

FREE OF COST

I.S.B.N : 81-7666-302-6

SCANNER'S APPENDIX

ICWA Foundation

December 2005

Paper - 1 Organisation and Management Fundamentals

Chapter - 1 : Organization

2005 - Dec [8] Write short notes on the following:

- (b) Line and staff organisation; (5 marks)

Chapter - 3 : Organisational Theory

2005 - Dec [2] What is organisation theory? Discuss the pillars of classical organisation theory. (3+7 = 10 marks)

Chapter - 5 : Conflict

2005 - Dec [8] Write short notes on the following:

- (a) Goal conflict; (5 marks)

Chapter - 7 : Human Relations School

2005 - Dec [8] Write short notes on the following:

- (d) Features of contingency approach; (5 marks)

Chapter - 8 : Planning

2005 - Dec [4] Define planning. Discuss the steps involved in planning.

(3+12 = 15 marks)

Chapter - 10 : Personnel Management

2005 - Dec [6] Explain the meaning of recruitment. Mention the importance of recruitment and discuss the steps involved in recruitment process.

(3+6+6 = 15 marks)

Chapter - 15 : Controlling

2005 - Dec [5] What is control? Discuss the steps involved in control.

(3+12 = 15 marks)

2005 - Dec [8] Write short notes on the following:

- (c) Span of control; (5 marks)

Chapter - 16 : Authority & Responsibility

2005 - Dec [3] What is delegation of authority? Explain the basic advantages of delegation of authority. (3+7 = 10 marks)

Chapter - 17 : Leadership**2005 - Dec [8]** Write short notes on the following:

- (e) Free-rein leadership. (5 marks)

Chapter - 20 : Public Sector Management**2005 - Dec [7]** Discuss the importance or advantages of public enterprises. Also point out the arguments against them. (8+7 = 15 marks)**Chapter - 21 : Objective Questions****2005 - Dec [1] {C}** Do you agree with the following statements? Write 'Yes' or 'No' giving proper reasoning in support of your answer. No marks will be awarded if only 'Yes' or 'No' is stated.

- (a) Organisation is a process.
(b) How Thorne Experiments covered three studies?
(c) Some amount of conflict is desirable in the organisation.
(d) The main purpose of Human Resource Management is wage and salary administration.
(e) Henri Fayal is known as father of Scientific Management.
(f) A rule is a standing plan.
(g) Communication process remains incomplete without feed-back.
(h) Delegation of authority increases work-load of Top Management.
(i) Mc Gregor propounded the 'Need Hierarchy Theory'.
(j) Management process and management functions are one and the same.
(k) Contingency approach is a common sense approach.
(l) Policies and procedures are synonymous.
(m) Basically delegation of authority involves three elements.
(n) Single use plans are aimed at meeting repetitive situations.
(o) Human relations school is a socio-psychological approach to management. (2×15 = 30 marks)

Paper - 2**Financial Accounting Fundamentals****Chapter - 1 : Principles of Accounting****2005 - Dec [8]** Write short notes on:

- (a) Historical cost concept; (3 marks)

Chapter - 7 : Closing & Rectification Entries**2005 - Dec [5]** Mrs. Honey who is not an accountant by profession prepared a Trial Balance as on 31.3.2005. There was difference in the same which she tallied by taking the amount to Suspense A/c. She needs your help in preparing

the correct Financial Statements for the year ended 31.3.2005. You on scrutiny find the following:

- | | |
|---------------------------------------------------------------------------------------------------------|---------------|
| (1) Purchases book was over cast by | Rs. 900.00 |
| (2) Sales book was undercast by | Rs. 5,400.00 |
| (3) Sales of goods of Ravi was wrongly debited to Raju | Rs. 1,000.00 |
| (4) Machinery purchases was wrongly taken to purchases | Rs. 25,000.00 |
| (5) Salary for the month of March was wrongly posted as Rs. 25,500 instead of Rs.55,500/- | |
| (6) Salary was not payable to the Driver for the month of March. This was not shown as O/s in the books | Rs. 4,500.00 |
| (7) Mrs. Neelu who is creditor was shown as a debtor | Rs. 2,500.00 |
| (8) Depreciation on machinery to be charged for the year | Rs. 3,750.00 |
- Mrs. Honey informs you that as per the Trial Balance prepared by her Profit for the year was Rs. 26,200.00.

You are required to pass the necessary journal entries and find out the exact profit for the year. (14 marks)

Chapter - 8 : Depreciation

2005 - Dec [8] Write short notes on:

- (b) Revaluation method of depreciations; (4 marks)

Chapter - 11 : Single Entry System

2005 - Dec [6] Mrs. Sharmila a fashion designer did not follow double entry system of accounting. She approaches you with the following data for the financial year 2004-05. You are required to

- (1) to prepare her Profit and Loss A/c for the year ended 31.3.2005 and
- (2) Balance Sheet as on 31.3.2005.

Data made available by Mrs. Sharmila:

A. Analysis of Current A/c with "Indian Bank":

Deposits:		Rs.
(1) Cash	3,00,000	
(2) Profession Fee	18,00,000	
(3) Bank Interest	12,980	
(4) Dividend	22,800	
Withdrawals:		
(1) Cash	7,20,000	
(2) Salary	3,00,000	
(3) Service Tax	1,44,000	
(4) Electricity	12,000	
(5) Telephone	18,000	
(6) Rent	3,00,000	
(7) Consultancy Charges	2,50,000	

B. Details of Cash transactions:

Payments:

(1) Printing and Stationery	75,000
(2) Repairs and Maintenance	80,000
(3) Travelling and Conveyance	1,25,000
(4) Staff Welfare	25,000
(5) Business Promotion	1,56,000

C. Details of Assets and Liabilities:

	31.3.2004	31.3.2005
Capital	?	?
Rent O/s	?	25,000
Professional Fee Receivable	—	55,000
Cash	25,000	42,000
Bank	1,25,000	?
Fixed Deposits	25,00,000	25,00,000
Office Equipment	8,50,000	?

Additional Information:

- (1) Rent per month Rs. 25,000
- (2) Drawing per month Rs. 15,000 in cash
- (3) Mrs. Sharmila has cash receipts also towards professional fee
- (4) Interest accrued on FDs for the Financial Year Rs. 1,37,500
- (5) Depreciate Office Equipment by 15% p.a. (14 marks)

Chapter - 12 : Accounts of Non-Trading Concerns

2005 - Dec [3] New Delhi Recreation Club consists of a badminton section and a football section. The Balance Sheet of the Club as on 1.1.2004 is as under:

<i>Liabilities</i>	<i>Rs.</i>	<i>Assets</i>	<i>Rs.</i>
Accumulated fund	36,450	Club house	21,200
		Badminton court (cost Rs.20,000)	12,000
		Equipments	2,500
		Cash and Bank	<u>750</u>
	<u>36,450</u>		<u>36,450</u>

The following is the Receipts and Payments Account for the year ended 31.12.2004:

<i>Receipts</i>	<i>Rs.</i>	<i>Payments</i>	<i>Rs.</i>
To balance b/d	750	By new badminton court	8,000
To ten-year badminton membership	6,000	By prizes for tournament:	
		Badminton	1,000
To subscriptions:		Football	12,000
Badminton	3,200		
Football	650	By football kit	1,200

To tournament entry fees:

Badminton	1,000	By rates of club house	500
Football	4,000		
		By general expenses	4,650

To collection at football

matches	<u>17,300</u>	By balance c/d	<u>5,550</u>
	<u>32,900</u>		<u>32,900</u>

In order to help pay for the new badminton court, ten-year badminton memberships were offered for sale, at the beginning of 2004 at Rs. 200 each. It is the club's policy to write off the cost of the badminton court over a ten-year period. Equipment are to be depreciated at 10%. The football kit can be considered to possess a nil value.

Prepare:

(a) An Income and Expenditure Account for the year ended 31.12.2004, showing the net surplus/deficit arising separately from the badminton section and football section.

(b) The Balance Sheet as on 31. 12.2004. (14 marks)

2005 - Dec [8] Write short notes on:

(c) Subscriptions; (4 marks)

Chapter - 13 : Joint Venture

2005 - Dec [7] (b) Me and You entered into joint venture contributing Rs. 45,000 each into the Joint Bank A/c with an understanding to share the profit or loss equally. It was also agreed to pay commission @ 5% on the sale made by the venturers. With the following details prepare.

1. Joint Venture A/c
2. Joint Bank A/c
3. Venturer's Capital A/c

Goods worth Rs. 52,000 was purchased and 50% of the same was sold for Rs. 35,000 by "Me". Rs. 4,500 was spent on transportation. 25% of goods bought were sold by "You" for Rs. 17,500. Unsold goods were taken over at cost price by both the venturers in the profit sharing ratio and balance due the venturers was paid from joint Bank A/c (8 marks)

Chapter - 14 : Consignment

2005 - Dec [7] (a) David sent goods costing Rs. 5,50,000 on consignment basis to Devi on 1.1.2005 @ 7% commission. Rs. 75,000 was spent on transportation by David. Devi spent Rs.45,000 on unloading. Devi sold 85% of the goods received for Rs. 6,25,000, 10% of the goods for Rs. 85,000 and she took over the balance @ 5% below the cost price and sent a DD for the amount due from her to David.

Show consignment A/c and Devi's A/c in the books of David.

(6 marks)

Chapter - 15 : Partnership – Fundamental

2005 - Dec [2] (a) Ram and Rahim agreed to share profits as follows:

First Rs. 8,000 to Ram and the balance in 2 : 1. The profits for the year are Rs. 11,600; the capitals being Ram Rs. 40,000 and Rahim Rs. 36,000. Interest on capital had been omitted from the books and is to be allowed at 5% p.a.—
Adjust. (6 marks)

2005 - Dec [8] Write short notes on:

(d) Change in the profit sharing ratio. (3 marks)

Chapter - 16 : Admission of Partner

2005 - Dec [4] The following is the Balance Sheet of A and B, who share profits and losses as 3 : 2 respectively, as at 31.12.2004:

<i>Liabilities</i>	<i>Rs.</i>	<i>Assets</i>	<i>Rs.</i>
Capital: A	35,000	Land and Building	30,000
B	30,000	Plant and Machinery	20,000
Reserve	10,000	Stock	10,000
Creditors	25,000	Debtors	20,000
		<i>Less: Provision for</i>	
		doubtful debts	<u>1,000</u> 19,000
		Bank	11,000
		Cash	<u>10,000</u>
	<u>1,00,000</u>		<u>1,00,000</u>

On 1.1.2005, C joins the firm and brings in the following assets:

Stock Rs. 21,000; Investments Rs. 12,000; Cash Rs. 15,000; Debtors Rs. 10,000.

Following were agreed upon:

- (i) The new profit sharing ratio among A, B and C will be equal.
- (ii) The capitals of the partners should also be equal taking C's capital as base.
- (iii) The reserve of the new firm will be Rs. 15,000.
- (iv) Provision for doubtful debts is to be created @ 10% of total debtors.
- (v) An investment provision of Rs. 2,000 is to be created.

You are required to prepare the Balance Sheet of the new firm. (14 marks)

Chapter - 20 : Shares and Debentures

2005 - Dec [2] (b) Flamingo Ltd. offered for public subscription 5000 equity shares of Rs.10 each at a premium of Rs. 2.50 per share payable as follows:

On Application	Rs. 2.00 per share
On Allotment	Rs. 4.50 per share (including premium)
On First Call	Rs. 4.00 per share
On Second Call	Rs. 2.00 per share

Applications were received for 7500 shares and allotment was made pro-rata to applicants for 5000 shares, letters of regret being issued for the remaining

applications. Money overpaid on application by the allottees was adjusted with allotment amount.

Rahim to whom 100 shares were allotted failed to pay the allotment money and on his failure to pay the first call, his shares were forfeited.

Haq, the holder of 150 shares failed to pay last two calls and his shares were forfeited after the second call was made.

Of the shares forfeited, 200 were allotted as fully paid up to Karim for Rs.8 per share paid in cash.

Show the journal entries to record the forfeiture and reissue of forfeited shares including those relating to cash, assuming that the whole of Rahim's shares have been re-issued. (8 marks)

Chapter - 23 : Objective Questions

2005 - Dec [1] {C} (a) In each of the following cases one of them is correct. Indicate the correct answer:

- (i) A Bill of Exchange is
 - (a) drawn on a specified Banker;
 - (b) an unconditional undertaking signed by the maker;
 - (c) an unconditional order signed by the maker.
 - (ii) Statement of Affairs is a
 - (a) statement of Income and Expenditure;
 - (b) statement of Assets and Liabilities;
 - (c) not a financial statement.
 - (iii) Shareholder of a company is
 - (a) owner of the company;
 - (b) debtor of the company;
 - (c) employee of the company.
 - (iv) Unfavourable bank balance means
 - (a) credit balance in the Cash Book;
 - (b) credit balance in the Pass Book;
 - (c) debit balance in the Cash Book;
 - (v) A and B are sharing profits in the ratio of 3 : 2. They admit C as a partner and the new profit sharing ratio is 2 : 2 : 1. If C pays Rs.1,000 towards goodwill, B will get
 - (a) Rs. 400;
 - (b) Rs. 500;
 - (c) Nil. (2×5 = 10 marks)
- (b) State with reasons whether the following statements are *true* or *false*:
- (i) A bearer cheque is payable to the person who presents it at the counter for encashment.
 - (ii) Higher depreciation will not affect cash profit of the business.
 - (iii) The balance in the Cash Book shows net income.

- (iv) A bill given to a creditor is called bills payable.
- (v) The excess of current assets over current liabilities is called net worth. (2×5= 10 marks)
- (c) Fill in the blanks:
- (i) Real accounts can be of two types and
- (ii) A debit balance in the income and expenditure account denotes excess of over
- (iii) Patent right is an asset. So it is in the nature of account.
- (iv) The process of recording in the journal is called and the process of recording in the ledger is called
- (v) balance of Profit and Loss Account is a asset. (2×5= 10 marks)

Paper - 3
Economics and Business Fundamentals
Part — A

Chapter - 8 : Money

2005 - Dec [2] Explain the concept of liquidity preference. What part does liquidity preference play in the determination of rate of interest?

(5+12 = 17 marks)

2005 - Dec [4] What is money? Discuss the quantity theory of money as propounded by Irving Fisher.

(5+12 = 17 marks)

Chapter - 11 : Commercial Banking

2005 - Dec [5] Explain the process of credit creation by commercial banks. What are the limitations to credit creation?

(10+7 = 17 marks)

Chapter - 12 : International Trade

2005 - Dec [3] (a) Briefly discuss the various items of balance of payments.

(10 marks)

(b) Examine the statement that "balance of payments always balances".

(7 marks)

Chapter - 16 : Objective Questions

2005 - Dec [1] {C} (a) Answer the following:

- (i) Economic was defined as a science of choice amidst scarcity by
- (A) Marshall
- (B) Smith
- (C) Robbins

- (ii) Equilibrium means
 (A) stability
 (B) equality
 (C) balance
- (iii) Optimum level of population means
 (A) maximum level of population
 (B) "maximum returns" level of population
 (C) maximum productive capacity
- (iv) IDA (an affiliate of World Bank) stands for
 (A) Indian Development Association
 (B) International Development Association
 (C) International Development Agency
- (v) A firm is said to be in equilibrium in the long run when
 (A) $MR > MC$
 (B) $AR > AC$
 (C) $P = AR = MR = MC = AC$ (1×5 = 5 marks)
- (b) Fill in the blanks:**
- (i) Marginal utility is the utility obtained from one unit of thing.
 (ii) The factor cost of land is
 (iii) Capital is defined as of production.
 (iv) Money is a of exchange.
 (v) Invisible items in the balance of payments indicates the value of exports and imports of (1×5 = 5 marks)
- (c) Define the following terms in not more than two lines:**
- (i) Normal price
 (ii) Velocity of money
 (iii) Bank rate
 (iv) GDP
 (v) Concept of multiplier
 (vi) Marginal propensity to consume (1×6 = 6 marks)

Part — B

Chapter - 2 : Company Organisation & Management

2005 - Dec [8] Discuss the various stages in the formation of a public joint stock company. (17 marks)

2005 - Dec [9] Define a meeting. What are the essential requirements of a valid meeting. (3+14 = 17 marks)

Chapter - 4 : Stock Exchange

2005 - Dec [7] Distinguish between:

- (a) Spot transaction and forward transaction; (8 marks)

2005 - Dec [10] Explain the role of stock exchange as a vital economic institution. What are the requirements for listing of shares in a stock exchange?
(10+7 = 17 marks)

Chapter - 5 : Business Communication

2005 - Dec [7] Distinguish between:

(b) Minute writing and report writing. (9 marks)

Chapter - 6 : Objective Questions

2005 - Dec [6] {C} (a) Answer the following:

- (i) A Co-operative society is
 - (A) profit-oriented
 - (B) service-oriented
 - (C) economic-oriented
 - (ii) A public limited company can start its business after obtaining
 - (A) Certificate of Incorporation
 - (B) Certificate of Commencement of business
 - (C) Listing Certificate
 - (iii) MBO stands for
 - (A) Management by oppression
 - (B) Management by ownership
 - (C) Management by objective
 - (iv) Functions of a stock exchange do not include
 - (A) providing a market for securities
 - (B) safe guarding interests of investors
 - (C) providing a machinery for settlement of conflicts among the brokers
 - (v) Important barriers to business communications are
 - (A) the long distance between the senders and the receivers
 - (B) the cost of sending and receiving communication
 - (C) status levels and personal differences of opinion between the senders and the receivers. (1×5 = 5 marks)
- (b)** State which of the following statements are 'True' and which are 'False':
- (i) Shares of all companies are dealt in on stock exchange.
 - (ii) 21 clear days' notice must be served to hold a Board meeting.
 - (iii) Noise is every thing surrounding the entire spectrum of communication.
 - (iv) Customs, cultural values, religious beliefs etc. do not affect a business.
 - (v) The Government tries to restrict the activities of co-operative by the Act. (1×5 = 5 marks)
- (c)** Define the following terms in not more than two lines:
- (i) Convertible debenture

- (ii) Quorum
 - (iii) SWOT
 - (iv) Decoding
 - (v) Karta
 - (vi) Organic objectives
- (1×6 = 6 marks)

Paper - 4

Business Mathematics & Statistics Fundamentals

Chapter - 2 : Mixtures, Ratio, Proportions and Variation

2005 - Dec [1] {C} (a) If $x = 2$, find the value of y . (1 mark)

(c) What will be the cost price per kg of the mixture of two types of teas, mixed in the ratio 3:2 if the first type is purchased in Rs. 200 per kg and the second in Rs. 300 per kg? (2 marks)

2005 - Dec [2] (a) If $\frac{a}{b} = \frac{c}{d}$, prove that $\frac{a+c}{b+d} = \frac{a}{b}$. (5 marks)

2005 - Dec [3] (a) Two vessels contain mixture of milk and water in the proportions 2:3 and 4:3 respectively. In what proportion should the two mixtures be mixed so as to form new mixture containing equal quantities of milk and water? (5 marks)

Chapter - 3 : Interest (Simple and Compound Interest)

2005 - Dec [1] {C} (b) At what rate per annum will a sum of money double itself in 10 years with simple interest? (2 marks)

Chapter - 4 : Percentages

2005 - Dec [2] (b) A sum of money is to be divided among three sons in such a way that the first son is to get 30% of the whole, the second son is to get 40% of the remainder and the third son the rest. If the third son gets Rs. 21,000, what would be the total sum divided and the amounts in the respective shares of the first and second son? (5 marks)

Chapter - 5 : Discounts

2005 - Dec [3] (b) The difference between interest and true discount on a sum due in 5 years at 5% per annum is Rs. 50. Find the sum. (5 marks)

Chapter - 6 : Set Theory

2005 - Dec [4] {C} Answer the following:

(g) If $A = \{1, 2, 3\}$ and $B = \{2, 3, 4\}$, find $(A - B) \cup (B - A)$. (1 mark)

2005 - Dec [7] (b) In a class test of 70 students, 23 and 30 students passed in Mathematics and in Statistics respectively and 15 passed in Mathematics but

not passed in Statistics. Using set theory result, find the number of students who passed in both the subjects and who did not pass in both the subjects.

(5 marks)

Chapter - 7 : Indices and Surds**2005 - Dec [4] {C}** Answer the following:

(a) Express as mixed surd. (1 mark)

(d) Evaluate $(243)^{-1/5}$. (1 mark)**2005 - Dec [5]** (b) If $2^x = 3^y = 6^z$, prove that $\frac{1}{x} + \frac{1}{y} = \frac{1}{z}$. (5 marks)**Chapter - 8 : Variation****2005 - Dec [4] {C}** Answer the following:(b) If $a + 2b$ varies as $a - 2b$, prove that a varies as b . (1 mark)**2005 - Dec [6]** (b) As the number of units manufactured in a factory is increased from 200 to 300, the total cost of production increases from Rs. 16,000 to Rs. 20,000. If the total cost of production is partly fixed and other part varies as number of units produced, find the total cost for producing 500 units. (5 marks)**Chapter - 9 : Logarithms (Including Compound Interest by log. Method)****2005 - Dec [4] {C}** Answer the following:(f) Prove that $\log(1 + 2 + 3) = \log 1 + \log 2 + \log 3$. (1 mark)**2005 - Dec [6]** (a) Solve $\log_x 2 = \dots$. (5 marks)**Chapter - 10 : Permutations & Combinations****2005 - Dec [4] {C}** Answer the following:(e) If ${}^n P_2 = 56$, find n . (1 mark)**2005 - Dec [7]** (a) If a group of 13 workers contains 5 women, in how many ways can a subgroup of 10 workers be selected so as to include atleast 6 men? (5 marks)**Chapter - 12 : Quadratic Equations****2005 - Dec [4] {C}** Answer the following:

(c) Form a quadratic equation whose one root is . (1 mark)

2005 - Dec [5] (a) Construct a quadratic equation whose roots are α^3 and β^3 when α and β are the roots of $x^2 + 3x + 2 = 0$. (5 marks)**Chapter - 14 : Area****2005 - Dec [8] {C}** Answer the following:

(a) A path of 4ft wide is to be laid outside round the square garden of 60 ft by 60 ft. Find the area of the path. (2 marks)

(b) Base radius of a conical tent is 5 m and its height is 10 m. Find the area of the canvas of the tent. (2 marks)

2005 - Dec [9] (a) The perimeter of a right angled triangle is 30 cm and hypotenuse is 13 cm. Find the other two sides and the area of the triangle.

(5 marks)

Chapter - 15 : Volume & Surfaces**2005 - Dec [8] {C}** Answer the following:

- (c) If the total surface area of a cube is 54 sq ft, find its volume. (2 marks)
 (d) Three solid gold spherical beads of radii 3, 4, and 5 cms respectively are melted to form another solid spherical bead. Find its radius. (2 marks)

2005 - Dec [9] (b) Volume of a right circular cylinder, whose base has a radius of 7 cm, is same as volume of a cube having an edge of 11 cm. Find the altitude and the total surface area of the cylinder. (3+2 = 5 marks)

2005 - Dec [10] (a) A right pyramid stands on a square base having a side of 10 cm and its height is 12 cm. Find its total surface area and volume. (3+2 = 5 marks)

Chapter - 17 : Equations of Straight Line**2005 - Dec [8] {C}** Answer the following:

- (e) Find the equation of the straight line making an intercept 3 on the x-axis and passing through the point (1, 2). (2 marks)

2005 - Dec [10] (b) If the three points (x, y) , $(5, -2)$ and $(3, -4)$ are collinear, prove that $3x + 4y - 7 = 0$. (5 marks)

Chapter - 18 : Equations of Circles**2005 - Dec [8] {C}** Answer the following:

- (f) For the equation of the circle $x^2 + y^2 + 2x - 4y = 11$, find the coordinates of its centre and also its radius. (2 marks)

2005 - Dec [11] (a) Find the centres and radii of two circles $x^2 + y^2 + 6x + 14y + 9 = 0$ and $x^2 + y^2 - 4x - 10y - 7 = 0$ and hence show that they touch each other externally. ($1\frac{1}{2} + 1\frac{1}{2} + 2 = 5$ marks)

Chapter - 19 : Equations of Parabola**2005 - Dec [8] {C}** Answer the following:

- (g) Find the vertex of the parabola $y^2 - 2y - 8x = 23$. (2 marks)

Chapter - 20 : Equations of Ellipse**2005 - Dec [8] {C}** Answer the following:

- (h) Find the eccentricity of the ellipse $8x^2 + 9y^2 = 288$. (2 marks)

Chapter - 21 : Equations of Hyperbola

2005 - Dec [11] (b) Find the coordinates of centre, length of latus rectum, eccentricity and the coordinates of foci of the hyperbola $3x^2 - 4y^2 - 12x - 8y - 4 = 0$. (2+1+1+1 = 5 marks)

Chapter - 22 : Graphical Representation of Statistical Data

2005 - Dec [13] (a) Draw a simple bar chart for the following productions of bicycles of a small factory in 4 consecutive years:

Year	:	1995	1996	1997	1998
Production	:	8400	7200	10000	12000

(5 marks)

(b) Draw an ogive (less than type) from the following distribution:

Daily wages (Rs.)	:	0-30	30-60	60-90	90-120	120-150
No. of workers	:	20	50	60	40	30

(5 marks)

Chapter - 24 : Measures of Central Tendency**2005 - Dec [12] {C}** Attempt the following:

- (a) Prove that for two numbers 2 and 4, $A.M. \times H.M. = (G.M.)^2$.
(2 marks)
- (b) If the relation between two variables x and y is $2x + 3y = 7$ and median of y is 2, find the median of x .
(2 marks)
- (c) If the observations 2, 4, 8 and 16 occur with frequency 4, 3, 2 and 1 respectively, find the geometric mean of them.
(2 marks)
- (g) If two groups of 50 and 100 observations have means 4 and 2 respectively, find the mean of the combined group.
(2 marks)

2005 - Dec [14] (a) Arithmetic mean of the following frequency distribution is 8.8. Find the missing frequencies:

Wages(Rs.)	:	4-6	6-8	8-10	10-12	12-14	Total
No. of workers	:	6	—	16	—	5	50

(5 marks)

Chapter - 25 : Measures of Dispersion, Skewness and Kurtosis**2005 - Dec [12] {C}** Attempt the following:

- (d) If the variables x and y are related by $3x - 2y + 5 = 0$ and the range of x is 8, find the range of y .
(2 marks)
- (e) Determine the mean deviation about mean of 9 observations 4, 4, 4, 6, 6, 6, 8, 8, 8.
(2 marks)
- (f) If A.M. and the coefficient of variation of a variable x are 10 and 50% respectively, find the variance of x .
(2 marks)
- (h) For a moderately skewed distribution the mean and median are 35 and 37 respectively, find the mode.
(2 marks)

2005 - Dec [14] (b) Find the quartile deviation of the following distribution:

Marks	:	0-10	10-20	20-30	30-40	40-50
No. of Students	:	10	20	35	25	10

(5 marks)

2005 - Dec [15] For the following frequency distribution, determine mean, mode, standard deviation and coefficient of skewness:

Marks	:	0-10	10-20	20-30	30-40
No. of Students	:	10	30	40	20

(2+3+3+2 = 10 marks)

Shuchita Prakashan (P) Ltd.
25/19, L.I.C. Colony, Tagore
Town, ALLAHABAD - 211002

Visit us : www.shuchita.com