

Roll No.....



Membership No.....

**The Institute of Chartered Accountants of India
Forex & Treasury Management Certificate Course
Evaluation Test Booklet**

Paper 1

20th Aug, 2016

Duration- 3 Hours

Total Marks- 100

INSTRUCTIONS:

1. Please read the instructions carefully given in the question paper and solve it in the space provided.
2. The candidates are not allowed to carry the evaluation test booklet with them. This should be tied up with sheets provided to answer the question Paper.
3. Use Blue/Black pen only.
4. Do not write your Roll No. or Name or other identification other than in the space (perforated) provided on this sheet.
5. Please show Identity Card to the invigilator for verification of your identity, when asked.
6. The candidates may use the simple calculator.
7. In order to get full credit on the problems, the candidates must show all their rough work/ other workings.

(Participant Signature)

(Invigilator Signature)

PLEASE RETURN THIS BOOKLET BEFORE LEAVING THE EXAMINATION HALL

Date : 20th Aug, 2016
Centre : Delhi/ Mumbai /Chennai/Kolkata/Bangalore/Ahmedabad/Baroda/Cochin & Pune.

(Do not write your Roll No. and Membership number anywhere in the answer sheet except as mentioned above)

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CERTIFICATION COURSE ON FOREX AND TREASURY MANAGEMENT

S. No.	Total Number of Questions	Questions to be answered	Total Marks	Marks Obtained
Multiple Choice - Section A	65	65	65	
Short Notes – Section B	7	5	25	
Case Study – Section C	2	1	10	
Total	74	71	100	

Section A

Number of questions: 65

Marks: 65

Multiple choices: There may be more than one correct answer. Please [] mark for the correct answer.

Part A: Answer all questions.

1 mark each

1. Treasury bonds and notes pays interest rates classified as?
(A) LIBOR rate monthly
(B) Coupon interest rate monthly.
(C) Coupon interest rate semi-annually.
(D) Coupon interest rate annually.
2. Treasury bonds have?
(A) Lesser Cost fluctuations
(B) Wider price fluctuations
(C) Less price fluctuations
(D) Wider cost fluctuations
3. A repo is a?
(A) Security which is traded in the stock market
(B) Contract to buy a specific security at a future date at the price on that date
(C) Contract which gives the holder an option to buy a specific security in future
(D) Contract in which one party sells a specific security to another party with an agreement to buy it back on a specified future date at a specified price
4. Which of the following is not correct with respect to Value at Risk (VaR)?
(A) VaR cannot measure accurately in extreme market conditions
(B) VaR is important in identifying the effects caused by substantial future movements to the value of the portfolio
(C) VaR is basically a statistical measure and not a managerial one.
(D) The distribution of values need not be normal distribution for using VaR
5. Which of the following statement about VEGA is False?
(A) Negative value indicates loss in theoretical value
(B) It declines as expiration approaches
(C) It will be highest for near the money option.
(D) It tends to be zero for Deep –out-of-money option.

6. The strategy followed by the banks of entering into a swap with a party and hedging the interest rate risk till counterparty is found is known as?
(A)Swapping
(B)Hedging
(C) Warehousing
(D) Speculating
7. Combination of two fixed floating currency swaps to fixed to fixed currency swap is called?
(A) Vanilla Swap
(B) Circus Swap
(C) Extendible swap
(D) Roller-Coaster Swaps
8. The treasurer of a corporation is negotiating with one of his suppliers to allow corporation to have 30 days to pay the supplier's invoice. The treasurer is arranging?
(A) Short term financing
(B) Revolving credit agreement
(C) Factoring of receivable
(D) Uncommitted line of credit
9. A main characteristic of a company with regional offices using a centralized treasury function is?
(A) High level of control.
(B) Increased borrowing costs.
(C) Centrally determined depository accounts
(D) Increased operating costs.
10. Treasury management systems and ERP systems allow companies to do all of the following EXCEPT?
(A) Reduce redundant data entry errors
(B) Migrate external data into G/L infrastructure.
(C) Increase productivity through seamless exchange of data.
(D) Reduce cash processing costs.
- 11.** What do the prudential trading limits reflect?
(A) They reflect merely the directives of management.
(B) They reflect the understanding with the counter parties.
(C) They reflect risk appetite of the management
(D) They reflect the dealers' competence levels
12. The functions of Front and Mid Office should be segregated and must be distinctly different. Why?
(A) To prevent Front Office and Mid Office from colluding and defrauding the bank.

- (B) To enable Front Office to increase volumes without intervention by Mid Office.
(C) To avoid conflict of interest
(D) To provide level playing field for both Front Office and Mid Office.
13. Which of the following is not an assumption of the Theory of Comparative Advantage?
- (A) In both the markets perfect competition exists
(B) Technological innovation is a continuous process in both the markets
(C) The marginal product of labour is constant
(D) Labour is perfectly mobile within the country
14. A company currently has a debt-equity ratio of 1.25. Common shareholder's equity is Rs. 40,00,000, consisting of 1.5 Million shares outstanding with a current price of Rs. 28/share. Part of the company's debt is currently outstanding is Rs. 10,00,000 of convertible bonds. Each Rs. 1,000 par bond can be converted into 50 common shares at any time during the next three years. The coupon rate on the bonds is 6 % with interest paid annually. If all convertible bonds are converted, the company debt capital ratio is closest to?
- (A) 42.5 %
(B) 44.4 %
(C) 80 %
(D) 62.80 %
15. An equity analyst working for a growth oriented mutual fund has a tendency to mis-value the stocks of popular companies that she has previously recommended and the fund already owns. Her behaviour is most likely consistent with which of the following biases?
- (A) Escalation Bias
(B) Prospect theory
(C) Confirmation Bias
(D) Perpetual theory
16. In which of the following international cash management methods is title for goods transferred for intercompany sales?
- (A) Pooling
(B) Internal factoring
(C) Multilateral netting
(D) RE-Invoicing
17. Which of the following is NOT a key area to consider when establishing treasury Policies?
- (A) Equity method investment accounting.**
(B) Medium term financing
(C) Management Reporting

(D) Foreign currency management

18. A Company is interested in lowering its overall banking costs, managing netting, pooling, re-invoicing, and centralizing FX exposure at headquarters. Which of the following options will accomplish this?

- (A) **In-house Banking**
- (B) Shared Service Center
- (C) Company processing center
- (D) Automated clearing house

19. Money market funds are able to obtain very competitive trading terms because:

- (A) There is no diversification.
- (B) **Of the economies of scale.**
- (C) Invested funds are locked in for a specific period of time.
- (D) The investment manager only purchases high yielding instruments

20. The rate of interest commercial banks charge their best credit rated customers is called the:

- (A) Discount rate.
- (B) Call rate.
- (C) **Prime rate.**
- (D) Real interest rate.

21. A company wants to gather daily balance reporting from its international subsidiaries' bank accounts. Which of the following systems would allow the company's bank to gather the balance positions from the local banks?

- (A) **SWIFT**
- (B) CHIPS
- (C) Giros
- (D) EDI

22. Treasury policies should be approved by the:

- (A) Audit committee.
- (B) Controller.
- (C) **Board of directors.**
- (D) External auditors.

23. The company currently calculates its Days' Receivables at 42 days, its Days' Payables at 31 days, and its Days Inventory at 58 days. What is the cash Turnover for the company?

- (A) **5.3 times**
- (B) 7.7 times
- (C) 24.3 times
- (D) 2.7 times

24. Which of the following trade payment methods virtually eliminates the seller's credit risk?
- (A) Bankers' acceptance
 - (B) Cash before delivery**
 - (C) Countertrade
 - (D) Consignment
25. A treasurer decides to use notional pooling across wholly-owned multiple legal entities instead of wiring money between entity accounts. What specific section in the company's policy allowed the treasurer to make this decision?
- (A) Regulatory and legal considerations
 - (B) Liquidity strategy
 - (C) Collection strategy
 - (D) Concentration practices and strategies**
26. The CFO asks the treasurer to create a new collections and concentration policy for their company. Following implementation of the policy, the company finds that reporting of Receivables values is taking 10% longer, with no improvement in the company's cash flow or liquidity. What step in developing the policy could have been executed to reduce this risk?
- (A) Delegation of authority
 - (B) Clarify roles and responsibilities
 - (C) Procedure implementation
 - (D) Identify issues and conduct analysis**
27. In order to increase liquidity, ABC Motor Company bundled its customers' instalment payments and resold them to other investors. This is known as?
- (A) Factoring.
 - (B) Securitization.**
 - (C) Reclassification.
 - (D) Secondary distribution
28. A company in the market to purchase a treasury management system (TMS) has issued a request for proposal to evaluate various vendors. One of the evaluation factors focuses on the long-term viability of the vendor. The company may have to choose between An untested new vendor with a superior product and an established vendor with an incomplete product suite. This dimension of the RFP is measuring what type of risk?
- (A) Reputational risk
 - (B) Supplier risk**
 - (C) Technology risk
 - (D) Financial risk

29. Some treasury management systems are capable of initiating investment purchases and loan drawdowns automatically. The automating of these transactions is related to which of the following treasury management Functions?
- (A) Payment management
(B) Liquidity management
(C) International trade management
(D) Capital budget management
29. Which of the following is an example of Secondary Reserves?
- (A) Cash on hand and Balances with other banks in current account
(B) Balances with RBI for CRR
(C) Investment in Government Securities for SLR
(D) Investment in Commercial Paper
30. The scope of treasury has grown mainly due to?
- (A) Economic reforms, economic development, declining disintermediation
(B) Competition, increasing intermediation, economic conditions
(C) Deregulation of markets, economic reforms competition
(D) All of the above
31. Which of the following statements is wrong?
- (A) Rupee is not freely convertible on Current Account**
(B) Rupee is not freely convertible on Capital Account.
(C) Rupee Is, to a large extent, also convertible on Capital Account.
(D) Rupee is freely convertible on current account
32. The Company J portfolio consists of two stocks, 65% of Stock A with a return of 7.63% and 35% of Stock B with a return of 3.89%. What is the Company J's portfolio return?
- (A) 1.86%
(B) 5.10%
(C) 6.32%
(D) 18.57%
33. When using the Internet to access auction markets, companies may use certificate authorities to reduce their exposure to which of the following types of risk?
- (A) Credit
(B) Valuation
(C) Counterparty
(D) Foreign exchange

34. Which of the following statement is right in respect of basis risk?

- (A) Risks that arise on account of assets and liabilities being based on different benchmarks
- (B) Risks that are measurable
- (C) Risks that arise without any notice
- (D) Risks that arise on account of changes in Base Rates of banks

35. Net overnight open position is calculated on the basis of _____ ?.

- (A) Deals done overnight
- (B) Covers done through derivatives
- (C) Limit fixed for the bank
- (D) **Net present value**

36. The time value of money exists not due to?

- (A) Inflationary conditions exist for money
- (B) Personal consumption preference is delayed
- (C) **The possibility to increase profits**
- (D) Forgoing reinvestment opportunities for someone

37. The Defensive interval ratio is a measure of?

- (A) Short – term solvency
- (B) Long term solvency
- (C) **Short term liquidity**
- (D) Long term liquidity

38. Which of the following might be found in a bond indenture?

- (A) A dividend restriction clause
- (B) A Sinking Fund Clause
- (C) A subordination clause
- (D) **all of the above**

39. Asset management ratios are used to measure the speed with various accounts are converted into?

- (A) Fixed assets or current assets
- (B) Sales or inventory
- (C) **Sales or cash**
- (D) Cash or bank

40. Which of the following firms would have the least liquidity?

- (A) Current ratio – 2.2 and Quick Ratio – 1.6
- (B) Current ratio – 2.2 and Quick Ratio – 1.1
- (C) Current ratio – 1.2 and Quick Ratio – 0.6**
- (D) Current ratio – 1.2 and Quick Ratio – 0.8

41. The customer is intimated about the assignment of debt to the factor and also directed to make payments to the factor instead of the firm is known as?

- (A) Invoice factoring
- (B) notified factoring**
- (C) Factoring with recourse
- (D) Credit factoring

42. One of the following is a common sources of finance for a small business firm ?

- (A) Bank Guarantee
- (B) Bills discounting**
- (C) Commercial Paper
- (D) Bills acceptance

43. The Exchange rate of national currency with other foreign currencies will influence the organization?

- (A) Factor influencing at international level
- (B) Factor influencing at national level**
- (C) Factor influencing at organisation level
- (D) None of the above

44. All transactions on foreign investors acquiring and holding shares in companies are removed. This will cause the market efficiency to?

- (A) Increase**
- (B) Decrease
- (C) No change
- (D) None of the above

45. It is quite common for banks to issue subordinated debt. The reasons are?

- (A) Fund Raising
- (B) It is treated as quasi – equity
- (C) It does not increase debt equity ratio
- (D) It is included in tier II capital for the purpose of determining capital adequacy**

46. Petro tech has issued some warrants that allow the holder to purchase, with one warrant, one equity share at Rs. 28.50. If the equity share is selling at Rs. 37.50, what would be the minimum price?

- (A) Rs. 28.50
- (B) Rs. 33.00
- (C) Rs. 9.00**
- (D) Rs. 15.00

47. Vandana Enzymes Ltd. Issues commercial paper for Rs. 3 crores with a maturity period of 90 days. The interest rate is 11 % p.a. The net amount received by the company will be?

- (A) Rs. 2.94 Cr.
- (B) Rs. 2.92 Cr.**
- (C) Rs. 2.85 Cr.
- (D) Rs. 3.08 Cr.

48. The minimum margin which a customer must maintain with the member at all times for transacting currency futures is known as?

- (A) Initial margin
- (B) M to M margin
- (C) Maintenance margin**
- (D) Variation margin

49. Black – schools formula to value the call option is based on certain assumptions. They include?

- (A) Only European options are considered
- (B) There is no transaction cost
- (C) The shares pays no dividend
- (D) all of the above**

50. Firm specific risk is also called '?

- (A) Market Risk**
- (B) Non- systematic Risk**
- (C) Macro Risk
- (D) Unavoidable Risk

51. High Interest rates often tend to be associated with?

- (A) Underdeveloped countries
- (B) Developed countries
- (C) Appreciating currencies
- (D) Depreciating currencies**

52. Barclays bank , London has credited the Nostro A/c of ABN amro , Mumbai with \$ 2,50,000 to fund Barclays bank's vostro A/c With ABN Amro , Mumbai , with what rupee equilant ABN Amro Mumbai will credit Barclays Bank's Vostro A/c when interbank rate is \$ 1 = Rs. 80.9570 - 90 ?

- (A) Rs. 2, 02, 39,250**
- (B) Rs. 2, 02, 39,500

- (C) Rs. 2,02,39,750
- (D) None of the above

53. One of the following is not the characteristics of GDR?

- (A) 1 GDR = n shares, where 'n' must be an integer
- (B) It is a fixed income security
- (C) The issuing company has no foreign exchange liabilities**
- (D) It is subject to two-way fungibility

54. Contingency plans for computerized operations should include appropriate backup arrangements. Which of the following arrangements would be considered too vendor dependent when vital operations require almost immediate availability of computer resources?

- (A) A "hot site" arrangement
- (B) A "cold site" arrangement**
- (C) A "cold and hot site" combination arrangement
- (D) Using excess capacity at another data center within the organization

55. Greater reliance of management on computerized information systems increases the exposure to:

- (A) Unauthorized third-party access to the system.
- (B) Systematic programming errors.
- (C) Inadequate information to the management
- (D) Business Interruption**

56. . . . have the highest degree of interest rate risk.

- (A) Fixed-rate Eurodollar CDs**
- (B) Eurodollar floating-rate CDs (FRCDs)
- (C) Floating-rate Eurodollar loans
- (D) All of the above are affected equally by an increase in interest rates

57. Jagdish Prasad purchased a Rs. 1,000 par value bond with a 9 percent annual coupon rate and an original maturity of 20 years. The bond was issued four years ago, and the yield to maturity is 11 percent. What is the price Mr. Jagdish Prasad should be willing to pay for this bond?

- (A) Rs.1,166.25
- (B) Rs.1,000
- (C) Rs. 852.42**
- (D) Rs. 840.73

58. If a bond sells at a high premium, then which of the following relationships hold true? (P_0 represents the price of a bond and YTM is the bond's yield to maturity) ?

- (A) $P_0 < \text{par}$ and $\text{YTM} >$ the coupon rate.
- (B) $P_0 > \text{par}$ and $\text{YTM} >$ the coupon rate.
- (C) $P_0 > \text{par}$ and $\text{YTM} <$ the coupon rate.**
- (D) $P_0 < \text{par}$ and $\text{YTM} <$ the coupon rate.

59. When Back Testing VaR Model, the Model is said to be accurate if?

- (A) Number of Exceptions is equal to the frequency of confidence level**
- (B) Number of Exceptions is Less than the frequency of confidence level
- (C) Number of Exceptions is Greater than the frequency of confidence level
- (D) None of the above

60. The "modified duration" used by practitioners is equal to the Macaulay duration

- (A) Times the change in interest rate
- (B) Times $(1 + \text{bond's yield to maturity})$
- (C) Divided by $(1 - \text{bond's yield to maturity})$
- (D) Divided by $(1 + \text{bond's yield to maturity})$**

61. Which of the following foreign currency transactions is not accounted for using hedge accounting?

- (A) Available-for-sale securities
- (B) Unrecognized firm commitments
- (C) Net investments in foreign operations**
- (D) Foreign currency denominated forecasted transactions

62. What advantage do over-the-counter derivatives have over exchange-traded derivatives?

- (A) Over-the-counter contracts are more readily tradable
- (B) Over-the-counter contracts are more flexible**
- (C) Over-the-counter contracts are always for longer periods
- (D) There is less risk of default on over-the-counter contracts

63. The Doing Business Report" is prepared by which of the following organizations every year?

- (A) World Bank**
- (B) Asian Development Bank (ADB)
- (C) International Monetary Fund (IMF)
- (D) World Trade Organization (WTO)

64. Commodities which are to be received by a clearing member, are delivered to him in the depository clearing system in respect of depository deals on the respective _____ day as per instructions of the exchange /clearing house?

- (A) Expiration
- (B) Pay-In
- (C) Settlement
- (D) Pay-out**

65. Real Time Gross Settlement System means a payment system in which?

- (A) Both processing and final settlement of funds transfer instructions takes place simultaneously**
- (B) Final transaction takes place at the end of the day
- (C) Final payment is physically effected within 24 hours
- (D) Final settlement of funds take place at 4 PM daily

Section B

Number of questions: 7

Marks: 25

Note: Answer any five questions. Each answer will carries 5 marks

[Unrelated answers & answers exceeding the brief will attract negative marks]

1. What is the need of treasury and treasurer in an organisation, State in brief?

Ans.: Treasury is one the most important department of in the organizational structure and having a good Treasury manager is equally important. Every other department is directly – indirectly related to treasury as it manages Funds (money) which is an essential for every activity. Following are the brief needs/roles /task of treasury and treasury manager:

- a. Raising capital
- b. Managing bank relationship
- c. Money management
- d. Treasury performance management
- e. Liquidity management
- f. Credit Management
- g. Forex Management
- h. Risk Management

2. Write a Short note on CLS (Continuous linked Settlement) ?

Ans.: Continuous Linked Settlement (CLS) plays a fundamental role in the foreign exchange (FX) market – it operates the largest multicurrency cash settlement system to mitigate settlement risk for the FX transactions of its Members and their customers.

Owned by the world's leading financial institutions, CLS settles payment instructions relating to underlying FX transactions in 17 major currencies and certain other transactions that result in one-way payments in a subset of those currencies.

The FX market is a key component of global economic activity. It is the largest financial market by value and is integral to global commerce. The reasons for exchanging currencies are as diverse as the community which trade them. This community includes central banks, commercial banks, small and large corporations and the fund management industry.

All members of the FX community potentially bear the risk of loss of principal due to settlement risk. Settlement risk, also known as "Herstatt risk," is widely recognized as the most significant

systemic risk to participants in the FX market, meaning the mitigation of it is a high priority for the community as a whole

3. What Do you understand by CROMS (clearcorp Repo Matching System) ?

Ans. Clearcorp Repo Order Matching System (CROMS) is an STP enabled anonymous Order Matching Platform launched by the Clearcorp Dealing Systems (India) Ltd on 27th January 2009 for facilitating dealing in Market Repos in all kinds of Government Securities. It enables dealing in two kinds of Repos:

- (1) Basket and
- (2) Special Repos.

Building on the internationally popular Standard Repo Model, Basket Repos enable dealing in baskets wherein repoable securities have been classified, based on the instrument type, liquidity and outstanding tenor and clustered together.

While borrowers can raise funds through a Basket Repo against any of security forming part of the concerned basket, the lender is assured that he will receive only any of the securities forming part of the concerned basket. Details of security allocated are known to both counterparties post trade.

As for Special Repos, which is the conventional repo, both borrower and lender are aware of the underlying security against which a deal is sought to be concluded. CROMS provides better transparency, repo rate discovery and operational efficiency and has thus become the preferred avenue for market repo dealing. About 70% of all market repo action against Government Securities is concluded on the Platform consistently.

4. Differentiate between direct and indirect currency quotes?

Ans.: There are two ways to quote a currency pair, either directly or indirectly. Following are the main Differences between direct and indirect currency quote:

Direct Quote	Indirect Quote
direct currency quote is simply a currency pair in which the domestic currency is the base currency	Indirect currency quote is a currency pair where the domestic currency is the quoted currency.
The direct quote varies the foreign currency, and the quoted, or domestic currency, remains fixed at one unit	In the indirect quote, the domestic currency is Variable and the foreign currency is fixed at one unit
e.g. . If Rs. Is domestic currency Direct quote would be 0.0147 Rs. /US \$ i.e. with Rs. 1 you can purchase 0.0147 US \$	e.g. . If Rs. Is domestic currency Indirect Quote would be 68.0272 US \$ / Rs. i.e. with US \$ 1 you can purchase Rs. 68.0272

In the forex spot market, most currencies are traded against the U.S. dollar, and the U.S. Dollar is frequently the base currency in the currency pair. Most currency exchange rates are quoted out to four digits after the decimal place, with the exception of the Japanese yen (JPY), which is quoted out to two decimal places.

5. What do you understand by Option Derivatives; briefly explain various types of option derivatives?

Ans: the options premium is determined by the three factors mentioned earlier, intrinsic value, time value, and volatility.

But there are other, more sophisticated tools used to measure the potential variations of Options premiums. They are generally employed by professional options traders and may be of a little interest to the individual investor.

These four tools are known as options derivatives. They are

- a. **Delta:** - An options delta is used to measure the anticipated percentage of change in the premium in relation to a change in the price of the underlying security. If a particular call option had a delta of 60% we would expect the option premium to vary by 60% of the change in the underlying stock. If that stock rose 1 point, the option premium should rise approximately 6/10 (60%) of 1 point.
- b. **Gamma:** - Gamma measures the expected change in the delta factor of an option when the value of the price of the underlying security rises. If a particular option had a delta of 60% and a gamma of 5%, an increase of 1 point in the value of the stock would increase the delta factor by 5% from 60% to 65%.
- c. **Theta:** - The theta derivative attempts to measure the erosion of an option's premium caused by the passage of time. We know that at expiration an option will have no time value and will be worth only the intrinsic value if, in fact, it has any. Theta is designed to predict the daily rate of erosion of the premium. Naturally, other factors such as changes in the value of the underlying stock will alter the premium. Theta is concerned only with the time value. Unfortunately, we cannot predict with accuracy changes in a stock's market value, but we can measure exactly the time remaining until expiration.
- d. **Vega:** - The fourth derivative, Vega is concerned with the volatility factor of the underlying stock. We have pointed out that the volatility varies among different securities. Vega measures the amount by which the premium will rise when the volatility factor of the stock increase. Vega measures the sensitivity of the premium to these changes in volatility. Delta, gamma, theta and vega are very sophisticated tools for predicting changes in an option's premium. They merely take the three factors which determine a premium (price of the stock, passage of time, and volatility), and measure each in an exacting manner. The derivatives vary for each series of options.

6. What are the various types of time series analysis?

Ans. Time series analysis aims to achieve various objectives and the tools and models used vary accordingly. The various types of time series analysis include –

Descriptive analysis - To determine the trend or pattern in a time series using graphs or other tools. This helps us identify cyclic patterns, overall trends, turning points and outliers.

Spectral analysis - is also referred to as frequency domain and aims to separate periodic or cyclical components in a time series. For example, identifying cyclical changes in the sales of a product.

Forecasting - is used extensively in business forecasting, budgeting, etc based on historical trends.

Intervention analysis - is used to determine if an event can lead to a change in the time series; for example, if an employee's level of performance has improved or not after getting training and thus to determine the effectiveness of the training program.

Explanative analysis - studies the cross correlation or relationship between two time series and the dependence of one on another. For example, the study of employee turnover data and employee training data to determine if there is any dependence of employee training programs on employee turnover rates over time.

7. What are the Major alternative Backup computer facilities that can be considered while preparing a Disaster recovery plan ?

Ans.: Many choices are available to us in preparing for a disaster. The following are some major choices available for alternative backup computer facilities:

- (i) **Dedicated Contingency Facilities:** Also known as "Hot Sites", where an organization provides fully equipped computer facilities for use in the event of disaster. Periodic computer testing time is made available. It is the most expensive choice. Large and complex online and Database systems use hot site services.
- (ii) **Empty-Shell Facilities:** A fully prepared computer room or building (cold site) is maintained by an organization which includes data communication systems, security systems, air conditioning, humidity controls, raised floors, storage and office space, and electrical power. In the event of a disaster, the computer vendor delivers the required hardware and peripheral equipment to the empty shell facility. Usually, empty shell facilities also provide offsite storage of computer files (programs and data), documentation, etc.
- (iii) **Warm Sites:** The configuration lies in between "hot site" and "cold site". It has telecommunications ready to be utilized, and is recommended for users of sophisticated telecommunications and network needs.
- (iv) **Vendor Backup Facilities:** Some hardware vendors offer their facilities, in the event of major computer disaster in their clients systems.
- (v) **Organization Multiple Sites:** Based on the redundancy concept, each site is configured to support the combined computer processing load of the organization.
- (vi) **Commercial Service Providers:** This provides backup and recovery services for their clients.
- (vii) **Mutual Aid (Reciprocal Processing) Agreements:** One organization agrees to provide backup and recovery facilities for another organization with a compatible hardware and software configuration and vice versa. Mutual aid agreements may not prove workable when needed. It is

the least expensive choice. Simple and large batch systems are suitable to use a reciprocal processing agreement.

(viii) **Consortium:** Several organizations pool their resources and build their own backup computer facility for common use.

(ix) **Time Brokers:** Time brokers serve as a resource for obtaining backup support. Time brokers find, for a fee, available processing time on other systems. Processing arrangements are made entirely through this third party service.

(x) **Reversion to Manual Processing:** This approach reverts back to a manual operation. It may be a workable choice if manual procedures that duplicate the automated process are documented. If, however, manual procedures are outdated, or simply not available, it may be Impractical to rewrite them. This option may be suitable if used in conjunction with another alternative.

(xi) A Combination of the above Options.

Section C

Number of questions: 2

Marks: 10

Note: Case Studies. Answer any one. Max 10 marks

1. You have been appointed as corporate treasurer of Kothari Industries Limited. The company is going through a rough phase and is under financial stress. In a special audit conducted last month few frauds in finance department were found and the forecasting/liquidity management was also found inaccurate which caused financial distress.

One of the main reasons pointed out was that the company's treasury (Finance) department is still running in old manual style and needs transformation. The Board has entrusted you to suggest whether the company should move towards automation in the treasury department and you need to explain the same along with benefits that company will derive from automation.

Ans.: In the present era of technology one cannot survive without integrating it into the system .businesses have become global in their activities and there are numerous activities to be managed at a time , number of bank relationships to be managed are going day by day besides all ,a lot of basic functions are to undertaken on daily basis .
to cope up with the pace at which the industry ,businesses are going , to compete in this increasing level of competition , to execute the tasks within or before the deadlines , to manage the day to day functions efficiently we need to get our system automated , we need to involve ,integrate technology in our functioning.

Without using technology and automation it would be difficult for the company to execute all the functions without fail, efficiently, compete and succeed in the coming time.

Rightly pointed out by the auditor that the treasury needs to be transformed, automated and updated .if the company accepts this suggestions and the company will be drawing following benefits if the treasury function is automated:

1. Automation saves time

This is, perhaps, one of the most obvious benefits of automation. Removing a corporate treasurer's need to carry out basic functions frees up their time to concentrate on fulfilling more strategic roles in the business.

Following the global economic crisis, there is a much greater need for treasurers to maintain a strong focus on regulations, risk and cash forecasting. Therefore, it is essential to free up a treasurer's time to carry out these tasks.

2. Automation enables more effective cash flow forecasting

Using a treasury management system helps treasurers gain a better level of cash visibility. Those using automated systems are able to obtain information about their cash position at any time, for any geographical location. All transactions are centralized, and treasurers can see Where money is coming in and out 24 hours a day. This, in turn, means they are better equipped to forecast what will happen next.

3. Automation reduces risk

Having a better understanding of a business's cash position, as well as greater control over transactions, also helps in managing risk. Alongside the global approach to business that is emerging, comes greater exposure to foreign exchange risk. Working with a TMS, which Centralizes all banking transactions, can help to neutralize these risks. For example, a TMS can automatically monitor FX movements, and make transaction and investment decisions based on these movements, to reduce exposure.

4. Automation boosts liquidity

Through the use of an automated treasury system, corporate treasurers can gain greater levels of liquidity within their businesses. With an ever-increasing number of banking relationships to manage, deploying the services of a TMS can help treasurers to achieve a better grasp of their cash position at any given time. Transaction decisions can be made more easily thanks to the use of a centralized banking system that awards better visibility and control for corporate treasurers.

5. Automation means your business benefits from The Cloud

Adopting cloud-based Software-as-a-Service tools offers numerous advantages. The initial advantage is reduced costs. Outsourcing basic functions means that treasury departments need less equipment and technology in-house. Implementing and deploying cloud services is easy and inexpensive, compared with bringing these functions in-house.

Conclusion: - It is apparent from the above discussion that the company should move towards automation in treasury functions in order to achieve the targets and implement the suggestion provided during the course of audit .In the capacity of corporate treasurer, I suggest the management to go ahead with the decision of automation of treasury functions.

2. Jindal Steel Ltd. Is the manufacturer of three products viz Exe, Wye and Zed. The last year's income statement and Balance Sheet are as follows:

Income Statement	(Rs.)
Sales	75, 00,000
Variable costs	46, 90,000
Contribution	28, 10,000
Fixed Costs	14, 00,000

EBIT	14, 10,000
Interest	2, 00,000
EBT	12, 10,000
Taxation	6,05,000
EAT	6, 05,000

Balance Sheet

Liabilities	Amount	Assets	Amount
Equity Capital	10,00,000	Fixed assets	60,00,000
Reserves and surplus	42,00,000	Inventory	6,00,000
Long term debt (10%)	20,00,000	Receivables	7,00,000
Current Liabilities	5,00,000	Cash	4,00,000
Total	77,00,000	Total	77,00,000

Figures for industry comparison: Normal assets turnover 1, 2:1, Normal profit margin 20%.

For the current year, the forecasted sales are Rs. 80, 00,000 and it is likely that variable costs will remain at approximately the same percentage of sales as was in last year. (Figures could be rounded off). Fixed costs will rise by 10%.

Company has short listed the following two products lines to be sold through its existing distribution channels:

- (1) Production and sales of 'Exe' and 'Wye' products will require an investment of Rs 20,00,000, which would involve installation of manufacturing and packaging machinery. Sales forecast are Rs. 15, 00,000 P.a. ,variable Cost account for 2/3rd of sales value ,Fixed cost are Rs. 2,00,000 and no additional working capital in needed.
- (2) For Production of Product ZED will require an investment of Rs. 30, 00,000 with forecasted sales per annum of Rs. 25, 00,000, variable costs 64% of sales value and fixed costs of Rs. 5,00,000.

Two financial plans are available:

- (a) It could borrow on a 10 years note at 9% for either or both of the projects of an amount not to exceed Rs. 60,00,000.
 - (b) Cumulative preference share with a 10% dividend up to an amount of Rs. 30,00,000.
- Financing through the issue of equity would not be possible at the present time.

Analyse:

- (1) Without the new proposals, what would be the company's operating, Fixed charges and combined leverage next year? Would the company have favourable financial leverage?
- (2) How does the acceptance of each project affect the differing leverage including assets leverage?
- (3) With each financing alternative, do the company future earnings per share increase or decrease, why?

Ans :

Analysis of Past information

Income Statement	(Rs.)
Particulars	Last Year
Sales	75, 00,000
Less: Variable costs (62.5%)	<u>46, 90,000</u>
Contribution	28, 10,000
Less: Fixed Costs	14, 00,000
EBIT	<u>14, 10,000</u>
Less : Interest	2, 00,000
EBT	<u>12, 10,000</u>
Less: Tax @50%	6, 05,000
EAT	<u>6, 05,000</u>

(1) Current year Profitability

$$\text{Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}} = \frac{30,00,000}{14, 60,000} = 2.055$$

$$\text{Financial Leverage} = \frac{\text{EBIT}}{\text{EBT}} = \frac{14, 60,000}{12, 60,000} = 2.055$$

$$\text{Combined Leverage} = \frac{\text{Contribution}}{\text{EBT}} = \frac{30,00,000}{12,60,000} = 2.38$$

$$\text{Return on Capital Employed} = \frac{\text{EBIT} * 100}{\text{Capital employed}} = \frac{14,60,000 * 100}{72,00,000} = 20.3\%$$

$$\text{Profit Margin} = \frac{\text{EBIT} * 100}{\text{Sales}} = \frac{14,60,000 * 100}{80,00,000} = 18.25\%$$

$$\text{Financial Leverage} = \frac{\text{Sales}}{\text{Capital employed}} = \frac{80,00,000}{72,00,000} = 1.11$$

The company is having a favourable financial leverage by earning 20.3% return on capital employed and by paying only 10% on long-term debt.

(2) Evaluation of New Projects

Project	Exe & Wye units	Zed units
Additional investment	20,00,000	30,00,000
Sales	15,00,000	25,00,000
Less: Variable costs (1500000*2/3),(2500000*64/100)	10,00,000	16,00,000
Contribution	5,00,000	9,00,000
Less: Fixed Costs	2,00,000	5,00,000
EBIT	3,00,000	4,00,000

$$(a) \text{ Operating Leverage} = \frac{\text{Contribution}}{\text{EBIT}}$$

$$\text{Exe and wye units} = \frac{5,00,000}{3,00,000} = 1.67$$

Zed unit = 9,00,000 = 2.25
 4,00,000

(b) Asset Leverage = Sales
 Capital employed

Exe and wye units = 15,00,000 = 0.75
 20,00,000

Zed unit = 25,00,000 = 0.83
 30,00,000

(c) Return on capital Employed = EBIT * 100
 Capital employed

Exe and wye units = 3,00,000 * 100 = 15%
 20,00,000

Zed unit = 4,00,000 * 100 = 13.33%
 30,00,000

(d) Profit Margin = EBIT * 100
 Sales

Exe and wye units = 3,00,000 * 100 = 20%
 15,00,000

Zed unit = 4,00,000 * 100 = 16%
 25,00,000

Analysis

a. The acceptance of Exe and Wye projects adversely affects :

- Operating Leverage
- Return on capital employed
- Asset leverage

b. The acceptance of Zed Project would adversely affect :

- Return on capital employed
- Asset Leverage

3. Evaluation of financing alternatives

Option I: borrowing a 10 years note at 9% for either or both of the projects, total borrowings not to exceed Rs. 60,00,0000.

Exe and Wye projects – The cost of debt is 9% , the return on capital employed is 15% and the additional return to added to Equity shareholders is 6 % (15%-9%)

Zed project - The cost of debt is 9%, the return on capital employed is 13.33% and the additional return to added to Equity shareholders is 4.33 % (13.33%-9%)

The Company's future earnings per share will increase for both the projects under option I

Option II: issue of 10% cumulative preference shares up to an amount of Rs. 30, 00,000.

Cost of preference share capital is 10 %.

Pre-tax cost of preference share capital is = $100/1-t = 10\%/1-0.5$

$$= 20\%$$

Exe and Wye projects – The pre-tax cost of preference share capital is 20 % and the return on capital employed is only 15% .this financial alternative will reduce overall profits and EPS of company.

Zed projects – The pre-tax cost of preference share capital is 20 % and the return on capital employed is only 13.33% .this financial alternative will reduce overall profits and EPS of company.

In the View of Above, The Debt Financing of the Projects is Preferable.