RISK MANAGEMENT IN BANKING & INSURANCE

Time Allowed: 3 Hours **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

I. (a) Choose the correct option: **[10 x 2 = 20]**

(i) Bankruptcy reorganizations are used by management to:
a. Forestall the inevitable liquidation in all cases.
b. Allow the courts time to set up an administrative structure
c. Provide time to turn the business around.
d. None of the above.

(ii) A Cap Also Called Ceiling:
a. Is A Call Option on Interest Rate
b. A Put Option on Interest Rate
c. A Short Option on Interest Rate
d. All of the above

(iii) Which of the following is the correct definition of Loss Given Default (LGD)?
a. It measures the remaining economic maturity of the exposure
b. It is the estimated amount outstanding in a loan commitment if default occurs
c. It measures the proportion of the exposure that will be lost if Default occurs
d. It measures the likelihood that the borrower will default over a given time horizon

(iv) Operational Risk is the risk of __________
a. When borrowers or counterparties fail to meet contractual obligations.
b. The unpredictability of equity markets, commodity prices, interest rates, and credit spreads.
c. Loss due to errors, interruptions, or damages caused by people, systems, or processes.
d. All of the above.

(v) Which of the following is contract between two insurers i.e. original insurer and another insurer?
a. Premium
b. Cover note
c. Reinsurance
d. Co-insurance

(vi) In which Policy, the insurer agrees to pay the assured or his nominees a specified sum of money on his death or on the maturity of the policy whichever is earlier?
a. Money Back Plan
b. Annuity Policy
c. Unit-linked insurance plan

d. Endowment Plans

(vii) What is the minimum capital and net worth requirement for exclusive corporate agents under IRDAI regulations?

a. ₹10 lakhs
b. ₹25 lakhs
c. ₹50 lakhs
d. ₹1 crore

(viii) Calculate the refund amount considering the given information: Sum Insured: ₹100.00 lakh, Premium Paid: ₹1,00,000.00, Units allotted at the time of Policy Issuance: 8,000 @ ₹10.00 per unit, Medical Expenses: ₹ 5,500 , The proportionate Risk premium for the cover period: ₹12,500
Stamp Duty Charges: ₹ 800, Fund Manager Charges: ₹1,200. Unit Price as of the date of cancellation: ₹9.50 per unit.

a. ₹77,000
b. ₹56,000
c. ₹60,000
d. ₹85,000

(ix) Master policy is issued for ________.

a. group insurance schemes
b. individual insurance
c. permanent insurance
d. Term insurance schemes

(x) _____ refers to the manner in which the risk control measures that have been implemented shall be financed.

a. Risk retention
b. Risk avoidance
c. Risk financing
d. Risk transfer

(b) Based on the following case study, you are required to answer the questions no. (i) to (v) **[5 x 2 = 10]**

Mumbai branch of Popular Bank granted a term loan of 2 Crores to a reputed corporate client for 6 years at 2% + Base rate. Presently, the base rate of the bank is 10%. The loan will be repaid by the company in 20 equal quarterly installments with a moratorium period of 6 months. The loan has been funded by the bank out of fixed deposit @ 7% fixed rate of interest, of equal amount, with a maturity period of 4 years. The CRR and SLR are to be ignored for any calculations.

(i) In this case, the loan is carrying a floating rate and the deposit is carrying a fixed rate. If the rate of interest is reduced during the first 4 years i.e., during the period of FDR, what type of risk, the bank is exposed to:

a. Funding Risk

b. Embedded Options Risk.
c. Basis Risk
d. Gap or Mismatch.

(ii) The rate of interest at the end of 4 years on a loan and the fresh deposit to be raised for funding this loan can be different. This is called:
a. Gap or Mismatch.
b. Basis Risk.
c. Embedded Options Risk.
d. Reinvestment Risk.

(iii) There is a possibility that the company may prepay the loan or the depositor may withdraw the deposit prematurely. Due to this, the bank is exposed to:
a. Reinvestment Risk.
b. Embedded Option Risk
c. Basis Risk.
d. Gap or Mismatch.

(iv) With quarterly repayment of the loan, the repayment amount has to be deployed by the bank elsewhere and the rate of interest may not be at par with the interest being charged on the loan. Due to this, the bank is exposed to:
a. Reinvestment Risk
b. Embedded Option Risk.
c. Basis Risk.
d. Gap or Mismatch

(v) Which of the following other risk is not associated with this transaction:
a. Liquidity Risk.
b. Market Risk.
c. Credit Risk.
d. Operational Risk.

Section – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks)

[5 x 14 = 70]

2. **(a)** Identify the core components of an effective risk management framework in financial institutions? **[7]**

(b) International Bank has following assets and liabilities in its balance-sheet as on March 31, 2022:

Capital	₹4,000 Crores
Reserves	₹24,000 Crores
Saving Bank Accounts	₹12,000 Crores
Term Deposits	₹1,20,000 Crores
Borrowing from RBI	₹12,000 Crores
Cash Balances	₹27,000 Crores
Balances with other Banks	₹60,000 Crores
Investment in Securities	₹60,000 Crores
Bills Payable	₹8,000 Crores
Cash Credit	₹80,000 Crores
Term Loan	₹80,000 Crores and
Fixed Assets	₹12,400 Crores
Total Assets and Total Liabilities	₹4,00,000 Crores.

The term loans have a fixed rate of interest. Based on this information, calculate the following.

i. Calculate the amount of interest rate-sensitive assets (RSA).
ii. Calculate the amount of interest rate-sensitive liabilities (RSL).
iii. Determine the interest rate sensitivity gap and identify whether it is a positive or negative gap and by how much.
iv. Calculate the Tier-1 Capital of the bank. **[7]**

3. **(a)** Examine the concept of Credit Default Swaps (CDS) in credit risk management and analyze why investors buy them. **[7]**

(b) Discuss the key channels of the sovereign-bank nexus and discuss policies to manage the related risks. **[7]**

4. **(a)** Discuss different types of Loan commitment and the advantages and disadvantages associated with each. **[7]**

(b) International Bank has provided the following information relating to its advance portfolio as of Mar 31, 2022: Total advances of ₹ 40,000 Crores. Gross NPA 9% and Net NPA 2%. Based on this information, calculate the following:

(i) Considering that all the standard loan accounts represent general advances, calculate the amount of provision for standard loan accounts?
(ii) provision on NPA accounts?
(iii) total amount of provisions on total advances, including the standard accounts?
(iv) amount of gross NPA and net NPA?
(v) provision coverage ratio for NPA
(vi) minimum amount of provisions to be maintained by the bank to meet the provisioning coverage ratio of 70%? **[7]**

5. **(a)** Sniper Bank has paid up capital of ₹200 Crores, free reserves of ₹600 Crores, provisions and contingencies reserves ₹400 Crores, Revaluation Reserve of ₹600 Crores, Perpetual nonCumulative Preference Shares of ₹800 Crores, and Subordinated Debt of ₹600 Crores. The Risk Weighted Assets for Credit and Operational Risk are ₹20,000 Crores and for-Market Risk ₹8,000 Crores. Based on the above information, calculate the following:

- The amount of Tier-1 capital and Tier-2 capital.
- Calculate the amount of fund.
- The capital adequacy ratio of the bank.
- The amount of minimum capital to support Credit and Operational Risk.
- The amount of minimum Tier 1 and Tier 2 to support the credit and operational risk.
- The amount of Tier-1 and Tier-2 capital fund, to support Market Risk. **[7]**

(b) Describe the role of insurance in economic development. **[7]**

6. **(a)** Align the objectives of the Tariff Advisory Committee (TAC) with the broader regulatory goals of the Insurance Act, 1938. **[7]**

(b) Analyze some of the health insurance policies with the specific needs they fulfil. **[7]**

7. **(a)** Demonstrate the three major risk groups that are important to non-life insurance companies. **[7]**

(b) Demonstrate the concept and structure of captive insurance companies. **[7]**

8. **(a)** A Corporate need a Corporate Loan of ₹1,000 Crores to be withdrawn immediately and availed for one year. Among other banks, Universal Bank is also approached for this. The bank is ready to sanction a loan up to ₹250 Crores (due to exposure ceiling), while the company has requested a loan of ₹500 Crores, as the balance part has been managed by the company, from other banks. To retain the customer, for accommodating the party to the extent of ₹500 Crores, Analyse, which of the following will be used by the bank.

(A) Credit Default Swap.
(B) Total Return Swap.
(C) Credit Linked Notes.
(D) Credit Spread Options. **[7]**

(b) M/s NG Ltd. is engaged in the manufacture and sale of metalized and coated films and papers. The company is planning to start a new manufacturing facility for which project planning has already begun. The project team is working day and night to procure land, financial arrangements, procuring orders and procurement of machinery from various places, storing machinery purchased and delivered, etc. The company agreed to purchase one Machinery from M/s GV Limited, England for a total value of £ 5 lakh. The machinery purchased was to be installed at the company's Plant at Jammu and to ensure, secured and safe delivery, the company took a marine cargo (Specific Voyage Policy) for a total assured sum of ₹500 lakh against any loss/damage occurring to the machinery during transit from Port to Jammu. The company paid the insurance premium due, to complete the contract. NG Ltd. bought the same policy from another insurer also for the same sum insured and on almost the same terms and conditions. The machinery had arrived at Mumbai Port and was delivered to the petitioner's warehouse at Jammu. However, on opening the packed cases, it transpired that the machinery had got damaged during transit. Both the diffusion pumps of the vacuum metallizer had cracked and the elbow of one of the pumps had bent and was damaged beyond repair. Consequently, insurers were informed about the damage and also sought for surveying assessment of loss estimated at ₹50 lakhs.

Answer the following questions considering the above:

1. Is it possible that NG Ltd. can take multiple marine insurance policies for the same cargo? In insurance terminology, what do we call NG Ltd.?
2. Discuss the admissibility of the claim and which insurer will bear the loss?
3. Do you think any insurance product covers the project before it starts operations? Discuss. **[7]**