PAPER – 20B : RISK MANAGEMENT IN BANKING AND INSURANCE
SUGGESTED ANSWERS
SECTION – A

1.

(i) (B)
(ii) (D)
(iii) (A)
(iv) (B)
(v) (B)
(vi) (B)
(vii) (D)
(viii) (B)
(ix) (B)
(x) (C)

1. (b)

(i) (C)
(ii) (C)
(iii) (C)
(iv) (D)
(v) (C)

SECTION - B

2. (a)

The various benefits provided by risk management are:

(i) Forecasts Probable Issues: One of the benefits of risk management is that it changes the culture of a business organization. Companies that tend to focus more on risk management tend to be more proactive as compared to other companies which can be reactive. Risk management forces the companies to take a hard look at each of their business processes and decide what can go wrong. This detailed what-if analysis helps companies become more proactive and forecast probable issues.

(ii) Avoiding Catastrophic Events: Risk management prepares the companies for all kinds of shocks. Risk managers try to foresee the small shocks which affect the day-to-day business of any firm. However, they also try to focus on catastrophic events. Such events have a very low probability of occurring. However, if they do occur, then companies need to be prepared to deal with them without going bankrupt. Such events have gained prominence in recent years. These events are called "black swan" events.

(iii) Enables Growth: Prima facie, risk management sounds like a defensive business activity. It has a negative connotation and the assumption is that the activity is performed to avoid losses. However, during risk management, companies are forced to study their processes and risk factors in detail. The management is aware of all the possible things that can go wrong.

(iv) Helps to Stay Competitive: Risk management helps companies to minimize their losses at critical times. These are the times when poorly managed companies struggle to stay afloat. On the other hand, companies that have risk management processes in place tend to minimize their loss. Hence, the competitiveness of such companies stays constant. It may improve also.

(v) Business Process Improvement: The day-to-day processes of risk management force companies to collect more and more information about their processes and operations. As a result, companies can identify the parts of the process which are inefficient or where there is scope for improvement.

(vi) Enables Better Budgeting: Companies that have risk management processes in place have better control of their finances as opposed to other companies. This is because they often have a close look at their financial numbers and try to trim any waste. The end result is that these companies have a better knowledge of their processes. As a result, these companies also have a better knowledge of their budgets. The bottom line is that the risk management process is highly beneficial. In the short run, it might seem like these activities only incur additional costs. However, over time, these activities save the company significant sums of money. The benefits far outweigh the costs associated with these activities. Hence, considering them as a cost center is a myopic view that could cost the organization dearly in the long run.

2. (b)

The 'Market Risk' is an umbrella term used for multiple types of risk associated with adverse changes in market variables that include Liquidity Risk, Interest rate risk, Foreign exchange rate risk, and equity price risk. Market risk causes substantial changes in the income and economic value of banks. The Bank of International Settlements (BIS) defines market risk as "the risk that the value of on-or off-balance-sheet positions will be adversely affected by movements in equity and interest rate markets, currency exchange rates and commodity prices". Basel II Framework offers a choice between two broad methodologies in measuring market risks for capital adequacy viz.,

(i) The Standardized Measurement Method (SMM).

(ii) The Internal Models Approach (IMA).

Standardized Measurement Method: In January 2016, the Basel Committee on Banking Supervision (BCBS) published revised standards for minimum capital requirements for market risk (Standards). The Standards replace the existing requirements for market risk. The Standardized Approach (SA) comprises three main blocks viz. the sensitivities-based method (SBM), the default risk charge (DRC), and the residual risk add-on (RRAO). Each block covers specific types of risk that are relevant in the context of market risk. A risk charge is computed for each of the three blocks, the sum of which is the overall risk charge for market risk under the SA. No diversification benefits are allowed across the three blocks. The Internal Models Approach (IMA): IMA is the alternative methodology that allows banks to use risk measures derived from their internal market risk management models. The permissible models under IMA are the ones that calculate a Value-at-Risk (VaR) – based measure of exposure to market risk. VaR-based models could be used to calculate measures of both general market risk and specific risk. As compared to the SMM, IMA is considered to be more risk-sensitive and aligns the capital charge for market risk more closely to the actual losses likely to be faced by banks due to movements in the market risk factors. This method is subject to the explicit approval of the supervisory authority.

3. (a)

The Reserve Bank had issued guidelines on Asset Liability Management (ALM) system, covering inter alia liquidity risk management system, in February 1999 and October 2007. Successful implementation of any risk management process has to emanate from the top management in the bank with the demonstration of its strong commitment to integrate basic operations and strategic decision making with risk management. Ideally, the organisational set up for liquidity risk management should be as under:

The Board of Directors (BOD):

The BOD should have the overall responsibility for management of liquidity risk. The Board should decide the strategy, policies and procedures of the bank to manage liquidity risk in accordance with the liquidity risk tolerance/limits. The risk tolerance should be clearly understood at all levels of management. The Board should also ensure that it understands the nature of the liquidity.

The Risk Management Committee:

The Risk Management Committee, which reports to the Board, consisting of Chief Executive Officer (CEO) Chairman and Managing Director (CMD) and heads of credit, market and operational risk management committee should be responsible for evaluating the overall risks faced by the bank including liquidity risk. The potential interaction of liquidity risk with other risks should also be included in the risks addressed by the risk management committee.

The Asset-Liability Management Committee (ALCO):

The Asset-Liability Management Committee (ALCO) consisting of the bank's top management should be responsible for ensuring adherence to the risk tolerance / limits set by the Board as well as implementing the liquidity risk management strategy of the bank in line with bank's decided risk management objectives and risk tolerance.

The Asset Liability Management (ALM) Support Group:

The ALM Support Group consisting of operating staff should be responsible for analysing, monitoring and reporting the liquidity risk profile to the ALCO. The group should also prepare forecasts (simulations) showing the effect of various possible changes in market conditions on the bank's liquidity position and recommend action needed to be taken to maintain the liquidity position/adhere to bank's internal limits.

3. (b)

Bankruptcy risk or insolvency risk, is the likelihood that a company will be unable to meet its debt obligations. It is the probability of a firm becoming insolvent due to its inability to service its debt. Many investors consider a firm's bankruptcy risk before making equity or bond investment decisions. Firms with a high risk of bankruptcy may find it difficult to raise capital from investors or creditors.

If a company is at risk of going bankrupt, the following are often signs of trouble:

- Dwindling cash and/or losses, especially if they represent a trend
- Abrupt dismissal of the company auditor
- Dividend cuts or the elimination of dividends
- Departure of senior management
- Insider selling, especially large or frequent transactions following negative news
- Selling off a product line to raise cash
- Cuts in perks like health benefits or pensions

How Companies Reduce Insolvency Risk: No company becomes insolvent overnight. If it looks like your business is headed in that direction, take steps to protect it.

- Focus on cash flow. Among other actions, this may involve invoicing promptly, recovering debts, renegotiating credit limits, renegotiating contracts with suppliers, selling assets (if necessary), and reducing the amount of cash tied up in stock.
- Reduce business expenses. Possibilities include cutting advertising and/or research and development, paying off debts earlier to lower interest on debt, reducing staff overtime, delaying the purchase of new or leased equipment.
- Keep your creditors in the loop. Discuss any problems you are having with payments and be ready to negotiate and compromise.
- Get good financial and legal advice. Consult the company›s accountant and lawyer, who should already be familiar with your business.

4. (a)

A loan commitment is an agreement by a commercial bank or other financial institution to lend a business or individual a specified sum of money. A loan commitment is useful for consumers looking to buy a home or a business planning to make a major purchase.

The loan can take the form of a single lump sum or in the case of an open-end loan commitment, a line of credit that the borrower can draw upon as needed (up to a predetermined limit).

Loan commitments can be either secured or unsecured.

Secured Loan Commitment:

A secured commitment is typically based on the borrower's creditworthiness and it has some form of collateral backing it. Two examples of open-end secured loan commitments for consumers are a secured credit card–where money in a bank account serves as collateral–and a home equity line of credit (HELOC)–in which the equity in a home is used as collateral.

Because the credit limit is typically based on the value of the secured asset, the credit limit is often higher for a secured loan commitment than for an unsecured loan commitment. In addition, the loan's interest rate may be lower and the payback time may be longer for a secured loan commitment than for an unsecured one. However, the approval process typically requires more paperwork and takes longer than with an unsecured loan.

The lender holds the collateral's deed or title–or places a lien on the asset–until the loan is completely paid.

Defaulting on a secured loan may result in the lender assuming ownership of and selling the secured asset, at which point they would then be responsible for using the proceeds to cover the loan.

Unsecured Loan Commitment:

A loan that doesn't have any collateral backing is primarily based on the borrower's creditworthiness. An unsecured credit card is one very basic example of an unsecured open end loan commitment. Typically, the higher the borrower's credit score, the higher the credit limit.

However, the interest rate may be higher than on a secured loan commitment because no collateral is backing the debt. Unsecured loans typically have a fixed minimum payment schedule and interest rate. The process for acquiring this type of loan often takes less paperwork and approval time than a secured loan commitment.

Advantages and Disadvantages of Loan Commitments:

Open-end loan commitments are flexible and can be useful for paying unexpected short-term debt obligations or covering financial emergencies. In addition, HELOCs typically have low interest rates, which may make their payments more affordable. Secured Credit Cards can help consumers establish or rebuild their credit; paying their bills on time and keeping total credit card debt low will improve their credit scores, and in time they may be eligible for an unsecured credit card.

The downside of a secured loan commitment is that borrowers who take out too much money and are unable to repay the loan may have to forfeit their collateral. For example, this could mean losing their home. Unsecured commitments have a higher interest rate, which makes borrowing more expensive.

4. (b)

(i) Standard loan account Total = ₹ 36,400 Crores.
Provision on NPA = ₹ 2,800 Crores

(ii) Total Provision = ₹ 2,945.60 Crores.

(iii) Amount of gross NPA = ₹ 3,600 Crores.

(iv) Amount of net NPA = ₹ 800 Crores

(v) Provision coverage ratio for NPA = 77.78%

5. (a)

(i) Tier-I = ₹ 800 Crores.

(ii) Tier-II = ₹ 610 Crores.

(iii) Amount of Fund = ₹ 1,410 Crores

(iv) Capital Adequacy Ratio of the Bank = 10.07%

(v) The amount of minimum capital to support credit and operational Risk = ₹ 900 Crores.

5. (b)

(i) **Principle of Utmost Good Faith:**

The fundamental principle is that both the parties in an insurance contract should act in good faith towards each other, i.e., they must provide clear and concise information related to the terms and conditions of the contract.

The Insured should provide all the information related to the subject matter, and the insurer must give precise details regarding the contract.

Example– Jacob took a health insurance policy. At the time of taking insurance, he was a smoker and failed to disclose this fact. Later, he got cancer. In such a situation, the Insurance Company will not be liable to bear the financial burden as Jacob concealed important facts.

(ii) **Principle of Proximate Cause:**

This is also called the principle of 'Causa Proxima' or the nearest cause. This principle applies when the loss is the result of two or more causes. The insurance company will find the nearest cause of loss to the property. If the proximate cause is the one in which the property is insured, then the company must pay compensation. If it is not a cause the property is insured against, then no payment will be made by the insured.

Example:

Due to a fire, a wall of a building was damaged, and the municipal authority ordered it to be demolished. While demolition the adjoining building was damaged. The owner of the adjoining building claimed the loss under the fire policy. The court held that fire is the nearest cause of loss to the adjoining building, and the claim is payable as the falling of the wall is an inevitable result of the fire.

(iii) **Principle of Indemnity:**

This principle says that insurance is done only for the coverage of the loss; hence insured should not make any profit from the insurance contract. In other words, the insured should be compensated the amount equal to the actual loss and not the amount exceeding the loss. The purpose of the indemnity principle is to set back the insured in the same financial position as he was before the loss occurred. The principle of indemnity is observed strictly for property insurance and does not apply to the life insurance contract.

Example – The owner of a commercial building enters an insurance contract to recover the costs for any loss or damage in the future. If the building sustains structural damages from fire, then the insurer will indemnify the owner for the costs to repair the building by way of reimbursing the owner for the exact amount spent on repair or by reconstructing the damaged areas using its authorized contractors.

6. (a)

There are two basic methods of reinsurance:

(i) Facultative Reinsurance, which is negotiated separately for each insurance policy that is reinsured. Facultative reinsurance is normally purchased by ceding companies for individual risks not covered, or insufficiently covered, by their reinsurance treaties, for amounts in excess of the monetary limits of their reinsurance treaties and for unusual risks. Underwriting expenses, and in particular personnel costs, are higher for such business because each risk is individually underwritten and administered. However, as they can separately evaluate each risk reinsured, the reinsurer's underwriter can price the contract more accurately to reflect the risks involved. Ultimately, a facultative certificate is issued by the reinsurance company to the ceding company reinsuring that one policy.

(ii) Treaty Reinsurance means that the ceding company and the reinsurer negotiate and execute a reinsurance contract under which the reinsurer covers the specified share of all the insurance policies issued by the ceding company which come within the scope of that contract. The reinsurance contract may oblige the reinsurer to accept reinsurance of all contracts within the scope (known as "obligatory" reinsurance), or it may allow the insurer to choose which risks it wants to cede, with the reinsurer obliged to accept such risks (known as "facultative-obligatory" or "facoblig" reinsurance).

Types of Treaty Reinsurance

1. Quota Share
2. Surplus
3. Excess of Loss
4. Excess of Loss Ratio (Stop-Loss) and
5. Pools

6. (b)

Ayushman Bharat, a flagship scheme of Government of India, was launched as recommended by the National Health Policy 2017, to achieve the vision of Universal Health Coverage (UHC). This initiative has been designed to meet Sustainable Development Goals (SDGs) and its underlining commitment, which is to "leave no one behind."

Ayushman Bharat is an attempt to move from sectoral and segmented approach of health service delivery to a comprehensive need-based health care service. This scheme aims to undertake path breaking interventions to holistically address the healthcare system (covering prevention, promotion and ambulatory care) at the primary, secondary and tertiary level. Ayushman Bharat adopts a continuum of care approach, comprising of two inter-related components, which are –

- Health and Wellness Centres (HWCs)
- Pradhan Mantri Jan Arogya Yojana (PMJAY)

PMJAY provides cashless cover of up to INR 5,00,000 to each eligible family per annum for listed secondary and tertiary care conditions. The cover under the scheme includes all expenses incurred on the following components of the treatment.

- Medical examination, treatment and consultation
- Pre-hospitalization
- Medicine and medical consumables
- Non-intensive and intensive care services
- Diagnostic and laboratory investigations
- Medical implantation services (where necessary)

- Accommodation benefits
- Food services
- Complications arising during treatment
- Post-hospitalization follow-up care up to 15 days

The benefits of INR 5,00,000 are on a family floater basis which means that it can be used by one or all members of the family. The Rashtriya Swasthya BimaYojana (RSBY) had a family cap of five members. However, based on learning from those schemes, PMJAY has been designed in such a way that there is no cap on family size or age of members. In addition, pre-existing diseases are covered from the very first day. This means that any eligible person suffering from any medical condition before being covered by PMJAY will now be able to get treatment for all those medical conditions as well under this scheme right from the day they are enrolled.

7. (a)

Every risk is measured based on two parameters:

i) Frequency of the risk
ii) Severity (impact) of the risk if it happens

Frequency: Frequency is how often a particular type of loss occurs or will occur. Generally, what we experience in our life is that smaller losses occur more frequently and larger losses less frequently and this is true in all spheres. Thus, each risk has to be measured and a probable frequency must be anticipated to decide the risk management.

If a finer and sharper analysis of Risk is required, the likelihood can be measured in a 5-point scale as under:

Risk likelihood	Likelihood Description	Level
Rare	May occur rarely only in exceptional circumstances	1
Unlikely	Unlikely to occur, but could occur at some point of time	2
Possible	Fairly likely occur at some time or in some circumstances	3
Likely	Will probably occur at some time or in most circumstances	4
Almost certain	Is expected to occur in most circumstances	5

Severity of risk:

When considering the degree of risk involved, we must also consider severity, the amount of loss that is to be sustained (impact). To predict future losses, prior occurrences should be reviewed to determine how often losses of a certain type have taken place and the range in cost of those losses. Various factors are applied to recognise such things as inflation, changes in laws, delay in reporting claims, increased activity etc.

Risk measurement:

Therefore, a Risk is measured based on both Frequency and Severity of the risk. Consider the example of the Risk of Earthquakes in Indonesian region. Since Indonesia is located in a high seismic risk zone, the frequency (probability of occurrence) is very high. At the same time, an Earth quake if it happens in Indonesia is accompanied mostly by Tsunami and creates huge destruction to Property & lives.

Therefore, the Risk arising out of Earthquakes in Indonesia is “Very high”.

All risks can be classified based on an analysis of the above two factors and accordingly, a 2x2 matrix can be created and all risks can be classified in the appropriate quadrant given below, depending on the assessment of the risks.

Frequency/ Impact	**Low Impact**	**High impact**
Low Frequency	Low risk	High risk
High Frequency	High risk	Very High risk

7. (b)

To be appointed as an actuary with any insurance company, an individual has to fulfil the following criteria, as put forth under regulations:

- He/she should be a resident of India.
- Should be a fellow member as per the Actuaries Act, 2006.
- He should not be over the age of 65 years.
- He should possess a Certificate of Practice from the Institute of Actuaries in India.
- He has not committed any professional breach.

(i) **In the case of life insurance:**

- He/she should have passed a specialisation subject related to life insurance. Currently, specialisation refers to a Specialist Application subject as put forth by the Institute of Actuaries in India.
- A prospective candidate should have at least 3 years of post-fellowship experience pertaining to the annual statutory value of life insurers.
- A minimum of 10 years' experience in the life insurance industry, out of which, at least 5 years should be that of the post-fellowship experience.

(ii) **In the case of Health Insurance:**

- He/she should have passed a specialisation subject related to health or general insurance. Similar to the above two categories, as per the Institute of Actuaries of India, currently, specialisation refers to the Specialist Application subject.
- He/she should have at least 1 year of post-fellowship experience pertaining to the annual statutory value of a health or general insurer.
- A minimum of 7 years of experience in the general or health insurance industry, out of which, there must be at least 2 years of post-fellowship experience.

8. (a)

Report on Interest Rate Sensitivity Analysis

Date:

Prepared by: Management Accountant

Executive Summary:

This report provides an analysis of interest rate sensitivity for The Bridge Bank. The assessment includes determining the value of interest rate-sensitive assets, calculating the amount of interest rate-sensitive liabilities, and identifying the gap between these two categories.

(i) **Interest Rate-Sensitive Assets:**

Assets other than Cash and other assets like Fixed Assets are rate sensitive.

		(₹ Crores)
Total Assets		4,00,000
Less: Cash balance	27,600	
Fixed Assets	12,400	40,000
	Net	3,60,000

(ii) **Interest Rate-Sensitive Liabilities:**

Liabilities other than Capital, Reserves and Current Accounts are rate sensitive.

		(₹ Crores)
Total Liabilities		4,00,000
Less: Capital	4,000	
Reserves	24,000	
Current Accounts	1,20,000	1,48,000
	Net	2,52,000

(iii) **Magnitude and nature of the gap between rate-sensitive assets and liabilities.**

		(₹ Crores)
Interest Rate-Sensitive Assets		3,60,000
Less: Interest Rate-Sensitive Liabilities		2,52,000
	Net	1,08,000

Interest-Sensitive Assets are more than Interest-Sensitive Liabilities by ₹1,08,000 Crores.
Hence, there is a positive gap.

In conclusion, this report has provided a comprehensive analysis of the interest rate sensitivity of the Bridge bank, addressing the key points outlined by management.

Overall, this analysis underscores the importance of proactive interest rate risk management to safeguard the financial health and stability of the Bridge bank.

Regards
The Management Accountant

8. (b)

(i) Section 64VB of Insurance Act, 1938 prohibits insurance companies accepting a risk on an insurance policy without receiving the consideration (Premium) in advance. The insurer cannot assume any risk earlier than the date on which the premium has been paid in cash or cheque to the insurer.

Here in the present case, payment by cheque by Mr. Neel is a reciprocal promise to be simultaneously performed. When the insured failed to pay the premium or whether cheque issued by him was returned dishonoured by the Bank, the insurer was not justified in seeking reimbursement of the claim in the absence of any consideration.

In this case Mr. Neel is not liable to take claim from the insurance in respect of damage of his car DL 2CJ 8745 because his cheque gets dishonoured.

As per the law, if the insured cheque gets dishonoured due to insufficient fund in the Account, then court will not consider this case, as it is the negligence of the insured and insured is not liable to claim from insurance company.

But in case, if the cheque gets dishonoured due to any other reason like signature not matching or any spelling mistakes on the cheque, then in these cases, insured is liable to claim from the insurance company.

(ii) It is a rule specified in Motor Vehicle Act, 1988 that no person should use a motor vehicle in a public place, unless there is an Insurance Policy in force in relation to the use of the vehicle. As per the rules, no vehicle can run on the road without Third Party (TP) Insurance. The main object of the provision is that third parties who suffer injuries due to use of the vehicle, may be able to get damages from the owners. The rights of third party to get indemnified can be exercised only against the insurer of the vehicle. The fact that there was a Policy issued in respect of the vehicle involved in the accident is enough for injured third party to maintain a claim against the insurer. The Third Party is not concerned whether the premium was paid or not as long as the policy has been issued.

Where a judgement or an award has been given against an insured person in respect of a third-party liability covered under the insurance policy, then, notwithstanding the rights or the insurer to avoid or cancel the insurance policy, the insurer shall be liable to pay to the person entitled to the benefit of decree (third party), as if the insurer were the judgement debtor, together with any amount payable in respect of costs and any sum payable along with interest.

Hence the person who sustained injuries while walking on the road can file a claim for injuries with the insurer and be indemnified as per provisions of law.