

## OBJECTIVE TYPE QUESTIONS

### Finance

Net Interest income is

- (i) Interest earned on advances
- (ii) Interest earned on investments
- (iii) Total interest earned on advances and investment
- (iv) Difference between interest earned and interest paid**

Interest rate risk is a type of

- (i) Credit risk
- (ii) Market risk**
- (iii) Operational risk
- (iv) All the above

European option can be exercised on any day at the option of the buyer on or before the expiry of the option.

- (i) True
- (ii) False**

What is the beta factor for corporate finance under Standardized approach ?

- (i) 15%
- (ii) 18%**
- (iii) 12%
- (iv) None of the above

A bank suffers loss due to adverse market movement of a security. The security was however held beyond the defeasance period. What is the type of the risk that the bank has suffered ?

- (i) Market Risk
- (ii) Operational Risk**
- (iii) Market Liquidation Risk
- (iv) Credit Risk

The June 1999 Basle Committee on Banking Supervision issued proposals for reform of its 1988 Capital Accord (the Basle II Proposals). These proposals contained MAINLY.

- (I) Settlement risk management
- (II) Capital requirements
- (III) Supervisory review
- (IV) The handling of hedge funds
- (V) Contingency plans
- (VI) Market discipline

- (i) I, III and VI
- (ii) II, IV and V
- (iii) I, IV and V
- (iv) II, III and VI**

Which of the following is not a type of credit risk ?

- (i) Default risk
- (ii) Credit spread risk**
- (iii) Intrinsic risk
- (iv) Basis risk

8% Government of India security is quoted at RS 120/- The current yield on the security, will be----

- (i) 12%
- (ii) 9.6%
- (iii) 6.7%**
- (iv) 8%

Risk of a portfolio with over exposure in steel sector will be

- (i) More than systematic risk**
- (ii) Equal to intrinsic risk
- (iii) Less than intrinsic risk
- (iv) None of these

A company declares RS 2/- dividend on the equity share of face value of RS 5/-. The share is quoted in the market at RS 80/- the dividend yield will be----

- (i) 20%
- (ii) 4%
- (iii) 40%**

(iv) 2.5%

How many accounts have suffered rating migration in the following table

Rating Migration of 100 A Rated Accounts  
Migration between 31.03.06 and 31.03.07

Last Rating	No. of Accounts	Present Rating						
		A++	A+	A	B+	B	C	Default
A	100	1	1	79	10	4	3	2

- (i) 2
- (ii) 19
- (iii) 21
- (iv) 25

The risk that arises due to worsening of credit quality is

- (i) Intrinsic Risk
- (ii) Credit spread Risk**
- (iii) Portfolio risk
- (iv) Counterparty risk

A debenture of face value of As. 100 carries a coupon of 15%. If the current yield is 12.5%. What is the current market price ?

- (i) Rs.100
- (ii) Rs.120**
- (iii) Rs.150
- (iv) Rs.125

In order to develop an capability to actively manage an credit portfolio one must have in place the following:

- (a) Credit Rating Model (or models for different categories of loans and advances)
- (b) Develop and maintain necessary data on defaults of borrowers rating category wise, i.e., 'Rating Migration'.

- (i) Both 1 and 2 are required**
- (ii) Only 1 is required
- (iii) Only 2 is required
- (iv) None of the above

An increase in cash reserve ratio will cause yield curve to

- (i) Shift downward
- (ii) Remain unchanged
- (iii) Become steeper
- (iv) Become flatter**

The model that combines five financial ratios using reported accounting information and equity values to produce an objective measure of borrower's financial health is

- (i) Altman's 2 score**
- (ii) 'Credit Metrics'
- (iii) Credit Risk +
- (iv) None of the above

A bank holds a security that is rated A+. The rating of the security migrates to A. What is the risk that the bank has faced ?

- (i) Market risk
- (ii) Operational risk
- (iii) Market liquidation risk
- (iv) Credit risk**

When interest rates go up, prices of fixed interest bonds –

- (i) Go up
- (ii) Go down**
- (iii) Remain unchanged

VaR is not enough to assess market risk of a portfolio. Stress testing is desirable because

- (i) It helps in calibrating VaR module
- (ii) It helps as an additional risk measure
- (iii) It helps in assessing risk due to abnormal movement of market parameters**
- (iv) It is used as VaR measure is not accurate enough

**STUDY THE FOLLOWING STATEMENTS AND ANSWER**

**(COVERS ALL MODULES)**

- (a) Bond with 'BBB' rating will carry lower interest rate than one with 'AA' rating
- i. False**
  - ii. True
  - iii. Difficult to say
- (b) Fall in interest rate cause the rate causes the bond prices also to fall.
- i. False**
  - ii. True
  - iii. Difficult to say
- (c) A normal yield curve is sloping upward.
- i. False
  - ii. True**
  - iii. Difficult to say
- (d) Stamp duty on transfer of dematted shares is lower.
- i. False**
  - ii. True
  - iii. Difficult to say
- (e) Large Government borrowing can cause yield curve to shift upward.
- i. False
  - ii. True**
  - iii. Difficult to say
- (f) Growth Funds assure growth in return.
- i. False**
  - ii. True
  - iii. Difficult to say
- (g) If short term interest rates remain higher than the long term interest rates, the yield curve will be inverted.
- i. False
  - ii. True**
  - iii. Difficult to say

- (h) Credit rating agencies determine interest rates on debt securities.
- i. **False**
  - ii. True
  - iii. Difficult to say
- (i) The shares of software companies carry high P/E ratio.
- i. False
  - ii. **True**
  - iii. Difficult to say
- (j) Closed end mutual funds are trading at discount to NAV.
- i. False
  - ii. **True**
  - iii. Difficult to say
- (k) In a rising interest rate phase Zero coupon bond will be traded at a premium
- i. **False**
  - ii. True
  - iii. Difficult to say
- (l) A sharp decline in short term interest rates will cause yield curve to be steeper
- i. False
  - ii. **True**
  - iii. Difficult to say
- (m) A fall in interest rates reduces the demand for bonds in the secondary market
- i. False
  - ii. **True**
  - iii. Difficult to say
- (n) Increase in the cash reserve ratio can cause the yield curve going temporarily inverted.
- i. False
  - ii. **True**
  - iii. Difficult to say

- (o) Dematerialization of stocks has increased turnover on the stock market.
- i. False
  - ii. True**
  - iii. Difficult to say
- (p) Tight money and credit policy will cause bond prices to fall.
- i. False
  - ii. True**
  - iii. Difficult to say
- (q) Increasing Government borrowing will raise interest rates.
- i. False
  - ii. True**
  - iii. Difficult to say
- (r) Bond carrying 'AA' rating will carry highest interest rate than one carrying 'BBB' rating.
- i. False**
  - ii. True
  - iii. Difficult to say
- (s) Mutual fund redemption bring bearish influence on the stock market.
- i. False
  - ii. True**
  - iii. Difficult to say
- (t) Decline in the interest rates on long dated Govt. bonds will cause yield curve to be steeper.
- i. False**
  - ii. True
  - iii. Difficult to say
- (u) Demat shares carry lower stamp duty on transfer than physical shares.
- i. False**
  - ii. True
  - iii. Difficult to say
- (v) Increase in interest rates will cause bond prices to fall.

- i. False
  - ii. True**
  - iii. Difficult to say
  
- (w) Growth fund is a mutual fund that invests primarily in equity shares.
  - i. False
  - ii. True**
  - iii. Difficult to say
  
- (x) Stamp duty on transfer of demated shares is lowest.
  - i. False**
  - ii. True
  - iii. Difficult to say
  
- (y) Large Government borrowing in the market can make the yield curve shift upward.
  - i. False
  - ii. True**
  - iii. Difficult to say
  
- (z) Bond with 'A' rating will carry higher interest rate than one carrying 'BBB' rating.
  - i. False**
  - ii. True
  - iii. Difficult to say

**OBJECTIVE TYPE QUESTIONS**  
**FOR PRACTICE (COVERS ALL MODULES)**

When the interest rates fall, the market price of a fixed rate bond

- (i) falls
- (ii) rises**
- (iii) does not change

A transaction where financial securities are issued against the cash flow generated from a pool of assets is called

- (i) **Securitization**
- (ii) Credit Default Swaps
- (iii) Credit Linked Notes
- (iv) Total Return Swaps

Growth Fund is a mutual fund that

- (i) assures growth in income
- (ii) invests in fixed income securities
- (iii) gives fixed return
- (iv) **invests primarily in equities**

Operational Risk arises from

- 1) Inadequate or failed internal processes
- 2) People and systems
- 3) External Events
- 4) Defaults

Which of the following is true ?

- (i) All of them
- (ii) None of them
- (iii) **(a) , (b) and (c)**
- (iv) (a) , (b) and (e)

A decline in cash reserve ratio will cause the yield curve to

- (i) shift upward
- (ii) **shift downward**
- (iii) become flatter
- (iv) remain unchanged

The third consultative paper recommended for

- (a) Cause based classification
- (b) Effect based classification
- (c) Event based classification

For operational risk. Which of the following is true

- (i) (a)
- (ii) None of them

- (iii) (c)
- (iv) (b)

12% Government of India security is quoted at Rs.120. If interest rates go down by 1%, the market price of the security will be.....

- (i) Rs. 120
- (ii) Rs.133.3**
- (iii) Rs. 109
- (iv) Rs. 140

Benefits of integrated risk frame work are:

- (a) To relate capital and reserves more effectively to their actual level of risk exposure.
- (b) To evaluate pricing decisions and product profitability.
- (c) In making risk transfer decisions.

Which of the following is true ?

- (i) All of them**
- (ii) None of them
- (iii) (a) and (b)
- (iv) (b) and (c)

Rewards of proper management of operational risks are

- (a) Lesser risk capital
- (b) Cost reductions in operations
- (c) Competitive edge

Which of the following is true ?

- (i) All of them
- (ii) None of them
- (iii) (a) , (b) and (c)
- (iv) (a) and (b)**

A fall in long term interest rates on Government securities will make the yield curve become

- (i) flatter**
- (ii) steeper
- (iii) shift downward

A bank expects fall in price of a security if it sells it in the market. What is the risk that the bank is facing ?

- (i) Market risk
- (ii) Operational risk
- (iii) Asset Liquidation risk**
- (iv) Market liquidity risk

**(i)** An 8-year 8% semi-annual bond has a BPV of Rs.125. The yield on the bond has

11% Government of India security is quoted at Rs. 110, the yield will be –

- (i) 11%
- (ii) 10%**
- (iii) 9%
- (iv) None of these

1 day VaR of a portfolio is Rs.500,000 with 95% confidence level. In a period of six months (125 working days) how many times the loss on the portfolio may exceed Rs.500,000 ?

- (i) 4 days
- (ii) 5 days
- (iii) 6 days**
- (iv) 7 days

A fall in interest rates will make prices of Government Securities -

- (ii) Go down
- (iii) Go up**
- (iv) Remain unchanged
- (v) None of these

Systemic risk the risk of

- (i) Failure of a bank, which is not adhering to regulations
- (ii) Failure of two banks simultaneously due to bankruptcy of one bank
- (iii) Where a group of banks fail due to contagion effect
- (iv) Failure of entire banking system**

If the yield on long dated Govt. securities falls, then the yield curve will become:-

- (i) Steeper
- (ii) Flatter**

- (iii) Shift downward

11% Govt. of India security is quoted at Rs.110. If the interest rates go down by 1% the market price of the security will be

- (i) Rs.110
- (ii) Rs.109
- (iii) Rs.122.2**
- (iv) Rs.130

Balanced fund is a mutual fund that

- (i) Assures income
- (ii) Invests in debt and equity
- (iii) Assure growth**
- (iv) Gives fixed returns

Back testing is done to

- (i) Test a model
- (ii) Compare model results and actual performance**
- (iii) Record performance
- (iv) None of the above

Under Basel II, Capital requirement under the accord is

- (i) The maximum Capital that is required to be maintained
- (ii) The minimum Capital that is required to be maintained
- (iii) The capital as specified by the regulatory authority is required to be maintained**
- (iv) None of the above

**STUDY THE FOLLOWING STATEMENTS AND ANSWER  
(COVERS ALL MODULES)**

(aa) Fall in interest rates cause the prices of Govt. securities to go up.

- i. False
- ii. True**
- iii. Difficult to say

(bb) Steeper yield curve means long term interest rates are much lower than short term interest rates.

- i. **False**
- ii. True
- iii. Difficult to say

(cc) Mutual fund mobilization has bearish influence on the stock market.

- i. **False**
- ii. True
- iii. Difficult to say

(dd) Convertible debentures carry an element of equity shares.

- i. False
- ii. **True**
- iii. Difficult to say

(ee) Credit Rating agencies fix interest rates on bonds or debentures issued by companies.

- i. **False**
- ii. True
- iii. Difficult to say

(ff) Mutual Funds invest only in equity shares.

- i. **False**
- ii. True
- iii. Difficult to say

(gg) Favorable monsoon brightens the prospects for stock market.

- i. False
- ii. **True**
- iii. Difficult to say

(hh) Large Government borrowings cause debt securities prices to rise.

- i. **False**
- ii. True
- iii. Difficult to say

(ii) Falling interest rates have benefited investors in debt securities mutual funds.

- i. False
- ii. True**
- iii. Difficult to say

(jj) Large government borrowing would cause interest rates to go down.

- i. False**
- ii. True
- iii. Difficult to say

(kk) Falling interest rates cause NAVs of debt mutual fund to go down.

- i. False**
- ii. True
- iii. Difficult to say

(ll) Bond with 'BBB' rating will carry lower interest rates than one with 'A' rating.

- i. False**
- ii. True
- iii. Difficult to say

(mm) Money market mutual funds do not invest in equity shares.

- i. False
- ii. True**
- iii. Difficult to say

(nn) SEBI gives credit rating to securities issued in the capital market.

- i. False**
- ii. True
- iii. Difficult to say

(oo) Mutual funds can offer guaranteed returns.

- i. False**
- ii. True
- iii. Difficult to say

(pp) Large government borrowings will cause interest rates to go up.

- i. False
- ii. True**
- iii. Difficult to say

(qq) A mutual fund scheme; with a entry load will have its sale price higher than its NAV.

- i. False
- ii. True**
- iii. Difficult to say

(rr) Security with A rating will carry higher interest rate than one with BB rating.

- i. False**
- ii. True
- iii. Difficult to say

**OBJECTIVE TYPE QUESTIONS**  
**FOR PRACTICE (COVERS ALL MODULES)**

A fall in the interest rates causes Govt. Securities to

- (i) Remain stable
- (ii) Fall
- (iii) Rise**

Capital charge for credit risk requires input for PD, LGD, EAD and M. Under advanced IRB approach, who provide the input for LGD.

- (i) Bank**
- (ii) Supervisor
- (iii) Function provided by BCBS
- (iv) None of the above

A debenture of Rs.100 carrying 15% coupon rate is quoted in the market at Rs.135/-. The current yield on this debenture will be

- (i) 13.5%
- (ii) 15%
- (iii) 11.11%**
- (iv) 10%

Investment in Post Office time deposit is

- (i) **Zero risk investment**
- (ii) Low risk investment
- (iii) Medium risk investment
- (iv) High risk investment

If the short term interest rates are temporarily higher than the long term interest rates, the yield curve will be

- (i) Sloping upward
- (ii) **Inverted**
- (iii) Zigzag
- (iv) Horizontal

Premature payment of a term loan will result in interest rate risk of type

- (i) Basis risk
- (ii) Yield curve risk
- (iii) **Embedded option risk**
- (iv) Mismatch risk

A company with equity capital of Rs.50 crores (Face Value of Rs.10/- per share) makes gross profit of Rs.70 crores and net profit after tax of Rs.25 crores. If the market price of its equity share is Rs.50, the PE ratio will be

- (i) 50
- (ii) 5
- (iii) **10**
- (iv) 20

Daily volatility of a stock is 1%. What is its 10 days volatility approximately ?

- (i) **3%**
- (ii) 10%
- (iii) 1%
- (iv) 4%

If call money rates are temporarily higher than the long term interest rates, the yield curve will be

- (i) Slopping upwards
- (ii) Zigzag
- (iii) **Inverted**
- (iv) Horizontal

Capital charge component of pricing accounts for

- 1) Cost of capital

- 2) Internal generation of capital
- 3) Loss provision

Which of the following is true.?

- (i) All the statements are correct
- (ii) Statements 1 and 2 are correct**
- (iii) Statements 2 and 3 are correct
- (iv) Statements 3 and 1 are correct

Equity oriented mutual funds

- (i) Assure income
- (ii) Assure growth
- (iii) Invest in debentures
- (iv) Invest in shares**

A bank funds its assets from a pool of composite liabilities. Apart from credit and operational risks, it faces

- (i) Basis risk**
- (ii) Mismatch risk
- (iii) Market risk
- (iv) Liquidity risk

A branch sanctions Rs.1 core loan to a borrower, which of the following risks the branch is taking

- 1) Liquidity risk
  - 2) Interest rate risk
  - 3) Market risk
  - 4) Credit risk
  - 5) Operational risk
- 
- (i) All of them
  - (ii) 1,2 and 3 only
  - (iii) 1,4 and 5 only
  - (iv) 1,2,4 and 5 only**

A rise in Government securities prices will make yield curve –

- (i) Slope upward
- (ii) Shift downward**
- (iii) Remain stable
- (iv) Shift upward

Risk mitigation measures result in

- 1) Reducing downside variability
- 2) Reducing upside potential which of the following is true

- (i) Both the statements are correct**
- (ii) Both the statements are not correct
- (iii) Statement 1 is correct
- (iv) Statement 2 is correct

9% Government of India security is quoted at Rs.120. The current yield on the security will be –

- (i) 12%
- (ii) 9%
- (iii) 7.5%**
- (iv) 13.3%

Financial Risk is defined as

- (i) Uncertainties resulting in adverse variation of profitability or outright losses**
- (ii) Uncertainties that result in outright losses
- (iii) Uncertainties in cash flow
- (iv) Variations in net cash flows

Strategic Risk is a type of

- (i) Interest Rate Risk
- (ii) Operation Risk
- (iii) Liquidity Risk
- (iv) None of the above**

Objective of liquidity management is to:

- (i) Ensure profitability
- (ii) Ensure liquidity
- (iii) Either of two
- (iv) Both**

A mutual fund charges 1% entry load and no exit load. Its NAV is Rs.16; its sale and repurchase price will ----

- (i) Rs.16 and Rs.15.80
- (ii) Rs.16.16 and Rs.15.84
- (iii) Rs.15.84 and Rs.16
- (iv) Rs.16.16 and Rs.16**

Banks need liquidity to:

- (i) Meet deposit withdrawal
- (ii) Fund loan demands
- (iii) Both of them**
- (iv) None of them

**OBJECTIVE TYPE QUESTIONS**  
**FOR PRACTICE (COVERS ALL MODULES)**

A fall in interest rate of long dated government securities with the short term interest rates remaining unchanged will make the yield curve.

- (i) Steeper
- (ii) Slope downward
- (iii) Shift downward
- (iv) Flatter**

Adequacy of bank's liquidity position depends upon:

- (i) Sources of funds
- (ii) Anticipated future funding needs
- (iii) Present and future earnings capacity
- (iv) All of the above**

Current yield on a government security is 5%. If the market price of the bond is Rs.160, the coupon rate on the bond will ----

- (i) 6%
- (ii) 5%
- (iii) 8%**
- (iv) 10%

Assets represent source of funds where as liabilities denote the use of funds in a balance sheet.

- (i) True

- (ii) **False**
- (iii) Difficult to say

Deregulated environment has narrowed spreads of the banks.

- (i) **True**
- (ii) False
- (iii) Difficult to say

Asset Liability management is only management of maturity mismatch and has no bearing on profit augmentation.

- (i) True
- (ii) **False**
- (iii) Difficult to say

A rise in the short term interest rates with the long term interest rates remaining unchanged will make the yield curve -----.

- (i) Steeper
- (ii) Shift upward
- (iii) **Flatter**
- (iv) Slope upward

Net Interest Margin is also known as 'Spread'.

- (i) **True**
- (ii) False
- (iii) Difficult to say

A scheme of mutual fund has units with face value of Rs.10 and NAV of Rs.37. The Fund declares a dividend of 35% in the scheme. The ex-dividend NAV will be ----- per unit.

- (i) Rs.37
- (ii) Rs.2
- (iii) **Rs.33.50**
- (iv) Rs.35.5

7.5% coupon interest Government Security is quoted at Rs.120. Its current yield will be -----.

- (i) 8.55%
- (ii) 6.25%**
- (iii) 7.75%
- (iv) 7%

A company with equity capital of Rs.15 crores makes PBIDT of Rs.15 crores and PAT of Rs.10 crores. The face value of its share is Rs.5 and PE is 10, the market price will be -----.

- (i) Rs.50
- (ii) Rs.66
- (iii) Rs.33**
- (iv) Rs.100

**CASE STUDIES**  
**(COVERS ALL MODULES)**

1. A company with equity of Rs.10 crore, earns PBIDT of Rs.30 crore. It incurs interest cost of Rs.35 crore depreciation of Rs.5 crore and pays Rs.10 crore as tax. It has reserve of Rs.30 crore (excluding current year's profits) and long terms debt of Rs.35 crore. It pays 50% dividends and transfer remaining profit to reserves. Its share of Rs.10 face value is quoted at Rs.150/-

Find the following----

- (i) Earning per share

$$\begin{aligned}
 &= \frac{\text{PAT}}{\text{Equity}} \times 10 \\
 &= \frac{30 - (5 + 5 + 10)}{10} \times 10 = \frac{10}{10} \times 10 = \text{Rs.10}
 \end{aligned}$$

- (ii) Book value of share

$$\begin{aligned}
 &= \text{Equity} + \text{Reserves} \\
 &= 10 + 30 + 5 \\
 &= \text{Rs.45}
 \end{aligned}$$

- (iii) Return on Net worth

$$\begin{aligned}
&= \frac{\text{PAT}}{\text{NW}} \\
&= \frac{10}{45} \times 100 \\
&= 22.2\%
\end{aligned}$$

(iv) Debt-equity ratio

$$= 35: 45 = 7:9$$

(v) P/E ratio

$$\text{PE} = \text{MP} / \text{EPS} = 150 / 10 = 15$$

(vi) Payout ratio

$$\begin{aligned}
&= \frac{\text{Dividend}}{\text{PAT}} \times 100 = \frac{5}{10} \times 100 = 50\%
\end{aligned}$$

2. A company with equity of Rs. 10 crore earns PBIDT of Rs. 40 crore. It incurs interest of Rs.5 crore, depreciation of Rs. 5 crore and pays tax of Rs. 10 crore. It has reserves of Rs. 30 crore (Excluding current years profits) and long term debt of Rs. 50 crore. It pays 100% dividend and transfers remaining profit to reserves. Its share of Rs. 10 face value is quoted at price of Rs. 200. Find the following :

(i) Book value of share after current year's profit transferred to reserves.

$$\begin{aligned}
\text{Book Value} &= \text{Equity} + \text{Reserves} + \text{Current year's (PAT - Div)} \\
&= 10 + 30 + (20 - 10) = \text{Rs.}50
\end{aligned}$$

(ii) Earning per share

$$\text{EPS} = \text{PAT} / \text{Equity} = \frac{40 - (5+5+10)}{10} \times 10$$

$$\begin{aligned}
&= \frac{20}{10} \times 10 = \text{Rs.}20
\end{aligned}$$

(iii) Return on net worth

$$40\% \text{ Return on net worth} = \frac{\text{PAT} \times 100}{\text{NW}} = \frac{20}{50} \times 100 = 40\%$$

(iv) Debt-equity ratio

$$1:1 \text{ Debt equity ratio} = \frac{50}{50} = 1:1$$

(v) P/E ratio

$$\begin{aligned} 10 \text{ M.P.} &= \text{EPs} \times \text{PE} \\ 200 &= 20 \times \text{PE} \\ \text{PE} &= 10 \end{aligned}$$

(vi) Payout ratio

$$50\%$$

$$\frac{\text{Dividend}}{\text{PAT}} = \frac{10}{20} = 50\%$$

### IMPORTANT KEY WORDS FOR PRACTICE

**Appreciation:**

An increase in the market value of an asset.

**Arbitrage:**

(i) Dealing between two centres to take advantage in the rate due to a temporary difference in the rates between two places.

(ii) The simultaneous trading (purchase/sale OR sale/purchase) of assets to take advantage of price differentials.

**Asset creation:**

Acquisition of assets/ investments

**Balance sheet:**

A Financial Statement that indicates the type and amount of assets, liabilities and Capital of a firm as on a particular date.

**Base currency:**

The currency against which another currency is quoted. [Eg. INR 39.4880/USD–wherein INR is quoted currency and USD is base currency]

**B R:**

Banker's Receipt. This is a receipt issued by the Bond/ security selling bank when the original scrip/ Bond is not immediately deliverable for settlement.

**Bid:**

The price quoted by someone to buy the asset or borrow funds.

**Broker:**

Intermediaries who match buyers and sellers Or borrowers and lenders and receive a commission (brokerage) for such intermediation.

**Concurrent auditor:**

A professional, generally an external guy (not a staff), who checks/ audits the day to day transactions and reports. His main task is to check whether the laid down systems/procedures/policy has been complied with, in each transaction and report the discrepancies to the Management.

**Cover:**

To take out forward contracts to protect against exchange fluctuation between today's date and due payment date.

**Deal:**

A transaction undertaken by the Dealer in the domestic market or Foreign Exchange market binding the Bank.

**Deal confirmation:**

Written advice from one counterparty in a deal to the other in which the main terms and conditions of the deal are confirmed.

**Fixed rate currency:**

Currency having a fixed rate of exchange within narrow limits versus another reference currency, usually the dollar.

**Floating rate currency:**

Currency having its exchange rate determined by market forces including Central Bank intervention.

**Forex:**

Foreign Exchange.

**Forward contract:**

Any contract for settlement later than spot date.

**Forward-Forward deal:**

Simultaneous purchase and sale of one currency for different forward value dates.

**Funding of assets:**

Borrowing done, when assets are more than the Liabilities of the bank.

**Hedge:**

Action taken by the Bank to reduce or eliminate a risky exposure.

**Intra day position:**

Open position run by a dealer within the day. This is generally reduced to square or nearly so before close of business.

**Keeping arms length:**

Not to influence/interfere or get influenced/interfered.

**Liquidity risk:**

The variation in net income and market value of bank equity caused by the bank's difficulty in obtaining immediate funds, either by borrowing or selling assets.

**LIBOR:**

London Interbank Offered Rate—the rate at which major Banks in London offer to lend in the interbank market.

**Nostro account:**

A Bank's account with a foreign Bank.

**NSE:**

National Stock Exchange

**NSE terminals:**

Computer nodes through which screen driven trading can be conducted in the NSE.

**Offer:**

Rate at which the Bank/dealer sells or lends.

**Open position:**

Difference between total purchases and total sales in a given currency on which an exchange risk is run.

**Premium:**

Difference between spot price and price for forward settlement.

**Proactive:**

One who acts in advance before others react, anticipating the market move.

**Reserves:**

Qualifying assets to meet the statutory reserve requirements.

**Settlement of deals:**

Verification of the deal terms/calculations, obtention of Deal confirmation from the counterparty, Brokers contract, documentation of the transaction and arranging the delivery of the documents.

**SGL account:**

Subsidiary General Ledger Account maintained with RBI for Govt. Securities transactions.

**Spot deal:**

A deal for currency for delivery two business days from today.

**Spot next:**

A deal from the spot date until the next day, either as a deposit or a swap.

**Spread:**

Difference between the cost of funds and return from the funds.

**Volatile market:**

Market wherein the prices/rates are fluctuating in a wide band/ range

**Vostro account:**

A foreign Bank's account with a local Bank.

**Wire agency:**

News reporters, which are transmitting the information/news instantaneously through tele-net work.

**Reserves:**

Assets qualifying to meet statutory requirements.

**CRR:**

Cash Reserve Ratio

**SLR:**

Statutory Liquidity Ratio

**Asset Liability Maturity Mismatches:**

Case when either gross Financial Assets outgrows Capital & Liabilities or vice versa

**Demand and Time Liabilities (DTL):**

Sum of Demand Deposits and Fixed deposits including inter bank deposits

**Government Stock/Loan/Securities/Gilts:**

Loans raised by Government to meet its fiscal deficits. These are issued in the form of tradable bonds.

**NDTL for SLR:**

Gross DTL less Inter Bank Deposits.

**NDTL for CRR:**

NDTL for SLR less exempted categories of liabilities.

**Delivery versus Payment (DVP) System:**

System where the securities are delivered against simultaneous payment. As both the legs of 'delivery' and 'payment' are simultaneous Settlement Risk is avoided.

**SGL Transfer Form:**

RBI prescribed format printed on semi security paper for effecting security transactions in the SGL account of the bank.

**Authorized Signatories:**

Officials (generally back office staff) who are authorized to execute/ sign SGL Transfer Forms and other documents and whose specimen signatures are lodged with RBI and other counterparts in the market.

**Bank Rate:**

Interest rate at which RBI lends to Sch. Comm. Banks. Refinance Rates and penalty on default of CRR are pegged to Bank Rate. RBI is using Bank Rate as a tool to send interest rate signals to the market.

**Local Bank Account:**

Account with SBI and/or such other Bank, which is managing the Clearing house, through which the Clearing net proceeds are and where the Bank is maintaining a current account for passing the Clearing inflows and outflows.

**Cash Surplus Branch:**

Branch which collecting and holding cash more than its stipulated limit/ normal payment requirement.

**Purchased Funds:**

Funds sourced at the at market determined rates (different from rates offered to the public).

**Repoable Securities:**

Securities which are approved for Repo transactions.

**Discretionary Liabilities:**

Liabilities/resources raised at the discretion of the borrower.

**Buyers Market:**

Market where the demand is less and supply is more. Buyer has better choice for selection/negotiation since sellers (supply) outnumber the buyers (demand).

**CAR:**

Capital Adequacy Ratio.

**DVP System:**

‘Delivery versus Payment’ (DVP) system is the Settlement system wherein delivery of the Stock/security and Payment of consideration are made simultaneous. In case if one side of the transaction doesn’t go through (say, for want of good delivery), the RBI holds

back the other side of the transaction (payment of consideration). By this, settlement risk is totally hedged.

**Derivative Usance Promissory Note (DUPN):**

Usance Promissory note drawn by the discounting Bank against the underlying Bills. While rediscounting the Bills, actual endorsement and delivery of these Bills are not necessary. Instead this Promissory Note is delivered. Since this Note derives its value from the underlying Bills, this is called Derivative Usance Promissory Note.

**Maximization of Spreads:**

Difference between the Total cost of funds and total return from it gives the spread. Spreads can be maximized either by reducing the cost and/or increasing the return from it.

**Maximization of Net worth:**

Increasing the profits of the business so that maximum profits can be ploughed back to Reserves. This maximizes the Net worth of the Company and thereby increases the Shareholders value.

**GAP:**

It is the difference between the Rate Sensitive Assets (RSA) and Rate Sensitive Liabilities (RSL). GAP is said to be positive when  $RSA > RSL$ .

**Duration GAP:**

Difference between the aggregate duration of Assets and aggregate duration of Liabilities is Duration Gap.

**Market Interest Rate:**

The interest rate, or discount rate, or yield to maturity is an interest rate which changes constantly, depending on various factors like demand/supply of the Financial asset, future economic outlook, etc.

**Face Value:**

The principal value or the Maturity value of the Bond, which is printed on the bond and which is fixed throughout the bond's life.

**Coupon Rate:**

The fixed rate of interest which is printed on the Bond certificate is called Coupon rate. Coupon rates are contractual rates that cannot be changed after the bond is issued.

**Time Value of Money:**

In order to understand this concept, it is important that we are familiar with discounted cash flow analysis.

It is known that:

- a. People have a positive time preference for money;
- b. A rupee today is worth more than a rupee received in the future;
- c. People postpone their current consumption and save only if their future consumption opportunities will be more because of their savings;
- d. Since money earns interest, it takes more future rupees to equal the value of a rupee today.

The above show that money has a time value.

**Future Value:**

The process of going from today's value or Present Value (PV) to Future Value (FV) is called compounding. To understand this, consider the case where an investor put Rs 100 in the Bank at 10 per cent p.a.

This means that Rs 100 today is equivalent to its Future value of  $Rs\ 100 \times (1 + 0.10) = Rs\ 110$  one year from now.

Future Value at the end of second year is  $Rs110 \times (1 + 0.1) = Rs\ 121$ .

This can be expressed by the formula:

$$FV = PV (1+i)^n$$

Where:  $i$  = interest rate and  $n$  is number of years

**Present Value:**

The process of calculation from Future Value to today's value (Present Value) is called discounting. In the above quoted example the Present value of Rs 121 to be received from the Bank at an interest rate of 10 per cent is Rs 100.00. The process of discounting is simply the inverse process of compounding. Accordingly, the Present Value (PV) can be found out as follows:

$$PV = FV / (1+i)^n$$

**Net Present Value:**

Suppose an investment of Rs.100 generates a net cash flow of Rs 115 from one year from now and if the cost of funds for the Bank is 10 per cent, the investment is worth doing. To find out how much wealth does the investment creates for the capital, the future value of Rs 115 is discounted at the cost of capital, i.e.,10 per cent.

$$PV \text{ of Rs } 115 = \frac{115}{(1 + 0.1)} = \text{Rs } 104.55$$

Since the initial cost of investment is only Rs 100, the Net Present Value, i.e., the wealth created for the shareholders, is found out as.

$$NPV = PV \text{ of the future revenue} - \text{initial cost} = 104.55 - 100 = \text{Rs } 4.55$$

The net present value (NPV) approach can be extended to more complex situations. Using the same logic as above, to find the NPV of an asset with an initial investment of cost of  $C$  and net cash flows at subsequent dates from year 1 to year 'n' is:

$$NPV = (-) C + \frac{\text{cash flow 1}}{(1+r)^1} + \frac{\text{cash flow 2}}{(1+r)^2} + \dots + \frac{\text{cash flow n}}{(1+r)^n}$$

**Bond Valuation:**

Bond is a contractual obligation to pay:

- i. Coupon/interest specified on the Bond;
- ii. at fixed intervals;
- iii. Principal amount with or without premium, if specified any, at maturity.

The Present value or price of the Bond is therefore:

- i. PV of the future stream of cash flows (interest payments and Principal) discounted at prevailing market interest rates;
- ii. At the time of new issue, coupon interest and market interest are ideally the same and expressed as follows:

$$\text{Bond Value (VB)} = \frac{C_1}{(1+i)} + \frac{C_2}{(1+i)^2} + \frac{C_3}{(1+i)^3} + \dots + \frac{(C_n + M)}{(1+i)^n}$$

$$= \sum_{t=1}^n \frac{C}{(1+i)^t} + \frac{M}{(1+i)^n}$$

Where:

$C_1.. C_n$  = period coupon payment from year 1 to n

$i$  = market interest rates, prevailing

$n$  = period to maturity

$M$  = Principal with / without redemption premium

The value of the Bond will change if there is a change in the market interest rate ( $i$ ). If market interest rate goes up beyond the coupon rate, the value of the bond will fall so that the new investor (buyer) would earn market interest rate despite the fact that the coupon of the Bond would continue to give fixed lower income. Likewise if market interest rate declines below the coupon rate, the value of the bond will appreciate so that the new investor (buyer) earn only lower market interest rate despite the fact that the coupon of the Bond would continue to give fixed higher income. Such equilibrating adjustment in bond price/ value is known as bond dynamics.

We learnt that the value of the Bond depends on the coupon rate vis-à-vis prevailing market interest rates. We can summarize the above as follows:

- i. Whenever the market interest rate rise above the coupon rate of the bond, the price of the bond will fall;
- ii. if the market interest rate falls below the coupon rate of bond, the price of bond will appreciate;
- iii. if there is no change in the market interest rate from bond coupon rate, the price of bond will remain the same.

**Annuity:**

This is a series of equal payments made at fixed intervals for a specified number of periods. If the payments are made at the end of the period, it is known as ordinary annuity or deferred annuity. If payments are made at beginning of period, then it is an annuity due.

Formula for Future value of an ordinary /deferred annuity is:

$$FVA_n = A (1+r) + A (1+r) + \dots + A$$

Where	FVA <sub>n</sub> =	Future value of an annuity with 'n' periods
	A =	Constant/regular cash flow
	r =	Interest rate
	n =	Duration of the annuity

**YIELD:**

Yield is defined as an overall return to an investor on his investment. With respect to yield on Bonds/GOI securities, three types of yields are discussed:

**Nominal yield:**

This is the annual interest rate specified on the Bonds, irrespective of its price (i.e., whether quoted at a premium or at a discount). This is also known as Coupon of the Bond.

**Current yield:**

This is the effective yield an investor earns keeping in mind the current market price of the Bond. This is given by the formula:

$$\text{Current Yield} = \frac{\text{Nominal yield or Coupon}}{\text{Current market Price}} \times 100$$

**Yield to maturity:**

This term popularly known as YTM connotes redemption yield and is very useful for Treasury Managers whose investment horizon is long term. YTM can be interpreted as the bond’s average compounded rate of return if the bond is bought at the current asked price and held until it matures and the face value is repaid. That is, YTM can be defined as the discount rate that equates present value of all cash flows to the present market price of the Bond. Future cash flows includes interest and capital gain/loss. This can be algebraically expressed as follows: Let the Bond with a face value of ‘A’ of coupon ‘C’ with a term to maturity of ‘n’ years is quoted/traded at a market price of P, then

$$P = \frac{C}{(1+y)^1} + \frac{C}{(1+y)^2} + \frac{C}{(1+y)^3} + \dots + \frac{(C + A)}{(1+y)^n}$$

Where 'y' is the discount rate (to be found by trial & error method ) at which the cash flows are discounted so that the right hand side of the above equation tallies/equates with the Price P (left hand side) of the Bond.

The 'y' so derived would be the Yield to maturity (YTM) of the bond. It implies that, if the Bond is held till maturity and the Coupons/Cash flows received are reinvested at the 'y' rate itself, the overall yield on the Bond will be 'y', which is its YTM.

An example would further help to understand the mechanics of the YTM. Suppose the market value of Rs 100 (face value) bond carrying coupon of 13 per cent p.a. maturing after 7 years is quoted Rs 109.45 in the market. The YTM of the bond is found by discounting the yearly coupon flows of Rs 13 in the next 6 years and Rs 113 (Principal of Rs 100 + coupon of Rs 13) at the end of 7 year at a rate (to be found by trial & error method), say 'r' so that the Present value of such cash flows sums to Rs 109.45  $Rs\ 13 (PVIFA) + Rs\ 100 (PVIF) = Rs\ 109.45$  PVIFA being the Price Value Interest Factor for the 7 year Annuity and PVIF the Price Value Interest Factor for 7 years to be taken from the PVIFA table and PVIF table (available in all standard Finance Text Books) for a 7 year term, by trial and error method.

Accordingly for 7 years (PVIFA) at 11% = 4.712

and for 7 years (PVIF) at 11% = 0.482

Then LHS of the equation becomes  $13 \times (4.712) + 100 \times (0.482) = Rs\ 109.45$

Then 11 per cent is said to be the YTM of the bond, also described as the Internal Rate of Return, (IRR). In other words, in the above example, if the above bond is held by the buyer till maturity the overall return from the Bond will be 11 per cent. However as the above process will be time consuming, YTM can be found by approximation as follows.

$$YTM = \frac{C + (A - P)/n}{(A + P) / 2} \times 100$$

Where C = coupon  
A = Face Value/maturity Value

P = Price paid for the Bond  
n = term to maturity

Applying this in the above example,

$$\begin{aligned}
\text{YTM} &= \frac{13 + (100 - 109.45)/7}{(100 + 109.45)/2} = \frac{13 + (-9.45/7)}{104.725} \\
&= \frac{13 - 1.35}{104.725} \times 100 = 11.12\%
\end{aligned}$$

However underlying assumption in the YTM concept is that the coupons/cash flows received during the tenure of the bond is reinvested at YTM rate, which may not be true since the market interest rates will always be changing from time to time.

**Holding Period/Realized Yield:**

When the holder/investor is going to disinvest the Bond before its maturity, the overall yield earned by him from the Bond is known as Holding Period Yield or Realized Yield. Let us understand this with the help of an example:

Suppose you are holding a 10 year Bond with a Face value of Rs 100 and coupon 8 per cent. After 3 years, when the interest rates move up to 10 per cent for 7 years term, you want to sell this Bond. As the interest rates have moved up, naturally you may have to sell the Bond at a discount. The selling price for the Bond by using the Bond Valuation Formula as follows:

$$\frac{8}{(1.10)} + \frac{8}{(1.10)^2} + \frac{8}{(1.10)^3} + \frac{108}{(1.10)^7} = 90.25$$

This shows that the Bond have to be sold at a below par value of Rs 90.25, thereby incurring a capital loss of

$$(100 - 90.25) = \text{Rs } 9.75.$$

Now to find the Realized yield on the 8 per cent bond for the period of 3 years held and with a redemption value of Rs 90.25 (as the sale proceeds of the Bond), the YTM formula is used as follows:

$$+ \frac{8}{(1+r)^1} + \frac{8}{(1+r)^2} + \frac{(8 + 90.25)}{(1+r)^3} = 100$$

Where 'r' is the Realized or Holding Period Yield.

Accordingly, we get the Realized yield 'r' = 4.9 per cent.

However as it is much lower than the promised yield of 8 per cent, the seller incurs a loss of  $(8 - 4.9) = 3.1$  per cent returns on his Bond.

### **Yield Spreads:**

Yield spreads are the differences between the yields of any pair of bonds—usually a zero risk bond and another risky bond—of same maturity.

$$\{\text{Yield on risky bond}\} - \{\text{Yield on zero risk bonds}\} = \{\text{yield spread}\}$$

Yield spreads are also called 'risk-premiums' because they measure the additional yield that risky bonds pay to induce investors to buy more-risky bonds rather than less risky bonds.

### **Yield on Discounted instruments:**

The issue price of a discounted instrument is calculated as follows:

$$D = \frac{F}{\dots}$$

$$1 + \{(r \times n)/36500\}$$

where,

- D = Discounted value of the instrument
- F = Maturity Value
- r = Effective rate of interest per annum
- n = Tenure of the instrument ( in days)

Conversely to find out the yield from a discounted instrument, the following formula can be derived from the above one,

$$r = \frac{(F - D)}{D} \times \frac{365}{n} \times 100$$

where,

- D = Discounted value of the instrument
- F = Maturity Value
- r = Effective rate of interest per annum
- n = Tenure of the instrument ( in days)

### **REPO Transactions—calculations:**

Assume Bank 'A' borrows from Bank 'B' an amount of Rs 10 crores for a period of 14 days from 10.10.2005 to 24.10.2005, at an interest rate of 8 per cent against its holding of 11.50 per cent GOI 2007 (Interest Payment dates of this stock are 5th April and 5th October of the year). As already stated earlier, the transaction involves 2 legs—First leg/Ready leg and Second leg/Forward leg. The calculation for both legs are explained below:

### **Working**

(**Note:** While calculating interest accrued on Government securities, 360 days are considered for an year.)

FIRST LEG/READY LEG on 10.10.2005: (Bank A sold 11.50 per cent GOI 2007 to Bank B)

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Calculation for first leg is as if Bank A is selling the security (11.5 per cent GOI 2007) outright to Bank B at the market price of Rs 100. This is as follows:

Principal (Rs 10 crs. @ 100.00)	=	Rs 10,00,00,000.00
Accrued int.on the stock		
= (10 crs x 11.5% x 5/360)	=	Rs 1,59,722.22
<u>First/Ready leg settlement amount...(1)</u>	=	<u>Rs 10,01,59,722.22</u>

(It may be understood from the above transaction, that Bank A borrowed Rs 10,01,59,722.22 from Bank B)

FORWARD/SECOND LEG on 24.10.2005: (Bank A bought back the stock from Bank B)

Though the second leg transaction is to be calculated as if Bank A is buying outright the security from Bank B, to arrive at the buying rate/price, the calculation has to be done on the reverse way, as follows:

1. Calculate the settlement amount Bank A has to pay Bank B which is = Amount borrowed + interest @ 8% for 14 days (Repo rate)

$$= \text{Rs } 10,01,59,722.22 + \text{Rs } 3,07,339.42$$

$$\square \text{ Settlement amount} = \text{Rs } 10,04,67,061.64$$

2. From this subtract accrued interest on the stock till date.

Accrued interest on the stock

$$= 10,00,00,000 \times 11.5\% \times 19$$

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360

$$= \underline{\text{Rs } 6,06,944.44}$$

$$\text{Settlement amt.} - \text{Accrued interest} = 10,04,67,061.64$$

6,06,944.44

Rs 9,98,60,117.20

3. Resulting amount of Rs 9,98,60,117.20 is the principal amount for the Rs 10 crore value stock. Hence to get rate of repurchase, divide this value by nominal value

i.e.

$$\frac{9,98,60,117.20}{10,00,00,000} = 99.860117$$

Now based on this rate, the accounting is done as follows:

Principal (Rs 10 crs. @99.860117) = Rs 9,98,60,117.20

Accrued int. on the stock

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= (10 crs x 11.5% x19/360) = Rs 6,06,944.44

Forward/second leg settlement amt

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= (1) + int @ 8% for 14 days = (2) = Rs 10,04,67,061.64

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**1-The formula used to calculate current ratio is**

- 1.Current assets / Current liabilities
- 2.Current liabilities / Current assets
- 3.Inventory / Current liabilities
- 4.Current liabilities / Inventory

(Ans: a)

**2-For a healthy business the current ratio lies between**

- 1.0 to 1.5
- 2.1.5 to 3
- 3.3 to 4.5
- 4.4.5 to 6

(Ans: b)

**3-In ABC analysis 'A' class consist of items having \_\_\_\_\_.**

- 1.Accurate records
- 2.Good records

3.Minimal records

4.No records

(Ans: a)

**4-The symptom of large inventory accumulation in anticipation of price rise in future will be indicated by**

1.Asset turnover ratio

2.Working Capital turnover ratio

3.Inventory turnover ratio

4.All of the above

(Ans: c)

**5-The comparison of financial data of same time period of different organisations engaged in similar business.**

1.Time series analysis

2.Cross-sectional analysis

3.Spatial data analysis

4.None of the above

(Ans: b)

**6-An example of fixed asset is**

1.Live stock

2.Value stock

3.Income stock

4.All of the above

(Ans: a)

**7-The following is (are) the limitation of Economic Order Quantity assumption(s).**

1.Demand may vary throughout the year

2.It assumes that the storage space is unlimited

3.Prices of materials change throughout the year

4.All of the above

(Ans: d)

**8-The assets held by a business which can be converted in the form of cash, without disturbing the normal operations of a business.**

- 1.Tangible assets
- 2.Intangible assets
- 3.Fixed assets
- 4.Current assets

(Ans: d)

**9-The return which the company pays on borrowed funds is termed as**

- 1.Dividend
- 2.Interest
- 3.Bonus
- 4.All of the above

(Ans: b)

**10-The following is(are) the type(s) of capital budgeting decision(s)**

- 1.Diversification
- 2.Replacements
- 3.Expansion
- 4.All of the above

(Ans: d)

**11-The following is(are) the external source(s) of cash**

- 1.Long terms loans
- 2.Short term borrowings
- 3.Issue of new shares
- 4.All of the above

(Ans: d)

**12-The total cost that arises when the quantity produced is increased by one unit is called**

- 1.Average cost
- 2.Marginal cost
- 3.Fixed cost
- 4.Unit cost

(Ans: b)

**13-Current assets are also referred to as**

- 1.Working capital
- 2.Investments
- 3.Inventory
- 4.Livestock

(Ans: a)

**14-Carriage Inward is normally debited to \_\_\_\_\_**

- 1.Profit and Loss account
- 2.Manufacturing Account
- 3.Marketing Account
- 4.None of the above

(Ans: b)

**15-The standard liquid ratio is**

- 1.2:1
- 2.1:2
- 3.1:1
- 4.1:3

(Ans:c)