Indian Institute of Technology, Kharagpur

Date_______ FN/AN Time: 3 hours Full Marks: 50 No of Students: 50

End Spring Semester 2017-18 Deptt: HSS Sub No: HS41004

5-Year Integrated M.Sc in Economics Sub Name: Banking Theory and Practice

Answer all the questions and each question carries equal marks.

Q1: (i) Highlight the objectives of loan pricing?

(ii) Compute the loan price using both the average cost of funds and the pooled cost of funds approach for a loan proposal of Rs. 30 crore for 2 years, if it sets a margin of 3%.

Maturity	Amount (Rs. Crore)	Rate (%)
-	20	0.00
6 Months	25	5.00
1 Year	35	7.00
2 Year	40	9.00
3 Year	30	12.00

(iii) Company ABC having AAA rating puts a loan proposal for Rs. 50 crore to be repaid in 5 years. Bank's cost of servicing is 3%. It has a plan to maintain a risk margin of 0.70 % for a company having AAA rating. How much should the bank charge the client to earn a profit margin of 3.5% if for 5 years loan the interest rate is 15%. Use both average cost of funds and pooled cost of funds approach separately.

(iv) XYZ Bank has given a loan of Rs. 350 crore. Based on historical data the company expects the probability of repayments is 75 % and the recovery rate is 65%. The average cost of funds is 12%, the servicing cost is 0.85% and the bank plan to maintain a margin of 3%, find out the contractual rate.

Q2. (i) For a 2 year fixed deposit of Rs 50000 with ABC bank, the interest rate is 10.5%. Ascertain the interest amount if the payment is made on a quarterly, half yearly and annual basis. What should be the interest rate if the interest is withdrawn every month and transformed to the savings account?

(ii) Compute the maturity value of a monthly instalment of Rs 500 for 3years, if the interest applied is 8% per annum and compounded quarterly.

(iii) If a depositor opens a reinvestment account at ABC bank, the interest rate offered is 9 percent for one year scheme, 10 percent for two years scheme and 11 percent for three years scheme. Find out the maturity amount for a quarterly re-investment of Rs. 10000 for a period of two years.

(iv) Given teh interest rate of 12 percent per annum on a certificate having a value of Rs. 100 after one year, calculate the issue price on the cash certificate.

Q3: Explain the different components of investment management process of commercial banks.

Q4: (a) Given the Sources and Uses of Funds Statement in Table 1, calculate the estimated changes in loans and deposits from month to month, as well as the estimated liquidity need.

Table-1 Source and uses of funds statement

End of month	Estimated total loans($)	Estimated total deposits($)
January	190000	200000
February	200000	190000
March	220000	200000
April	250000	210000
May	210000	220000
June	190000	210000
JUly	180000	200000

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(b) Given the information in Table-2, calculate the bank's ratio of estimated liquidity sources to liquidity needs. Is there a possibility that the bank will have a liquidity problem at some time in the coming months?

Table 2 estimated sources of liquidity

End of month	Estimated total loans($)	Estimated total deposits($)
January	4000	6000
February	5000	11000
March	5000	6000
April	4000	4000
May	3000	6000
June	4000	11000
July	5000	11000

(c) A bank has a capital base of Rs. 150 crore and its total assets are worth Rs. 2200 crore. While Rs. 200 crore worth assets are risk free, the risk weights for the remaining assets are given below. Compute the total risk weighted assets (RWAs), the Average Risk Weight (ARW) and the Capital Adequacy Ratio (CAR) for the various combinations. Based on the result obtained, identify the combinations of assets which give the minimum/maximum credit risk exposures to the bank.

No.	Assets	Risk Weights
1	800	50%
	1200	30%
2	1000	50%
	1000	25%
3	800	75%
	1200	30%
4	1000	75%
	1000	50%
5	1200	75%
	800	50%
6	800	105%
	1200	50%
7	1000	100%
	1000	60%
8	1000	100%
	1000	75%
9	1200	100%
	800	75%
10	1700	100%
	300	50%
11	1500	100%
	500	75%
12	1800	100%
	200	75%

Q5: Briefly explain the different Basle accords and how all these accords are different from each other?

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