is planning to launch Organic Fertilisers in the India.

2. During the year, the company acquired RST Pvt. Ltd. (RST), an entity which deals in the sale of agri-based implements. The Board saw this as a very good opportunity, considering the usage of this equipment in Agri sector in India. Due diligence was carried out of RST and the Board of Directors had approved the acquisition of 100% stake in RST for a value of ₹ 150 Crores. The Chief Financial Officer (CFO), had evaluated two options for funding the acquisition of RST :

Marks

Option I – Fund the acquisition fully through internal accruals.

Option II – Fund the acquisition 50% through internal accruals and 50% with Long term borrowings at 9% interest rate.

The Profit before Depreciation, Interest & Tax (PBDIT) for the five years has been estimated as given in the table below :

Year	1	2	3	4	5
PBDIT ₹ crores	15	20	25	30	35

3. Pursuant to the approval of the Board, the Company acquired 100% in RST and took control of the operations. It was observed that RST had no documented internal financial controls or risk management framework. The Board has mandated the Internal Audit team and the Risk Management team to set up controls and extend the risk management framework to RST.

4. Considering that the Company has no exposure to the agri-implements sector, the Board has requested the CRO to evaluate and suggest inherent risks related to this sector. An external firm was engaged by the CRO to carry out the study and report on the inherent risks.

Based on the above, you are requested to answer the following questions :

Multiple Choice Questions

Choose the most appropriate answer from the given options. **2×5 =10**

(3.1) (i) ________ is the level of risk assuming no internal controls, while (ii) ________ is the level of risk after considering the impact of internal controls.

(A) (i) Operational Risk (ii) Residual Risk.

(B) (i) Inherent Risk (ii) Residual Risk.

(C) (i) Operational Risk & (ii) Inherent Risk

(D) (i) Inherent Risk & (ii) Control Risk.

Marks

(3.2) A report issued with respect to internal controls and fraud investigation carried out in the organisation and the assurance on these risks being managed within the acceptable limits as laid down for the review of the Committees of the Board of Directors is :

(A) Risk report issued by the CRO.

(B) Compliance report issued by the Compliance officer.

(C) Internal audit report issued by the Management auditor.

(D) Statutory audit report issued by the statutory auditor.

(3.3) Organisations carry out various periodic reviews of associated risks. The test step which is tagged to each of the internal controls and the management audit function performs that test. This exercise is denoted as :

(A) Risk evaluation

(B) Risk and Control Self-Assessment

(C) Risk Validation

(D) Risk Appetite Assessment

(3.4) Certain aspects within the organisation indicates the levels of Risk maturity, which includes Risk appetite is well defined and communicated across the organisation, control environment is strong etc. The two levels which indicates the Risk Maturity having the following characteristics :

(i) Risk strategy in place and risks identified within functions and yet to be communicated across the organisation.

(ii) Enterprise wide approach to risk management developed and functional risks communicated across the organisation.

(A) Risk Naïve & Risk Enabled

(B) Risk Aware & Risk Enabled

(C) Risk Aware & Risk Managed

(D) Risk Defined & Risk Managed

Marks

(3.5) A monitoring tool to track the progress of risk management using qualitative assessment of probability and impact of risk :

(A) Risk Event map

(B) Flow Charts and risk maps

(C) Risk Score cards

(D) Risk Heat maps

Descriptive Questions

(3.6) Elaborate the qualitative Risk assessment process undertaken in the manufacturing setup, and map few risks discussed in the case study to the risk matrix designed under qualitative risk assessment. **5**

(3.7) Enumerate the types of Country risks which should have been considered by the Company with reference to Sri Lanka. What variables should be considered to identify these risks ? **5**

(3.8) Compute the net cash flows from the project for the two options available to the CFO, considering the Risk premium is expected to be 5% and the applicable tax rate at 35%. Which option would you suggest to the CFO ?

(a) Which option would you suggest to the CFO to be beneficial from the cash flow point of view, in case where there is a cash surplus of ₹ 200 crores with the company and the company is getting only 5% interest income from depositing the same with the bank. If the immediate cash surplus with the company stands at ₹ 80 Crores, which option would the CFO proceed ? **3**

(b) Also discuss the advantages and the limitations of the risk adjusted discount rate. **2**

Discounting Factors

9%	0.9174	0.8417	0.7722	0.7084	0.6499
14%	0.8772	0.7695	0.675	0.5718	0.4972

CASE STUDY – 4

About the Company

Founded in the year 1976, M/s. ECOFEN is a joint venture company (hereinafter referred as 'the company') between the Indian ECO Group and Malaysia based FEN Group. The Company is one of the few FMCG companies which manufactures and markets household equipment, essential kitchen commodities and plethora of grocery products.

Their packaged food brands are top brands in South East Asia and are registered in many countries. The company operates through eighteen plants across India and several south Asian countries.

Control features established by the Company

1. The Company has a strong team to monitor internal financial controls and has established enterprise risk management framework across all the processes and functions except for Research & Development.
2. The Finance & Accounting functions plays a critical role in the organisations, managing the treasury risks across the countries and accounting for the hedge transactions. Since, the company operates in multiple countries; the Corporate Finance team has developed a dash board to monitor the pricing movements of each foreign currency and looking for arbitrage opportunities. They have benchmarked Indian Rupee & US Dollar as to two currencies, with other country currencies and repatriated the surplus funds, whenever the prices are favourable and ensured that the company accrues forex gains.

Marks

3. The Company invests heavily in the Research & Development activities, and has Centre of Excellence (COEs) in five countries including India. The COEs continues to study the market demand, consumer preferences, environment and sustainable products. There is a proposal to invest ₹ 100 Crores on the R & D centres which will carry out scientific research on evolution of human needs over next twenty years and come up with innovative products and services.
4. In order to improve operational efficiencies, the Board of Directors advised the management, to establish a Steering Committee to evaluate the areas of cost reduction and identify efficiency improvement projects, besides prioritizing retention of employees. The Committee comprised of Operations Head, Chief Financial Officer, Chief Risk Officer, Human Resources Head, R & D Head & Marketing Head.

Observations and suggestions by the Steering Committee

1. The Committee observed that the R & D centres are facing multiple issues like :
   - Lack of skilled personnel : Availability of talented resource is a serious concern. Retention of talents is equally a concern. Due to family constraints and lucrative salary offered in the market, retention of talented resources proves to be a bottle neck in running R & D centres. The HR team could not fill up all the vacancies and there is high level of attrition in the last five years.
   - IPR Compliances : Intellectual property registration are in the form of patent right, copy rights trademarks and trade secrets. Due to global presence, the Company is finding difficult to comply with the local IPR laws of the respective countries. This has led of leakage of revenue due to similar design packages was used by the unorganized players. This has also had a reputational risk due to the inferior quality of products being sold by the infiltrator.

- Long duration of Technology projects : It is imperative that R & D projects generally consume a considerable time to study the changing market dynamics. The Company has targeted for 45 different projects to be completed over three cycle, however were able to complete only 15 projects, and the three year cycle is almost getting completed.

- Information Breaches / leakages : Securing R & D data is critical. In spite of having the state of art technology and controls, there has been data compromise in the recent days, which impacts the development projects. The Company has also spent on Ransomware breaches of about ₹ 250 Crores after which the importance of technology and the gaps in their IT systems were understood.

2. The Committee after multiple rounds of discussions and data analysis has come up with various suggestions which are listed below :

(a) Outsourcing the R & D Surveys to external agencies at fixed rate contracts.

(b) Modernisation of lab equipment, which would enhance quality of product analysis.

(c) Upgrade the existing IT systems, to ensure on-line monitoring of all projects initiated by R & D Team and have adequate data protection protocols.

(d) Establish Risk Management Framework to the R & D function and ensure it is integrated with other functions in the organisation.

Marks

Steps taken by the company on the suggestions made by the Steering Committee :

1. The Committee wanted to assess the risk maturity levels in the organization and the level of integration of risk management with operational performance. An external firm was appointed, to study the existing risk management practices, assess the gaps compared to industry best practices and also advise on settling for risk framework to the R & D Centres of Excellence.

   The external firm carried out a risk maturity exercise and applied various techniques to identify whether all related risks have been covered and adequately mitigated. They have also carried out an independent assessment of the Governance Framework and submitted their report after a detailed study.

   They have identified that the company has a qualitative and quantitative risk assessment process, based on which all risks are classified in High, Medium and Low. A step by step process for implementation of Enterprise Risk Management to R & D Centres was covered in the report, including the bottlenecks for its implementation. The report also included suggestions for enhancing the effectiveness of risk management across the functions & geographies.

2. The Chief Risk officer advised his team of risk managers in various countries to monitor the geo-political changes, climatic conditions, consumer preferences, regularly which forms the basis to mitigate R & D Risks.

3. The Management has engaged third party professional firms, to carry out various consumer preference surveys and to provide HR support respectively. The marketing team and the R & D team would consider the survey findings. The marketing team understands the needs of the consumers and place the products from the existing portfolio basket. R & D team picks up the futuristic preference into their product development process.

The actions taken by the Management, based on the recommendations by the Steering Committee is yielding positive results.

Marks

Multiple Choice Questions 2×5 =10

Choose the most appropriate answer from the given options.

(4.1) The risks which arises due to changes in the economy like fluctuations in price levels, consumer references, distribution of income, product development, shifts in technology, etc. They are less predictable and not insurable. Such risks can be classified as

(A) Control Risks.

(B) Technology Risks

(C) Dynamic Risks

(D) Strategic Risks

(4.2) Standard Operating Procedures is a set of

(A) documents laying down controls to be instituted

(B) document that guides the operations of the organisation

(C) procedures listing dos and don'ts

(D) documents laying down policies and procedures to be followed in the operations of Centres of Excellence

(4.3) The Delphi technique is a method which involves getting opinion on a process.

(A) From an individual

(B) From a group of individuals

(C) From regulator

(D) From whistleblower

Marks

(4.4) Risk enabled organisations use __________ to identify potential events that can have a significant impact on business to avoid negative surprises and ________ to monitor the process of risk management. Choose the appropriate to fill in the blanks.

(A) Risk Event Maps; Risk Scorecards

(B) Risk Heat Maps; Risk Scorecards

(C) Flow Charts; Risk Event Maps

(D) Risk Scorecards; Risk flags

(4.5) The theory that states the forward rate of one currency will contain a premium that is determined by the differential in the interest rates between the two countries and as a result covered interest arbitrage will provide a return that is no higher than a domestic return, is known as

(A) Purchasing Power Parity

(B) International Fisher Effect

(C) Interest Rate Parity

(D) Netting

Descriptive Questions

(4.6) The Company have established the Enterprise Risk Management process to the R & D function and risk management was adopted across all the Centres of Excellence. Having implement ERM, how in your view would help the organisation. **5**

(4.7) If you were part of the external firm who has carried out the assessment of the Risk Governance framework, how would be carry out the assessment ? **5**

(4.8) The Company is having business operations in multiple countries and transactions are carried out in respective country currencies. The Corporate Finance team adopt strategy/strategies to management currency risks. Can there be a single strategy possible to manage the foreign exchange rate risk ? **5**

CASE STUDY – 5

About the Company and its New product

HealthHi Pvt Ltd (HHPL) is a Bangalore-based medical-grade equipment manufacturing company. Dr Gaurav, one of the promoters of the Company, is a renowned ENT doctor. He has developed 17 patents. Over five years, he has developed three medical equipment based on his patented technology. The one product that is used for scanning by ENT doctors is getting good acceptance in the market. The ease of operation of the equipment is the reason why both doctors, as well as retail customers, are interested in the equipment. The product is linked with a centralized platform that uses Al and this helps patients in knowing about the status of the disease in no time. A team of doctors then remotely confirms the assessment of the Al which is followed by the prescription of the medicine. The same process is adopted for the review.

The Company has created a team of engineers who are working on further improving the machine learning so that more accurate and timely identification of the disease is done based on video captured by the equipment at the patient end.

Fresh Investment into the company and its temporary deployment

1. After seeing the initial success of ENT scanning equipment which is very effective and is available at a very affordable cost, a venture capital firm SKUCap has made an investment of USD 2 million. The money received by SKUCap is temporarily parked in certificates of deposits, mutual funds, and bank deposits.

Although the Board is concerned with this action, the Chief Finance Officer (CFO) has assured the Board that liquidity risk and market risks arising out of the temporary investment would be managed well. A Board member who does not have a background in finance wants to understand liquidity risk so that a similar agenda note put up before the Board can be examined in detail. The CFO has agreed to provide a short note on the same.

2. Mr David, one of the friends of Dr Gaurav, also wants to make some investment in the company but he wants to understand the role of machine learning in the medical world. The task of explaining the functioning of machine learning has been assigned to one of the team members, working on the machine learning and AI project.

3. The Company is also expecting another fresh investment INR 20 million investment in 5 months' time. The CFO wants to place it on a deposit for four months (120 days) before it is utilized in the business. The CFO has got quotes for the Forward Rate Agreement (FRA) from PTC Bank and the day count convention is actual /360 :-

   0×5 : 10.09-14

   0×4 : 10.07-12

   5×9 : 10.30-35

Corporate Governance and Risk Mitigation

To satisfy the corporate governance requirements of the investor, the Board adopts an active role in reviewing the Company's policies on risk oversight and management.

The Board oversees developing the Company's risk appetite, defining the risk framework, and making sure that risk controls are included in management's operational strategy. The Audit Committee oversees evaluating the efficacy of the existing risk management systems and conducting an impartial examination of the risk mitigation strategies created for significant risks. The Risk Committee meets on a monthly basis to perform a thorough evaluation of the risk register and to make sure that management is doing an effective job of identifying and managing risks when they come up.

Concerns expressed by the Board

1. While the Board believed the company's approach to risk management was generally satisfactory, previous audits were regarded as superficial and had not provided it with the degree of assurance it required.

2. The Board is not happy with the way the risk register is maintained and has directed for an independent review of the risk register.

3. The Board also wants a robust written risk management policy that should in detail cover the risk responsibilities of all the players starting from the Board.

Action taken by the Board

1. As a leading expert in this field, Mr Lal was commissioned to conduct an independent review of the current risk framework, strategy, and process for managing risk and to compare these to best practices.

2. The Board further requested Mr Lal for a professional opinion on the current situation of data management and advice on any further steps that should be taken now to enhance and improve the foundations for risk management.

Fund requirements of the company

1. Considering the growth prospect of the Company, it also has a plan to raise a loan from a bank that has agreed to lend an unsecured loan of INR 20 million subject to a review of the credit risk. The management wants you to help it in understanding credit risk-related factors that typically a bank considers.

2. Dr Gaurav believes that HHPL should invest a substantial amount in developing a medical product that can ease the process of kidney dialysis. However, the Board believes the fund should not be diverted for the new unknown product at this stage despite the bigger opportunities as it will derail in positioning of the existing product.

Issues relating to Personal Investment by the Promoter

Dr Gaurav along with his wife controls a Company named CorpFin which deals in derivatives and investments in equity and bond markets. There are certain matters, relating to operational decisions made by the Investment Division of CorpFin, have come to the notice of Dr Gaurav. He wants to take your opinion on to the following matters to ensure that investment decisions are made based on sound principles, policies, and practices :-

Marks

1. CorpFin made a substantial investment two years back in an unlisted company named PPL. The performance of PPL has not been on the expected line. Last year PPL had a bad year and its return on assets fell from plus 10% to minus 25%. It has networking capital assets equal to 35% of total assets and the market value of its equity is 20% of its total debt. Last year's losses wiped out its retained earnings and PPL turned over its assets 1.90 times last year.

2. CorpFin is exploring dealing in Credit Default Swaps (CDS). A strong case has been made by the chief of treasury, as there are opportunities to make more money by investing in risky debt along with CDS.

Multiple Choice Questions — 2×5 =10

Choose the most appropriate answer from the given options

(5.1) Which of the following combinations of factors typically represent credit risk ?

(A) Default Risk and Loss Risk

(B) Loss Risk and Exposure Risk

(C) Exposure Risk and Default Risk

(D) Default Risk, Loss Risk, and Exposure Risk

(5.2) Which of the following is correct regarding the liquidity risk of the investment made by HHPL ?

(A) It is the systematic risk of the investment

(B) It is the unsystematic risk of the investment

(C) It is the total systematic and unsystematic risk of the investment

(D) It indicates the ease of exit from an investment

(5.3) Mr David wants to understand the process of machine learning, the type of algorithm that is generally used in machine learning, and its effectiveness in the medical field. Which of the following combinations is not correct regarding learning mode, problem, and algorithm related to machine learning ?

	Learning Mode	Problem	Algorithm
(A)	Supervised learning	Classification	Logistic Regression
(B)	Unsupervised learning	Regression	Linear Regression
(C)	Unsupervised learning	Clustering	k-means
(D)	Supervised learning	Classification	Deep learning

(5.4) Which of the following is incorrect with respect to opportunity risk ?

(A) It is the kind of risk that has the potential to improve the accomplishment of the organization's mission.

(B) It is a risk connected to seizing business opportunities.

(C) Opportunity risks are typically linked to the development of new or modified strategies.

(D) Opportunity risks are avoided using exchange-traded derivatives

Marks

(5.5) Which one of the following is incorrect with respect to the responsibility of Risk Identification and Management ?

(A) The Board

(B) The Chief Risk Officer

(C) The Audit Committee

(D) Auditor

Descriptive Questions

(5.6) Assuming you are also part of the machine learning project how you would explain the difference between deep learning and reinforcement learning and how it is related to machine learning ? **2**

(5.7) Examine the performance of PPL using Altman's model using the information given in the Case Study. **3**

(5.8) Based on the information given in the Case Study, answer the following questions :

(A) Which FRA and rate will be applicable to HHPL for entering an FRA ? **1**

(B) What Payment will be received or made by HHPL when the MIBOR rate is settled at 12% and 9% ? **2**

(5.9) In what respect CDS is different from the purchase of insurance, letters of credit, and guarantees and how are the types of settlement generally done in a CDS ? **4**

Marks

(5.10) On the request of the Board, you have been asked to answer certain questions related to the risk register :

(A) For a risk register to be complete, only boot-up risk identification is required. Do you agree ? Explain. 1

(B) While reviewing the risk register one of the Board members remarked "A good risk management strategy is built around a static risk register." Is this statement, right ? Give a reasoned answer. 2