NOV 2022

Roll No. ....

Total No. of Case Study Questions – 5

Total No. of Printed Pages – 24

Time Allowed – 4 Hours

Final New Syllabus
Paper - 6 A
Risk Management

Maximum Marks – 100

17/11/2022
6.15PM

FRJ

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.

CASE STUDY : 1

1. ABOUT THE COMPANY

XYZ Limited (herein after referred as 'the Company') is engaged in coal mining and marketing. It sells coal & coal products to various companies which are engaged in the manufacture of power and steel. 10% of the total coal mined is also exported to South East Asian Countries. The Company has a risk management function headed by the Chief Risk Officer ('CRO'), who participates in all the leadership meetings and shares his views with the Heads of the Departments during such meetings. He has a vast experience in the mining related risks. Monthly assessment of the operational and business risks faced by the Company is assessed and mitigation procedures are reviewed.

On a half-yearly basis, a report is submitted to the Board, for its review and a detailed presentation is made by the CRO.

2. CONCERNS NOTICED

(A) The operations of the Company, were significantly affected during the last two years, on account of pandemic. The Company was not able to implement various proposed capex projects and costs of the projects escalated substantially, impacting the payback periods.

(B) Further, due to pandemic, employees' health was affected in most of the mining locations, resulting in :

(i) Reduction in attendance by 50% during pandemic period, which lasted for almost 6 months.

(ii) The efficiency of the employees reduced, due to after affects of the pandemic.

(iii) There was a huge demand for coal and employees were regularly working overtime, to meet targets. This impacted efficiency.

(iv) Multiple accidents occurred in the recent past, due to employee fatigue.

(C) The operating costs have gone up and the Company was unable to increase the selling prices, since they have entered into long term sale contracts. The payments were not being received on a timely basis, and the over dues were piling up, which affected the working capital requirements.

3. **REMEDIAL STEPS TAKEN**

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 employees' Health & Wellness. The Steering Committee comprised of Operations Head, Chief Financial Officer, Chief Risk Officer, Human Resources Head, Logistics Head & Marketing Head.

Steering Committee, has come up with various suggestions for implementation, which includes

(a) Outsourcing the entire mining activity to external agencies at fixed rate contracts.

(b) Modernisation of mining equipment, which would enhance production and improve efficiencies.

(c) Install a conveyor belt from the mines to the wagon loading point, to reduce delays in internal movements and multiple handling of the materials.

(d) Upgrade the existing IT systems, to ensure on-line monitoring of the coal mined, shifted and dispatched.

(e) Increase the frequency of health checks from annual to half yearly basis and extend free medication to all employees at the Company operated clinic.

(f) Establish "Centre of Excellence" for training the employees, with respect to "Just in time", "Multi-tasking" and "Safety" concepts.

(g) Integrate the Risk Management with strategic activity.

The Steering Committee, also 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.

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 submitted their report after a detailed study. They have identified that the company has a qualitative risk assessment module, based on which all risks are classified in High, Medium and Low. Certain risks which are considered medium, required to be moved to high risk category. The report also included details of the existing risk maturity levels in the company.

4. EXPANSION / DIVERSIFICATION PLANS

Based on the revival of the Indian economy, the Board of Directors of the Company have envisaged to diversify into power generation & distribution activities.

The various options which were under consideration included:

Option I : To set up a green-field project for power generation, funded through debt and internal accruals.

Option II : Enter into a Joint Venture with 50% share in equity with other power generating companies, to set up a power generation plant.

Option III : Revive a sick power generation unit, and avail tax & other benefits extended by the Government.

The Board members have advised the CFO and CRO to examine the three options and submit a brief report for consideration, based on which Board can assess the project viability. The CFO & CRO, carried out the evaluation and examined the funding requirements, future cash flows, return on investments and risks involved in each of the options.

Marks

The CFO summarized certain financial assumptions which are given below :

(Amount in ₹ Crores)

	Option 1	Option 2	Option 3
Timelines to commence operations	5 years	5 years	2 years
Life of the project	25 years	25 years	10 years
Capacity of the plant	500 MW	500 MW	500 MW
Estimated Project cost	2,000.00	2,000.00	500.00
Funding options			
External Loan from financial institutions	1,500.00	500.00	250.00
Internal Accruals	500.00	500.00	250.00
Total Company's exposure to the project	2,000.00	1,000.00	500.00
Exposure of the Joint Venture partner	-	1,000.00	
Interest rates	9%	9%	6%

The CRO, has summarized the following specific project related risks of the three options :-

(a) Project getting delayed beyond scheduled period.

(b) Changes in government regulations relating to taxes and tariffs.

(c) Possibility of imposition of Environment cess after 5 years.

(d) Joint venture partner not providing funds on a timely basis.

(e) Higher maintenance costs and machine failures.

Multiple Choice Questions : 2×5 =10

Choose the most appropriate answer from the given options.

1.1 A Risk identification approach used by the external team was a structured program including team exercise, where the facilitator of the firm used a set of indicators to stimulate participants to identify risks in their respective operational areas. The approach adopted by them was:

(A) Brainstorming (B) Bow Tie analysis

(C) "What if" Technique (D) Benchmarking

Marks

1.2 A risk management technique involving the estimation of future cash flow benefits relating to the project arising from risk management actions vis-s-vis the costs of risk consequences is :

(A) Value at Risk (B) Capital Budgeting

(C) Risk Score Cards (D) Risk Heat Maps

1.3 The Steering Committee's suggestion to provide training to its employees through "Centre of Excellence" to make them understand the multi-tasking and safety concepts would fall under :

(A) Efficiency alternatives (B) Safety alternatives

(C) Operational alternatives (D) Financial alternatives

1.4 The external firm, during its evaluation process, identified two risk attributes which are being used to derive the risk score. The two attributes identified are :

(A) Likelihood of risk occurrence and Risk Consequence.

(B) Risk criticality and Risk Consequence.

(C) Risk appetite & Likelihood of risk occurrence.

(D) Risk appetite & Risk criticality.

1.5 The CRO has carried out the risk evaluation of the proposed project options and listed down the risks in his report to the Board. What is the objective of the exercise carried out by the CRO ?

(A) Carrying out due diligence and quantifying the risks

(B) Assessing technical capability of the project team to implement the project prior to recommending the suitable option.

(C) Quantifying all the risks associated with the project and give adequate weightage to the risk associated with each project.

(D) Assessing external risks which are un-controllable.

Marks

Descriptive Questions

1.6 (A) Elaborate the qualitative risk assessment process which has been adopted by the Company and explain the rationale of plotting the risks in the risk matrix. 3

(B) Taking into account the five key project risks identified by the CRO, classify them into High, Medium and Low for each of the three options under consideration. 3

1.7 The external firm has evaluated the risk maturity levels in the organization and issued a Risk Assessment Report. The report compiled the characteristics associated in each of the risk maturity level. Name the risk maturity levels taking into account the operations of the company with related key characteristics. 4

1.8. (A) Based on the financial data compiled by the CFO and additional information given below, calculate the Return on Investment and the payback period, based on traditional method and recommend, which option would be suitable if : 3

(a) Return on Investment is taken as the benchmark

(b) Payback period, from the date of commencement of operations is taken into account.

(Amount in ₹ Crores)

	Option 1	Option 2	Option 3
Estimated Revenue	500.00	500.00	375.00
Annual Maintenance Costs	50.00	50.00	150.00
Fixed & Other Costs	100.00	100.00	125.00
Depreciation	80.00	80.00	50.00
Tax Rates	25%	25%	10%

(B) Would the options change if risks identified by the CRO is taken into consideration ? 2

Marks

CASE STUDY : 2

1. ABOUT THE COMPANY

ABC Agri Limited (herein after referred as 'the company') is a listed company, engaged in the manufacture of fertilisers and pesticides and markets its products through dealer network. The role of agriculture in the Indian economy is of utmost importance and the Government monitors the production and distribution of fertilisers across India. The Government also provides subsidy to the fertiliser manufacturers based on sales made to the ultimate end users who are the farmers. The subsidy amount is computed based on the nutrient content in the fertilizers.

The Company has a strong Research & Development (R & D) team which is equipped with state of the art facilities. The R & D team is associated with multiple international crop research agencies and agriculture universities involved in the study of climatic changes, soil health testing, changes in cropping patterns and study of molecules enriching the agriculture yields, etc.

2. ISSUES NOTICED

More than 80% of the raw material requirements are imported by the Company, which includes rock phosphate & acids. Due to the war between Russia & Ukraine, there has been a manifold increase in the raw material prices and shipping costs which the Company is unable to pass on to the customers. In addition to steep increase in prices, the US $ conversion rates have also contributed to the increase in raw material costs, which required close monitoring of currency movements and focus on foreign currency hedge.

3. PROPOSALS BEFORE THE COMPANY

The company intends to introduce new-age fertilizers & pesticides with the help of the R & D team. R & D team assesses the performance of the new products in test environment. On satisfactory completion of the trials, the product combinations are released to the business & legal teams for necessary regulatory approvals and launching of the products.

While the R & D team is coming up with new product portfolio, the marketing team have come up with an idea of marketing these new age products through e-commerce and direct delivery channels to the farmers. Prior to the launch of these products the marketing team would like to carry out a survey to understand the farmer's expectation, present gaps in meeting such expectation, market demand, regulatory compliances, supply chain challenges, etc., and appointed an external survey agency to carry out market research and give its recommendations.

4. SURVEY FINDINGS

The following survey findings were shared with the marketing team for taking necessary mitigation steps prior to the launch of new products :

- The end customers are primarily farmers, who lack awareness of using mobile apps. and place direct orders on the mobile app.
- The company may have to make investments, in supply chain & logistics, by way of setting up additional warehouses and procurement of trucks and delivery vans at remote locations and would require compliance with statutory requirements including licenses etc.
- Branding of the new products via e-commerce channels is a challenging exercise. Farmers, are not aware of the new product properties & its applications.
- Company need to invest in IT infrastructure for application development/support "e-commerce portal".
- Company to recruit additional manpower for demonstration and delivery of the products at the door step of the farmers.

5. RISK MANAGEMENT BY THE COMPANY

The Company has a robust ERM framework in place, which includes complete documentation of Risk Registers, establishing Risk Management Committee and Operational Risk Committees, risk scores, monitoring tools etc. covering Strategic and Operational activities. All activities of the company are systematically segregated into various functions starting from procurement to marketing supported by strategic and back office teams.

The risks are classified into controllable and un-controllable risks. The inherent risk faced by the company is primarily monsoon. During the average monsoon period, the company achieves the production & sales targets. During monsoon failure scenario, the sales volumes reduces by almost 50%. The Board and the Leadership team are aware of the inherent risks faced by the company, against which mitigation procedures are put in place.

There is also a strong team of Internal audit, which is aligned with the ERM framework of the Company. The internal audits are carried out based on the risk matrix to ensure key risks are integrated with audit execution. On a regular basis, the risks identified during process are shared by the Chief Risk Officer (CRO) with the internal audit team, who in turn considers the same during the planning and execution of various functional audits.

6. SIGNIFICANT RISKS HIGHLIGHTED FOR MITIGATION

During the presentation to the Risk Management Committee, CRO highlighted the following significant risks, against which mitigation procedures were also deliberated.

- Significant volatility in the Raw material prices
- Non-availability of ships for importing raw materials
- Foreign currency fluctuations leading to high input costs
- Storage space constraints within manufacturing locations
- Lack of adequate gear to employees handling hazardous chemicals
- High talent attrition.
- Trade-marks/patent infringement by competitors
- Finished products were awaiting sale due to delayed monsoons.
- Over dues on account of monsoon failures.
- Unauthorised access & hacking of the system

Marks

Multiple Choice Questions 2×5 =10

Choose the most appropriate answer from the given options.

2.1 The gap between the inherent risk and residual risk in the above ERM Environment :

(A) Shows the strength of the controls and is known as control score.

(B) Shows the level of Risk appetite and is known as Risk score.

(C) Shows the strength of controls and is known as Risk score.

(D) Explains controllable risks and the probability of their occurrence

2.2 The operational risk is an overarching concept inter-related with

(A) Risks relating to production activities

(B) Risks relating to both production and maintenance activities

(C) Risks related to all activities and not restricted to production

(D) Risks related to production, maintenance, human resources which are having financial impact.

2.3 The risk monitoring tools 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 Heat Maps

(D) Risk Score Cards

2.4 A company's decision to launch new products, through e-commerce portal, which is outside its existing core competency is BEST known as :

(A) Uncertainty

(B) Ambiguity

(C) Complexity

(D) Volality

Marks

2.5 Every listed company normally constitutes Risk Management Committee. Among the various responsibilities of the committee, which one is not required to be carried out by the Risk Management Committee.

(A) Discuss the risk strategies on both aggregate basis and on individual basis.

(B) Oversee that the management has robust processes to ensure adherence to the risk policies approved by the Board.

(C) Risk Committee to discuss the agenda matters coming up for Board Meeting.

(D) Review and approve the mitigation processes in place annually.

Descriptive Questions

2.6 Document the responsible function in the organisation and a mitigation procedure for any of the five significant risks presented by the CRO to the Risk Management Committee, covered in the above case. **5**

2.7 The Board seeks your advise, with respect to the disclosure in the Annual Report relating to Risks and Concerns of the business, based on the Case Study. **5**

2.8 (a) Elucidate, how the risks and its mitigation procedures are considered for carrying out an effective internal audit, by the audit team. **3**

(b) For the first two commercial risks identified by the CRO, explain how the internal audit team can carry out a risk based audit to address the specific risk. **2**

Marks

CASE STUDY : 3

1. EMERGENCE OF FINTECH

Fintech is generally described as a sector that leverages technology end-to-end. Fintech companies extensively use software and other current technologies used in the businesses for providing automated financial services solutions to customers.

Financing business faces higher risk when large loans are given and at the same time enjoy the reward in the form of interest receipts. The Credit Manager knows that in order to survive in the market, there has to be a proper balance between risk and reward and an optimal decision might maximise the return.

2. MNO FINTECH LIMITED (MFL) - A NEW STARTUP

MFL was commenced as a start-up company with a view to tap the potential of the financial services industry. MFL has to subsist in the stiff competing financial world and comply with various regulations. It has a team of enthusiastic and resolute professionals who strive to achieve excellence.

MFL knows that for the purpose of centralised risk monitoring, the financial services industry of the country is heading towards a risk-based supervision regime involving real-time risk monitoring through automatic data transfer to the regulators and in the given scenario, the biggest risk would be cyber risk.

3. NEW PRODUCTS

A Fintech Start-up company will have to face the challenges in the form of customer loyalty and stakeholders' growing expectations. Having these in mind, MFL is launching many new products. The Chairman of MFL wants the sales manager to evaluate :- i) the efficacy of the new products especially in the wake of new technology deployed, ii) track whether the controls are exercised properly by designated individuals who are vested with the power of approving new modules and iii) highlight issues and potential gaps in the processes.

4. **RISKS AND REWARD**

The Chief Financial Officer (CFO) cautioned the management that there might be defaults in payments by some customers, as the customers would assume that there would be laxity in controls in the collection mechanism of a Start-up company.

The Chairman of MFL wants to know what are the inherent risks of a fintech start-up company.

Evaluating and assessing governance risks plays a vital role in any organisation. For achieving the above purpose, a risk appetite framework is to be approved ensuring that business strategy and financial plans are linked to the same. The Chairman of MFL is thinking of entrusting the above task to appropriate persons.

The management is conscious that a well-managed risk management process helps to resolve problems when they occur rather than following an impulsive and reactive approach. Having realised the importance of the checklists of ISO 31000 meant for risk management, the management requested the manager's assistance in preparing a mandatory report on risk. They also needed explanation for the concepts : i) risk aware, ii) critical controls and iii) control weaknesses.

The management likes to take into account the impact of adverse and external conditions which can be a big threat to the survival of MFL. For this purpose, it would like to select the scenarios for testing purposes.

5. **TECHNOLOGY PLATFORM FOR ACCOUNTING**

The Internal Auditor of MFL, Mr Shreyas, told the management that from an audit and accounting perspective, the most intensive focus area is the technology platform that is used for accounting. Operational risks of misstatements in financial reporting would arise as several types of transactions that have a financial impact are performed in various systems and there might be inconsistent data in the final reports.

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

Marks

Multiple Choice Questions

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

3.1 The approval of the risk appetite framework is expected to be performed by :

(A) The Board of Directors

(B) The Risk Committee

(C) The Board of Directors and the Risk Committee jointly

(D) The Chief Risk Officer in consultation with the Risk Committee

3.2 The automatic data transfer to the regulators, as discussed in the case study, would be done with respect to which of the following?

(A) Key supervision monitoring position

(B) key regulatory compliance position

(C) Key risk monitoring position

(D) Key risk indicator position

3.3 The cautioning of the CFO would represent:

(A) Financial risk (B) Control risk

(C) Technology risk (D) Process risk

3.4 Which one of the following is the main reason, according to Mr. Shreyas, which would prevent the data from being inconsistent in final reporting ?

(A) Co-ordination between business and user groups

(B) On-going supervisory reviews

(C) Periodic master maintenance

(D) Compliance to taxation requirements

3.5 From the angle of credit risk, the balancing between risk and reward would foremost entail the Credit Manager to take which of the following decision ?

(A) Measuring probability of default of customers

(B) Studying the behaviour of market changes constantly

(C) Placing a credit cap for each customer

(D) Quickness in realisation of collateral

Marks

Descriptive Questions :

3.6 What is an inherent risk ? Briefly outline the inherent risks of a Fintech Start-up company like MFL. 3

3.7 You are required to suggest solutions to the sales manager for his evaluation exercise. 3

3.8 You are requested to help the management in its scenario selection for testing purposes and also apprise them of the drawbacks of the same. 4

3.9 What would be the explanation of the manager to the management on the three concepts and the important aspects of risk reporting which the manager must include in his report on the subject ? 5

CASE STUDY : 4

1. FACTS OF THE CASE

The whole world is battling against energy crisis. The focus now is more on effectively utilizing non-fossil fuel as a source of energy. India, with the highest band of average annual solar radiation, which is very much conducive in manufacturing electricity, based on solar cell technology. The requirements of this type of industry necessitates procuring good quality materials at a low price, reliable manufacturing quality, greater levels of automation, and employing highly trained staff members.

2. ABC SOLAR LIMITED (ASL)

ASL was formed five years before and is one the leading manufacturer of solar cells which go as input to various types of solar panel production.

The modern business environment is increasingly throwing up newer challenges. At the same time many opportunities are presented especially with globalization. Newer challenges and the ensuing risks are to be suitably met with a dynamic risk management. Internal auditors play a vital role in achieving the same.

3. **RISK MEASURES AND GOVERNANCE**

The plants manager has decided to incorporate several risk-control measures in its manufacturing processes, which would eventually prevent losses from faulty / incomplete processes.

The management had an apprehension that, in future, if ASL's strategy becomes less effective in the marketplace the same might result in struggling to reach its goals.

The risk manager explained to the Board that Governance structure of ASL contains a larger concept of Risk Management and Internal Control is a sub-set of the same. Normally, organisations face a wide range of internal and external uncertainties which may affect the attainment of their objectives, viz., strategic, operational, financial etc., either positively or negatively. While Positive Risks are opportunities, the Negative Risks are threats to the achievement of objectives.

4. **EFFECTIVENESS OF INTERNAL CONTROL (IC)**

He explained to the Board the need for IC and who in turn asked him to prepare a report on how the IC would help ASL in its efficient use of resources and thereby improve its performance.

The finance manager understands the need to have preventive, detective, and corrective (PDC) controls in its transaction approval and processing. Apart from above, he wants to embed specific categories of controls in it before, during and after processing of a transaction exceeding a particular value.

The Board also instructed the risk manager to work on Risk Mitigation Plan (RMP) for ASL and to suggest activities to enhance the role of internal audit for better risk management.

Marks

5. IMPORT OF GOODS AND FORWARD CONTRACT

ASL intends to import some goods from Country A. The exporter from that country is unknown to ASL. Hence the exporter needs an assurance from ASL that it will pay the exporter the sum of money due on such export. In order to fulfil the obligation of the exporter, ASL approached its banker to solve the issue.

On 12^{th} January 2022, the Banker booked a forward contract for US$ 2,10,000 for ASL's import deliverable on 12^{th} March 2022 at ₹ 76.156. On due date, ASL requested the Banker to cancel the contract. On this date, quotation for spot rate for US$ in the inter-bank market is ₹ 75.9800/7985.

6. ESTIMATE OF SALES

The sales manager wants to estimate the northern region sales for the next year, which he finds to be uncertain. He knows that the same cannot be easily predicted due to the intervention of many variables that act randomly and depends on possible different outcomes of uncertain events.

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**

4.1 Which of the following simulation method that you would suggest to the sales manager in his estimation ?

(A) Discrete Event Simulation

(B) Bootstrap Simulation

(C) Continuous Simulation

(D) Monte Carlo Simulation

Marks

4.2 ASL is already having some risk management activities running. It wants to leverage the same to build on the Enterprise Risk Management (ERM) blocks and activities. Which of the following function can effectively be utilised for the same ?

(A) Stand-alone staff function

(B) Internal audit function

(C) Operational process function

(D) Stakeholders risk management function.

4.3 The measure of the plants manager would fall under :

(A) Risk Identification

(B) Risk Analysis

(C) Risk Ranking

(D) Risk Treatment

4.4 Supposing, if the apprehension of the management becomes true, then ASL most likely would be facing :

(A) Management risks

(B) Market risks

(C) Model risks

(D) Governance risks

4.5 The banker in solving the issue of ASL, would most likely recommend which of the following facility to ASL ?

(A) Bank Guarantee

(B) Letter of Credit

(C) Pre-shipment Credit

(D) Post-shipment Credit

Marks

Descriptive Questions

4.6 Briefly explain internal control in relation with Risk Management, to the Risk Manager, which would assist him in preparing his report to the Board. 3

4.7 You are required to suggest and explain the controls to the finance manager which could be embedded in the transaction processing approval processes. 3

4.8 Assuming that the flat charge for the cancellation is ₹ 200 and exchange margin is 0.11%, then determine the cancellation charges payable by ASL to the Banker on the forward contract booked by the Banker. 4

4.9 (i) Explain the analysis which will provide valuable input to the Risk Manager for preparation of an RMP for ASL. 2

(ii) What vital responsibilities the internal auditor of ASL should have in the field of risk management, and explain how he will proceed to provide his assurance in this respect ? 3

CASE STUDY : 5

1. EMERGING OPPORTUNITIES IN LiB RESOURCE RECOVERY BUSINESS

The key value drivers of Lithium-ion battery (LiB) resource recovery business (i) the electric vehicle (EV) revolution, (ii) the supply shortage of strategic battery materials, and (iii) the need for a truly sustainable environmental, social, and governance ("ESG")-friendly LiB recycling solution.

It is expected that the recycling process can make a valuable contribution to the world's transition to renewable energy sources, by diverting end-of-life LiB materials from landfill sites, offering environmentally-friendly alternative processing methods, and providing a steady source of recycled content into the battery supply chain.

2. ABOUT XMC

XMC (hereinafter also referred as 'the company') is a leading player in LiB resource (metals like cobalt, nickel, lithium graphite, etc.) recovery. The Company has recently developed proprietary recycling technology, however it is yet to be commercially tested on a large scale. The pilot project has provided very encouraging results. Using this technology the company has been able to recover 90% of the metals in the pilot project as against the 50% traditional industry average.

The Company has two sources of revenue namely the sale of recovered metals and e-waste collection charges. The focus of the Company is on the sale of recovered metals as it is highly profitable.

3. EXPANSION PLANS OF XMC

The market demand for LiB is very high and hence there is a big opportunity for recyclers like XMC. Currently, China controls the supply chain of LiB. In the changed geo-political scenario especially after the war between Russia and Ukraine the Company believes its technology can disrupt the existing supply chain. Considering this, the Company has a plan for a global footprint. To support its aggressive growth plan, it has already raised money in the form of equity in the capital market and has a plan to fund the establishment of plants with a mix of equity and debt. The Company's second plant is likely to become operational in early 2023.

4. CONCERNS RELATING TO EXPANSION PLANS OF XMC

Expanding globally involves political risks which were not part of the Risk Management of XMC. There is a plan to outsource the HR function in the Company. The Management of XMC has identified that the performance of the company in the future would depend upon many factors including:

(i) Effectively introduce methods for higher recovery rates,

(ii) Complete the construction of its planned plants on time and within the cost budgeted for this purpose,

Marks

(iii) Invest and keep pace in technology, research and development efforts and ensure compliance of IPR regulatory regime,

(iv) Secure and maintain required suppliers' contracts and off-take contracts and

(v) Attract and retain key employees who possess specialized knowledge and technical skills.

5. STEPS TAKEN BY XMC

In terms of the listing requirements and to meet the expectation of stakeholders, the Company has established Enterprise Risk Management (ERM). Recently a consultant was hired who reviewed the Business Continuity Plan (BCP) and carried out a Business Impact Analysis (BIA).

The CRO recognized that the Company faces heightened strategic and operational risk – which is why comprehensive Risk and Control Self-Assessments (RCSAs) were carried out as a first step in mitigating these risks. In addition to this, the CRO makes a presentation to the Board about stress tests for various positions taken by the Company.

It was decided that the money raised in the capital market and raised by the promoters will be used in the business over the next two years. A large portion of the promoter's money has been invested in short-term liquid investments which are exposed to market risks. Further, battery metal prices are volatile and hence they too are prone to hedging using derivatives. The treasurer has used many derivatives instruments to hedge market risk.

6. FURTHER ACTION POINTS

The Board has expressed its desire to have a fresh review from the external consultant regarding the roles and responsibilities of the CRO considering the rising complexities in the business. Currently, the company also has a corporate-level risk steering committee.

Marks

Multiple Choice Questions

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

5.1 Which one of the following is incorrect with respect to essential actions to be taken to write a BCP ?

(A) Conducting a hazard identification of surface area threats.

(B) Assessing those risks to determine their frequency and history and prioritizing the ones most likely to have at least a moderate impact, and conducting a loss estimation to see what the business can withstand and what could be lost.

(C) Thinking through a business impact analysis based on the first three essential actions.

(D) Deciding what losses will be acceptable but not identifying a means to reduce those losses.

5.2 Which one of the following is not correct with respect to Business Impact Analysis (BIA) ?

(A) BIA is an analysis is used to quantify the financial value of each function to the business and to identify the risks to the most valuable functions.

(B) BIA does not suggest mitigation actions to reduce the likelihood of risks.

(C) In the event of a disaster, the BIA indicates how much is lost per hour or per day for the length of the outage. Many of these functions are linked to an IT system that supports them.

(D) BIA provides many benefits to an organization, many of which are valuable beyond the scope of a BCP.

5.3 Which one of the following is not correct regarding the primary objectives of RCSA ?

(A) The reliability and integrity of information.

(B) Compliance with policies, plans, procedures, laws, regulations, and contracts.

(C) The safeguarding of assets.

(D) The economic and efficient use of resources is not the primary objective of RSCA.

Marks

5.4 Which one of the following is incorrect regarding political risk ?

(A) It concerns those political and social developments that can have an impact upon the value or repatriation of foreign investment or on the repayment of cross-border lending.

(B) It includes arbitrary or discriminatory actions taken by governments, political groups, or individuals that hurt trade or investment transactions.

(C) It is more related to trade and investment risk.

(D) It is more related to country risk.

5.5 Which one of the following is incorrect regarding ERM ?

(A) It includes strategic risks.

(B) It includes operational risks.

(C) It includes hazard/ compliance risks.

(D) It does not include financial reporting risk.

Descriptive Questions

5.6 What is the goal of stress testing ? Should the stress test consider the interplay of market and credit risk ? Give a reasoned answer. 4

5.7 The purpose of using derivatives is the management of market risk. However, while addressing market risk the use of derivatives exposes XMC to other risks. Identify the four risks which arise as a result of the use of derivatives for managing market risks. 2

5.8 What are the examples of strategic risks in the Case Study ? 2

5.9 Assuming you are hired by the Board for defining key responsibilities of the CRO and its office, what would be your suggestions ? 7