



GRAPH PAPER IS ON THE PENULTIMATE PAGE

Book No. 1 (containing 28 pages)

THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA

CA Final Examination

Group No. 2 Paper No. 6A

Subject Risk Management

Number of Answer Books used : Main + additional sheets

For use by ICAI only

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Q.No.	To be ticked (✓) by the candidate against the Questions answered	Marks Awarded (To be filled by Examiner)					Total
		a	b	c	d	e	
1	✓	0	5	1/2			6 1/2
2	✓	5	4 1/2	2			11 1/2
3	✓	6	5 1/2	1			11 1/2
4							
5	✓	3 1/2	2	5			10 1/2
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14							
Total							41



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Use only Blue / Black Ball Point Pen to write and shade the circles. **AVOID RED PEN.** Write the marks in the boxes before shading the respective circles.

Total Marks awarded

4	1
0	0
1	0
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

Total Marks awarded (in words) Forty One

Examiner's Signature

DO NOT WRITE ANYTHING HERE

INSTRUCTIONS TO THE CANDIDATE

Answers are not to be written on this page

- Answers should be written in figures and words in the allotted space at the right hand corner of the answer book only and nowhere else including additional answer book/s and graph paper.
- Roll number should be written in the box in numbers and darken the appropriate circles of the OMR portion provided in the right hand corner of the cover page with **Black / Blue** ball point pen.
3. Fill particulars such as name of Examination, Group No., Paper No. and subject at the appropriate space at the left hand upper corner.
 4. Remove the Bar Code sticker of the particular paper from the Attendance sheet and affix the same on the box provided in the right hand corner of the cover page.
 5. Since a machine will read the Roll no., please check and ensure that Roll number written in numbers, words and circles darkened are correct. In case any candidate fills this information wrongly, Institute will not take any responsibility for rectifying the mistake.
 6. The answers should be written neatly and legibly
 7. The answer to each question must be commenced on a fresh page and question number prominently written at the top of each answer. Alternatively, the question number should be distinctly written in the margin.
 8. The answer to each question in all parts should be fully completed in one page or in a consecutive set of pages, before the next question is taken up.
9. Writing of Roll number in place/s other than the space provided for the purpose or writing distinguishing mark, symbols like "OM", "Sri", "Jesus", "786", etc., will tantamount to adoption of "unfair means"
10. Before submission of answer book to the invigilator take care to score out (X) blank pages, if any, that you might have left.



Case Study 5

Q5.6 Pure risks are associated with uncertainties which may cause loss. In a pure risk situation, a loss occurs or no loss occurs - there is no possibility for gain. These uncertainties may be due to perils such as fire, floods etc. or may arise from human action such as theft, accident etc. There are certain risk events that can only result in negative outcomes such as fire accidents or leakage of harmful chemicals from a manufacturing plant. These risks are Hazard or Pure Risks, and may be thought of as Operational or Insurable risk. A good example of Hazard risk faced by many organizations is that of theft. There are different types of Pure Risks:

- * Personal Risks - Includes early death, sudden accident, disability, unemployment etc.
- * Property Risks - reduction in value of assets due to physical damage, fire, theft, etc.
- * Liability Risks - the risk of legal liability



for damages accruing to customer, suppliers, vendors etc. Such risks are also connected with compensation payable to employees for injuries and other harm afflicted in the workplace.

Above situations all come under the category of pure risks and are insurable.

The manufacturing company faced the following pure risks:

- * a flood loss in its premise
- * damage to buildings, compound walls, plant & machinery
- * lay off workers owing to which employee morale was hit

It is important to cover the risks through insurance cover because Hazard Risks are associated with a source of potential harm or a situation with the potential to undermine objectives in a negative way. These are the most common risks associated with organizational risk management, including occupational health and safety programmes.



Q5.7 Operational Risk Management is primarily an exercise in mitigating potential losses i.e possible losses, through a well laid out mechanism of identifying the inherent risks in a business process and reviewing or testing the efficacy of controls related to each risk.

Additionally, an important part of Operational Risk Management (ORM) is also to identify and report operational risk events, including their financial impact (losses and recoveries) if any. Thus, an adequate governance framework is expected to cover both the preventive and lag aspects of operational risk.

The Operational Risk originates because of following accentuating the need of ORM in the company:

- * Inadequately defined products and services which may not be compliant to industry regulations and may be exposed to risk of misspelling
- * Inadequate technology functionality or infrastructure that exists in any technologically



supported environment, which organizations use in respective business operations

- * Internal or external crimes that take advantage of gaps in processes for unlawful gain i.e. fraud
- * External events like terrorist attacks or natural disasters that disrupt business or cause financial losses

Therefore, the company would be able to avoid the pure risks mentioned earlier through the implementation of ORM, i.e. it will be able to:

- * avoid delays in the claims of insurance lodged
- * maintain better relations with the employees
- * report the claims as soon as the losses (low-levels or high-levels) are detected
- * insure the damaged assets to its full amount and avoid underinsurance



Q5.8 Role of the Risk Manager includes following tasks:

- * Manage the implementation of all aspects of the risk function, including implementation of processes, tools and systems to identify, assess, measure, manage, monitor and report risks
- * Select the most suited risk identification techniques and approaches
- * Manage the process for developing risk policies and procedures, risk limits and approval authorities.
- * Monitor, major, critical and minor risk issues
- * Manage the process for elevating control risks to a more senior level when appropriate
- * Manage of risk reporting, including reporting to senior management
- * Generate Project Management documents



Responsibility of Risk Management Committee

- * To define the risk appetite of the organization
- * To exercise oversight of management responsibilities, and review the risk profile of the organization to ensure that risk is not higher than the risk appetite decided by the Board
- * To fulfill its statutory, fiduciary and regulatory responsibilities
- * To ensure that risk management culture is pervasive throughout the organization

Some of the common risk management objectives include:

- * Achieve a better understanding of risk for competitive advantage
- * Build safeguards against earnings related surprise
- * Achieve cost savings through better manage-



ment of internal resources

- * Allocate capital more efficiently

According to ISO 31000 "Risk Management - Principles and Guidelines on Implementation",

the process of risk management consists of several steps as follows:

- * Identification of risk in a selected domain of interest
- * Planning the remainder of the process
- * Mapping out the following:
 - social scope of risk management
 - identity & objectives of stakeholders
 - basis upon which risks will be evaluated
- * Defining a framework for the activity & an agenda for identification
- * Developing an analysis of risks involved in the process
- * mitigation or solution of risks using available technological, human & organizational resources.

Thus, the step by step process of Risk Management is as follows:



- Step 1: Identify the Risk
- Step 2: Analyze the Risk
- Step 3: Evaluate or Rank the Risk
- Step 4: Treat the Risk
- Step 5: Monitor and Review the Risk

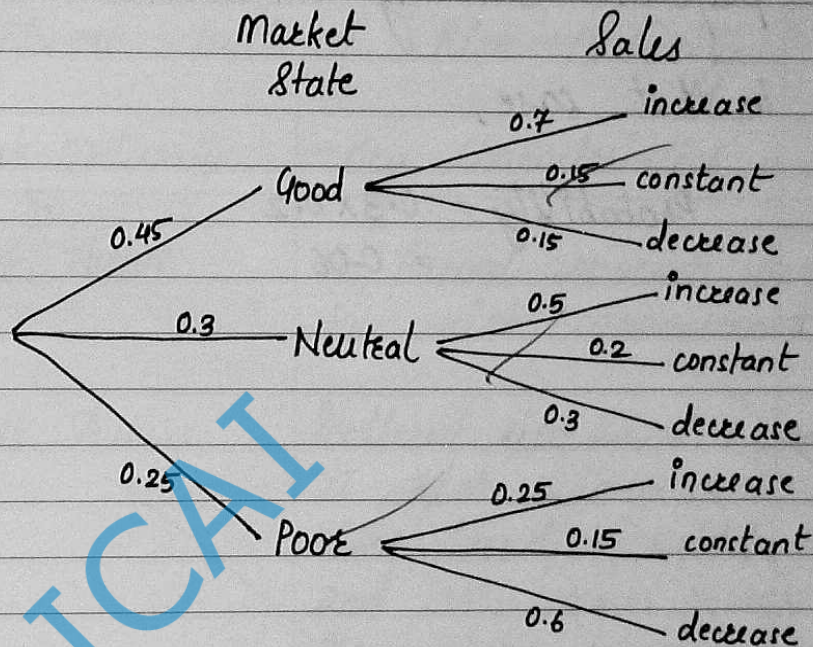
✓
✓
(10/2)

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Case Study 3

Q3.6



Probability of Market State being Neutral given Sales Performance is Constant

$$\begin{aligned}
 &= P(\text{Neutral} | \text{Sales Constant}) = \frac{P(\text{Neutral} \times \text{Sales Constant})}{P(\text{Sales Constant})} \\
 &= \frac{0.3 \times 0.2}{0.45 \times 0.15 + 0.3 \times 0.2 + 0.25 \times 0.15} \\
 &= 0.3636 \text{ (4 dp)}
 \end{aligned}$$

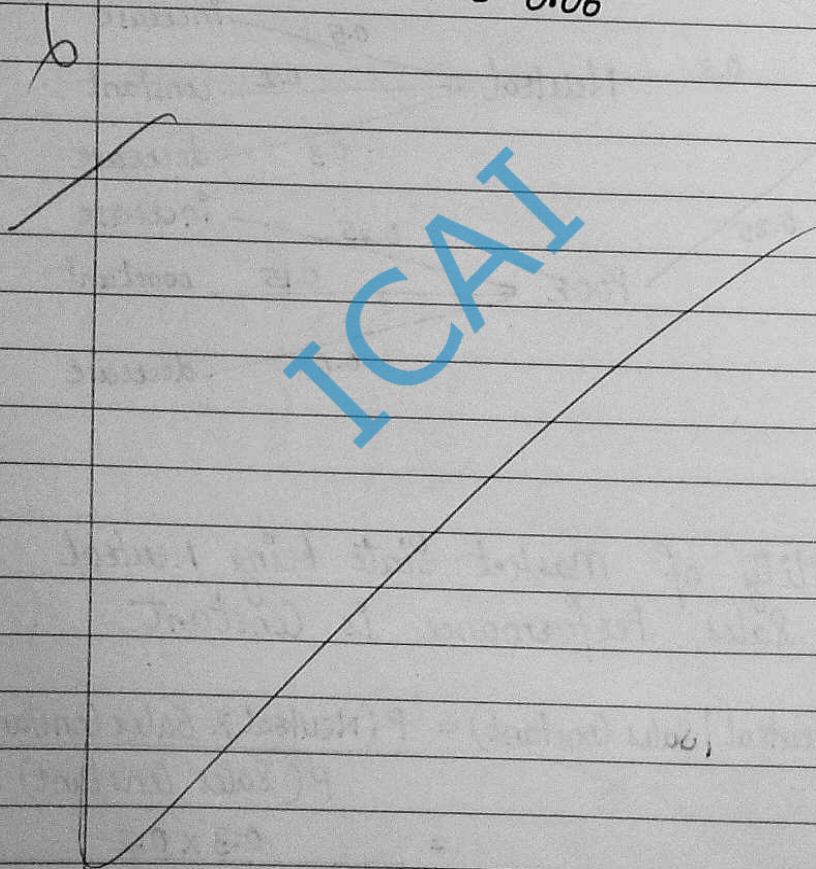
The question can also be interpreted as to finding the probability of the

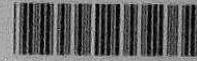


market state being neutral and the sales performance being constant.

In that case,

$$\begin{aligned} \text{Probability} &= 0.3 \times 0.2 \\ &= 0.06 \end{aligned}$$





Q3.7 The table below shows the levels of risk maturity, key characteristics at different levels of Risk Maturity:

Risk Maturity	Key Characteristics
* Risk Naive	No formal approach developed for risk management
* Risk Aware	Scattered silo based approach to risk management. Risks identified within functions and not across processes. Also, risks not communicated across enterprise.
* Risk Defined	Strategy and Policy in place and communicated. Risk appetite defined.
* Risk Managed	Enterprise wide approach to risk management developed & communicated. Risk register in place.



Risk Maturity

Key Characteristics

* Risk Enabled

Risk management and internal control fully embedded into operations.

Organization in readiness to convert market uncertainties into opportunities

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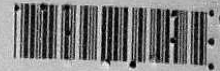
Q3.8 Economic risks can be manifested in lower incomes or higher expenditure than expected. The causes can be many, for instance,

- * the hike in the price of raw material
- * the lapsing of deadlines for construction of a new operating facility
- * disruptions in a production process
- * emergence of a serious competitor on the market
- * loss of key personnel
- * change of political regime
- * natural disaster

Following are the economic risks that could be faced by Mrs. Rita (apart from above):

- * Natural Disaster - the flash floods in the year 2015, which was the worst rainfall in 100 years in Chennai, causing extensive damage to the goods
- * Disruptions in Production Process - the computer server crashed resulting in 15-day data loss
- * lapsing of deadlines - she has to repay ₹ 2 cr of long term loan after 15 years

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Case Study 1

Q1.6

The data on vehicular movement can be captured through the central server through an application installed in the user's mobile. Since the vehicle can be fitted with an in-built wireless connectivity and GPS Navigator, the distance can easily be captured by the GPS Navigator.

Moreover, the application installed provides data in relation to the speed of the vehicle, mileage, time taken to charge, the condition of the battery and health of the engine, the vehicular movement can be calculated by multiplying the average speed with the time taken for the vehicle to be fully discharged (which can be found from the application on user's mobile).

In addition to this, the condition of the battery and the health of the engine could be analyzed in order to estimate the wear and tear, or obsolescence of the vehicle, which can



then be compared with the estimated life of the vehicle.

Since a charge for 4 hours will make the vehicle run for 150 km per hour at an average speed of 30 km per hour, it implies that the vehicle can run for 5 hours ($150/30$). Thus, this time should be cross tallied with the time mentioned in the user mobile application.

The company viz. ABC Scooters Ltd. will also have to analyze the break down of the vehicles due to battery failure after selling it to the customer. The root cause of the same should be analyzed and it needs to take actions in order to avoid the same as it will lead to customer dissatisfaction.

The analysis of the data can be done by computing the Payback Period, Accounting Rate of Return, Net Present Value, Profitability Index, the Internal Rate of Return, or the discounted



payback period.

Organizations may use any or more of the above mentioned techniques while others may use multiple methods for evaluating each project.

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Q1.7 i) Expected NPV

$$\begin{aligned} \text{Project A} &= 1200000 \times 0.1 + 1100000 \times 0.2 + \\ & 900000 \times 0.3 + 750000 \times 0.4 \\ &= \text{₹ } 910000 \end{aligned}$$

$$\begin{aligned} \text{Project B} &= 1200000 \times 0.4 + 1100000 \times 0.3 \\ & + 900000 \times 0.2 + 750000 \times 0.1 \\ &= \text{₹ } 1065000 \end{aligned}$$

ii) Profitability Index

$$\begin{aligned} \text{Project A} &= \frac{\text{Sum of discounted cash inflows}}{\text{Initial Cash Outlay}} \\ &= \frac{910000 + 3000000}{3000000} \\ &= 1.303 \text{ (3 dp)} \end{aligned}$$

$$\begin{aligned} \text{Project B} &= \frac{1065000 + 3400000}{3400000} \\ &= 1.313 \text{ (3 dp)} \end{aligned}$$

The company should undertake Project B (as it has to choose between 2 projects) because it has a higher NPV and a better profitability Index.



Q1.8 The areas of improvement to be made are as under:

- * Strategy - the company should be engaged in the continuous rebookings and cancellations of the forward contract in order to take the favourable movements in exchange rate. It should also adopt a six-sigma strategy wherein there are negligible chances of defect and breakdown due to the battery failure.
- * Tactics - ABC Scooters Ltd. should charge the customers on the basis of distance travelled rather than the time taken. It can also use an efficient type of battery causing a lower environmental damage.
- * Operational Objective & Compliance - It should ensure to comply with the norms relating to the environment by setting up an Operational Risk Management Policy and shall retain the skilled manpower as well as get the raw materials within the required time.



Case Study 2

Q2.6 m/s Modern Realty Developers faces the following types of risk:

- * Credit Risk - It is the risk of loss arising from outright default due to the inability or unwillingness of a customer or counterparty to meet their commitments. It is also known as Default Risk.

The actual collection from customers was ₹ 25 cr, which was short by the projected collection of ₹ 27 cr.

- * Liquidity Risk - It is the potential inability to meet commitments as they fall due.

The firm has paid only 10 instalments of the term loan against the projected 12 instalments. Furthermore, the bank has also sent a notice to the firm demanding immediate repayment of the dues.

- * Industry Risk - This is the risk of losses due to adverse changes in the industry.



as a whole.

The firm has scarcity of the Raw Material and is hence compelled to use the substitute raw material which might be inferior in quality. The price of raw material also increased by 10%.

- * Project-specific Risk - these are the risks which are related to a particular project and affects the project's cash flows. It includes errors in estimation in resources and allocation, completion of a project in time.

The firm could complete only upto 45% of the project as against the projected 60%.

- * Operational Risk - these are the risks associated with the operations of the company. It is the risk of loss resulting from failure of people employed in the organization.

Since the workers hired were not adequately skilled, the firm is prone to operational risk.

- * Safety Risk - these are the most common risks and will be present in most



workplaces. They include unsafe conditions that can cause injury, illness and death.

Since the workers and the site supervisors did not follow the safety regulations, many accidents occurred. Thus, the firm is prone to safety risk.

* Environment Risk - since the firm is in construction industry, it will have to comply with the environmental norms.



Q2.7 Risk register is a record of risk, risk assessment, risk mitigation and action plans prepared by the responsible parties that help support overall ERM (Enterprise Risk Management) and controls disclosure reporting process.

It is continuously updated, and has columns for risk, causes, consequences, ownership, inherent risk score, controls, residual risk score, process, action for further mitigation, action owner, due date etc.

Column Headings and Contents

- * Risk - Dust and Pollution Risk
- * Causes - the use of JCBs and trucks for cement transfer, and the sand to be removed for the foundation of the apartment
- * Consequences - The neighbours around the site are complaining and it is causing illness to the workers concerned



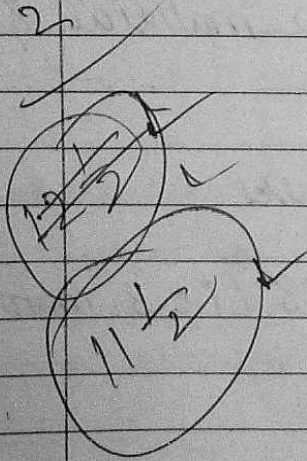
- * Ownership - the partners of m/s modern Realty Developers
- * Inherent Risk Score - 4 (out of 5)
- * Controls - the workers are advised to wear protective masks and spray water to the buildings under construction
- * Residual Risk Score - 2 (out of 5)
- * Process - it will be a time consuming process but will be effective
- * Action for further mitigation - use of efficient quality of raw material & fuel efficient JCBs
- * Action Owner - the partners
- * Due Date - June 2018 (i.e 3 months from commencement date)

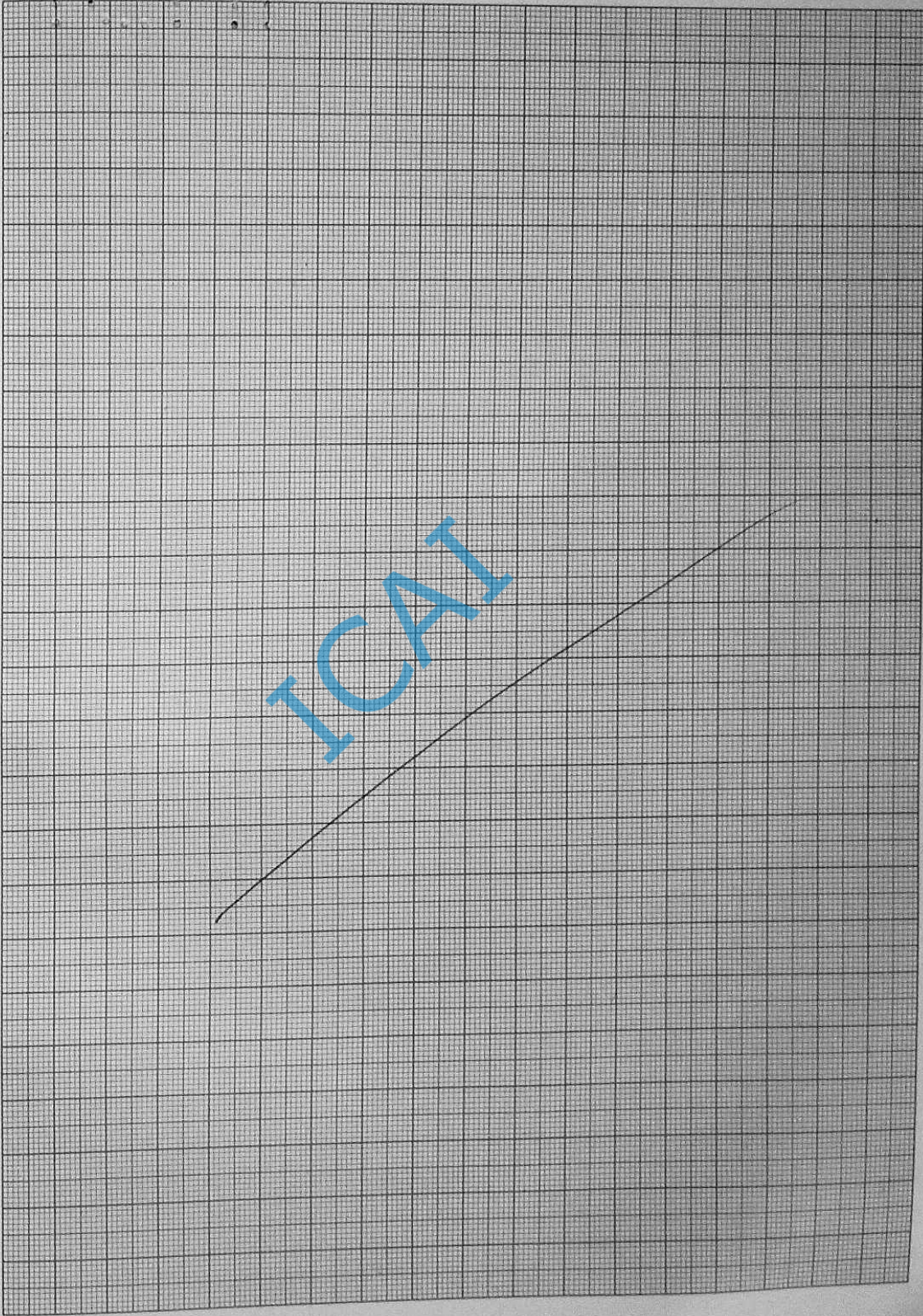
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Q2-8 The Risk Management Payoff Model of Epstein and Rejt, 2005 demonstrates how improved risk measurement and management provide benefits throughout the organization. Benefits extend to:

- * enhanced working environment
- * improved allocation of resources to the risks that really matter
- * sustained or improved corporate reputation
- * other gains, all of which lead to prevention of loss, better performance and profitability, and increased shareholder value







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OMR ANSWER SHEET - PAPER 6 FINAL (NEW)

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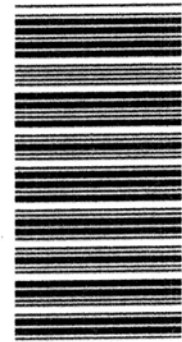
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Use Black Ball point pen to write in the Boxes

Paper Code

F **J** **N**

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SPACE FOR ICAI STAMP

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November 2019

DATE OF EXAM → **13 NOV 2019**

Signature of Candidate with Pen
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Signature of Invigilator with Pen
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QUESTION - 1		QUESTION - 2		QUESTION - 3		QUESTION - 4		QUESTION - 5	
1.1	A ● C D	2.1	A B C ●	3.1	A B ● D	4.1	A B C D	5.1	● B C D
1.2	A ● C D	2.2	A ● C D	3.2	A B C ●	4.2	A B C D	5.2	A B ● D
1.3	A B C ●	2.3	● B C D	3.3	A B ● D	4.3	A B C D	5.3	A B C ●
1.4	A B ● D	2.4	A B ● D	3.4	A B ● D	4.4	A B C D	5.4	A B C ●
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