

**Indian Institute of Technology, Kharagpur**

Date \_\_\_\_\_ FN/AN Time: 2 hours Full Marks: 30 No of Students: 50  
 Mid Spring Semester 2017-18 Deptt: HSS Sub No: HS41004  
 5-Year Integrated M.Sc in Economics Sub Name: Banking Theory and Practice

**Answer all questions. (Each questions carry equal marks)**

1. Answers the following questions

i. How do you define a bank? Why the banks are special among the other financial institutions in the market?

ii. Differentiate between bank based and market based economy.

2. Why are the banks regulated? Write a note on the regulation of banking in India?

3. Prepare the balance-sheet and income statement of a commercial bank. Explain the various financial ratios used for measuring the banks' financial performance.

4. Answers the following questions

i. What is asset-liability management (ALM) of a bank? Why is it advantageous for banks to accept some amount of interest rate risk? What are the factors affect the degree of interest rate risk that the bank takes?

ii. How would an increase (decrease) in interest rates affect a bank with positive dollar gap? Negative dollar gap?

5. Given the following information:

XYZ National Bank (in Millions)			
Assets		Liabilities and Equity	
Rate-sensitive	Rs. 200 (12%)	Rate-sensitive	Rs.300 (6%)
Non-rate-sensitive	Rs. 400 (11%)	Non-rate-sensitive	Rs. 300 (5%)
Non-earning	Rs. 100	Equity	Rs. 100
Total Assets	Rs.700	Total Liabilities and Equity	Rs.700

a. What is the gap? Net interest income? Net interest margin? How much will net interest income change if interest rates fall by 200 basis points?

b. What changes in portfolio composition would you recommend to management if you expected interest rates to increase? Be specific.

6. Calculate the duration gap of the following bank.

Assets				Liabilities and Equity			
	Amount	%	Duration (Years)		Amount	%	Duration (Years)
Cash	Rs.1000		5.0	Deposits	Rs.3000	4.0	0.5
Govt. Securities	Rs.2000	4.0	4.0	CDs	Rs.9000	6.0	4.0
Loans	Rs.10000	8.0		Equity	Rs.1000		
	Rs.13000				Rs.13000		

Calculate the percentage and dollar change in the value of equity if all interest rates increase by 200 basis points. How could the bank protect itself from this anticipated interest rate change?