CMA Students Newsletter (For Foundation Students)

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Paper 1: Fundamentals of Economics and Management (FEM)

BANKING

Definition of a Bank:

According to Prof. Kinley – "A bank is an establishment which makes to individuals such advances of money as may be required and safely made, and to which individuals entrust money when no required by them for use."

The Banking Companies Act – 1949 of Indian defines Bank as - "A Bank is a financial institution which accepts money from the public for the purpose of lending or investment repayment on demand or otherwise withdrawable by cheques, drafts or order or otherwise."

Functions of a Commercial Bank

(1) Receiving Deposits from the public.

(2) Making Loans and Advances.

(3) The most distinctive function of commercial banks is creation and destruction of money because demand deposits serve as money in the community.

(4) A bank performs certain functions as an artificial person or natural person.

(5) Other functions –

  (a) Issuing of letters of credit to its customers.

  (b) Issuing of bank drafts and travelers cheques etc.

Importance of a Bank

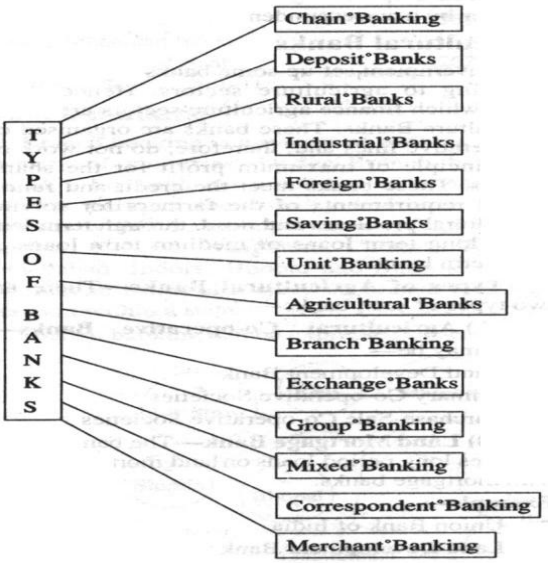
The business significance of banks to a developing economy may be as follows –

- Capital formation is the basic requirement of economic development.
- For implementation of effective monetary policy.
- The development of Commercial banking strengthens the links between the organized and the unorganized sectors of the money market.

- The banks in developing economics can be made to serve the basic sectors, such as agriculture, small scale and rural industries.

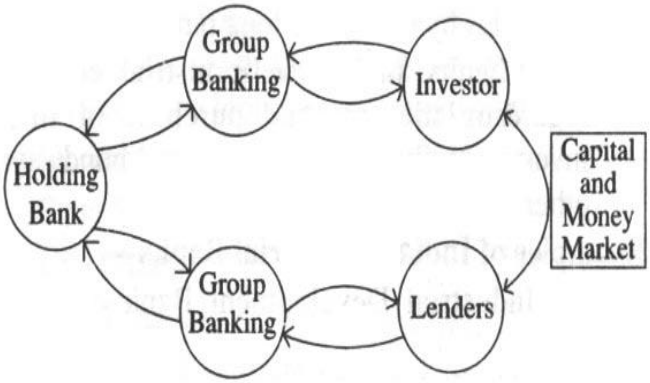
Types of Banks

There are many types of banks such as commercial banks and central bank. The central bank has the vital function of controlling and guiding commercial banks for various other economic activities.



Chain Banking

The Chain banking **mostly** used in United States America. It is a banking system where the same individual or group of individuals controls two or more, as against controlled by a holding bank under group banking. This is done by stock ownership in two or more banks stockholders directly or through their nominees exercise control on competing banks.



Deposit Banking

The most important type of bank is a deposit bank. It is a Commercial Bank. This type of banks accept deposits from the public and stockholder and lend them to needy parties. Since their deposits are for short time only (From one month to 5 years). These banks extend loans only for a period of one month to 3 years.

Reserve Bank of India

Reserve Bank of India is a Central bank of India. The Central Bank is the apex bank in India. A Central Bank is basically different from the Commercial Bank. The Central Bank does not engage itself in ordinary banking activities like accepting deposits and advancing loans to the public and it does not aim at making profits like the commercial banks.

Definition of a Central Bank-

A Central Bank has been define as follow –

"The Primary definition of Central Banking is a banking system in which a single bank has either complete control or a residuary monopoly of note issue." – V Smith

"A Central Bank is a bank of bankers, its duty is to control the monetary base …. and through control of this high powered money, to control the community's supply of money." – Samuelson.

In 1921, the Imperial Bank of India was set-up by amalgamating three Presidency Banks. Though primarily a commercial bank, it preformed certain central banking functions, such as activity as banker to the Government. In 1926, The Hilton Young Commission suggested the establishment of the Reserve Bank of India to act as a Central Bank. In 1929, the Central Banking Enquiry Committee again made a forceful suggestion for the establishment of the Reserve Bank. Consequently the Reserve Bank of India Act was passed in 1934 and the act of bank implemented from 1st April, 1935. The bank has its headquarter at Mumbai. The Department of Non Banking office located at Kolkata.

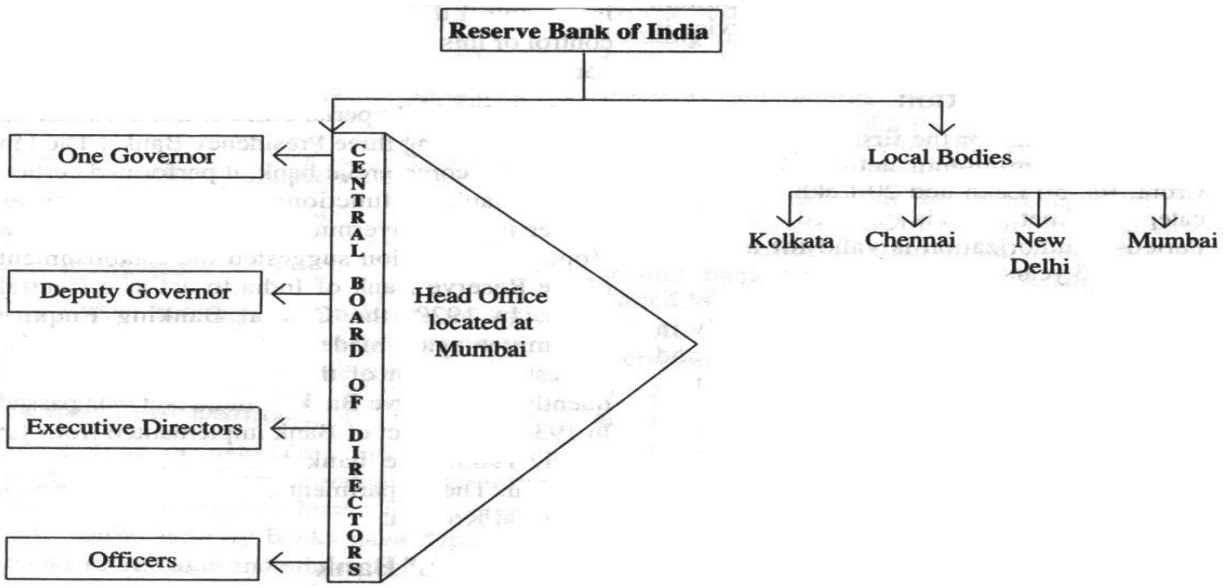
Objectives of Bank

The main objectives of bank are –

- To regulate the issue of Bank notes.
- To organize a sound and healthy system of commercial banking in the country.
- For holding custody of commercial banks cash reserves.
- For granting accommodation in a discretionary way to the commercial banks.
- To conduct the banking and financial operations of the Government.
- To maintain exchange value of rupee.
- To set up Monetary Policy.

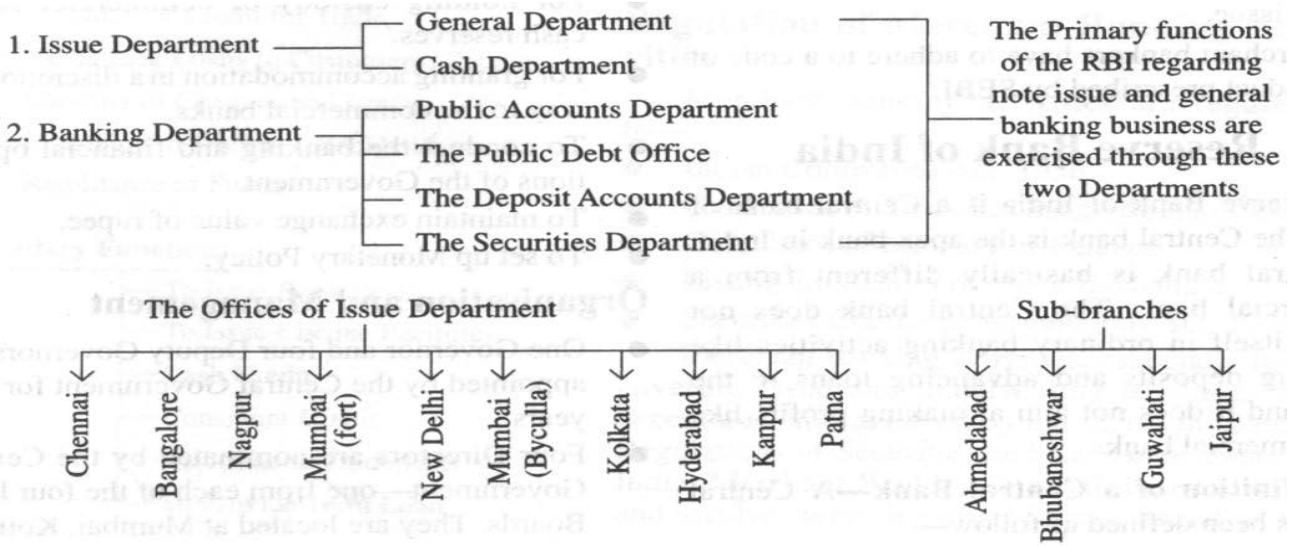
Organization and Management

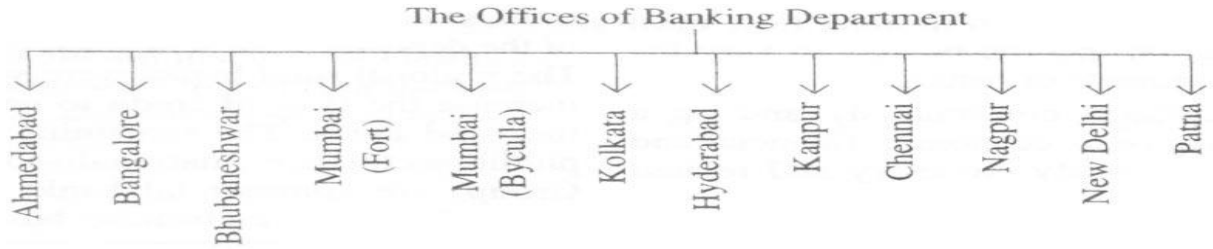
- One Governor and four Deputy Governors are appointed by the Central Government for five years.
- Four Directors are nominated by the Central Government – one from each of the four local Boards. They are located at Mumbai, Kolkata, New Delhi and Chennai. The tenure of the appointment will be for five years.
- Ten other Directors are appointed by the Central Government. The tenure of these Directors will be four years.
- One Government Official nominated by the Central Government for attend the meeting of the Central Board of Directors. He cannot use the right to vote in the meeting of the Central Board.



Capital Bank – The Reserve Bank of India was originally constituted as a shareholders bank with a share capital of ₹ 5 crore, divided into 5 lakh fully paid shares of ₹ 100 each.

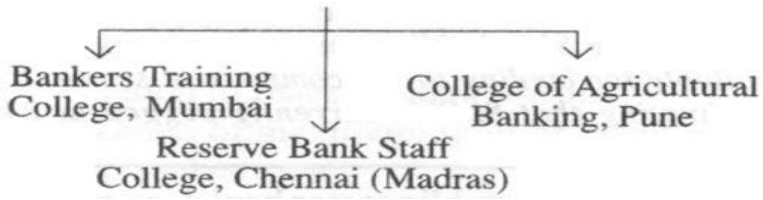
Department of Bank – The Reserve Bank of India has following department for formulating policy and to carry out its functions without any problem. These are –





3. Department of Banking Operations
4. Department of Banking Development
5. Agricultural Credit Department
6. Industrial Finance Department
7. Exchange Central Department
8. Legal Department
9. Non-Banking Companies Department – The office located at Kolkata
10. Department of Expenditure of Budgetary control
11. Department of Currency Management
12. Department of Research and Statistics
13. Credit Planning Cell
14. Department of Government and Bank Accounts
15. Inspection Department
16. Department of Economic Analysis Policy
17. Rural Planning and Credit Department

18. Premises Department
19. Department of Administration and Personnel
20. Management Service Department
21. Reserve Bank of India Service Board
22. Secretary's Department
23. Training Establishment



24. Central Records and Documentation Centre

On July 6, 2005 Reserve bank of India has constituted a new department, named Financial market Department for Surveillance on financial markets. The Deputy Governor of RBI Mr. Rakesh Mohan look after this newly created department. Besides this new department Mr. Rakesh Mohan has been given responsibility of Monetary Policy department. The constituted new financial market department will separate the activities of debt management and monetary operations in future.

RBI to Issue Coins with Commonwealth Theme

Reserve Bank of India has announced to issue new coins of ₹ 5 and ₹ 2 to commemorate the Commonwealth Games held in New Delhi in October 2010.

RBI has decided to put into circulation coins of ₹ 5 and ₹ 2 with the theme XIX Commonwealth Games 2010—Delhi. Both the newly planned coins of ₹ 5 and 2 denomination will be of circular shape and have a diameter of 23 millimeter and 27 millimeter respectively.

RBI also announced that the existing ₹ 5 and ₹ 2 coins will also continue in circulation.

Functions of Reserve Bank of India

1. **Issue of Currency –** The Reserve Bank of India has the sole authority for the issue of currency in India other than one rupee coins/notes and subsidiary coins.
2. **Banker, Fiscal Agent and Advisor to the Government –** The Reserve Bank everywhere in India act as bankers, fiscal agent and advisor to the Central Government. As Banker to the Government of India, the Reserve Bank keeps the deposits of the centre and state governments and makes payment on behalf of governments. But it does not pay interest on government deposits.
3. Managing the public debt and issue of new loans and Treasury Bills of the Central Government.

4. The Reserve Bank represents the Government of India as member of the International Monetary Fund and World Bank.
5. **Banker's Bank –** The Reserve Bank has the right of controlling the activities of the banks in the country.
6. Reserve Bank controls the money market through licensing, inspection and supervision of all banks.
7. **Others functions:**
   - It controls the credit such as bank rate, open market operation and the powers to vary the reserve requirements of banks.
   - The Bank collects continuously and on a comprehensive basis economic, financial and banking data to study monetary and related problems.
   - To make provisions relating to Rural and Agricultural Finance.
   - To set-up monetary and fiscal policy of country.
   - To make and implement policy relating to Banking Development.
   - It holds the cash reserves of the entire scheduled bank.
   - It controls the credit operations of the banks through quantitative and qualitative controls.
   - The Reserve Bank acts as the national clearing house and helps the members of the bank to settle their mutual indebtedness without physically transferring cash from place to place.

Paper 2: Fundamentals of Accounting (FOA)

(i) Rabin consigned goods for the value of ₹ 8,250 to Amit of Kanpur paid freight etc. of ₹ 650 and insurance ₹ 400. Drew a bill on Amit at 3 months after date for ₹ 3,000 as an advance against consignment, and discounted the bill for ₹ 2960. Received Account Sales from Amit showing that part of the goods had realized gross ₹ 8,350 and that his expenses and commission amounted to ₹ 870. The stock unsold was valued at ₹ 2750.

Consignee wants to remit a draft for the amount due. Calculate the amount of draft.

Solution:

Value of Sales by Amit	₹ 8350
Less: Amount Paid in Advance (Bill Accepted by Amit)	₹ 3000
Less: Commission and other expenses of Amit	₹ 870
Net Amount to be remitted by Amit	₹ 4480

(ii) A company estimates that ₹20,000 of its ₹500,000 of accounts receivable will be uncollectible. Its Allowance for Doubtful Accounts presently has a credit balance of ₹18,000. The adjusting entry will include a _____ to Bad Debts Expense.

Solution:

Debit of ₹2,000
Amount needed in Allowance is ₹20,000 minus the present amount of ₹18,000 = ₹2,000 additional credit needed in Allowance. The entry will therefore require a debit of ₹ 2,000 to Bad Debts Expenses.

(iii) A company's Cash account has a balance of ₹851 as of October 31. The bank statement for this account reports a balance of ₹1,430 as of October 31. There are outstanding checks totaling ₹840 and a deposit in transit of ₹60. The bank statement shows interest earned of ₹19, service charges of ₹30, a customer's returned check of ₹100, and a check printing fee of ₹90. The reconciled Cash balance that should be reported on the company's balance sheet as of October 31 is ₹ _____.

Solution:

Adjusted balance as per book =
Balance as per books + Interest – Service charges – Returned check –Check printing
₹851 + ₹19 – ₹30 – ₹100 – ₹90 = ₹650

(iv) Use the information to answer the question:

Fixed expenses:

Rent	**₹ 24,000**
Salaries	**₹ 40,000**
Depreciation	**₹ 13,000**

Variable expenses

Cost of goods sold	**58% of sales**
Supplies	**7% of sales**

(a) What is the company's contribution margin ratio?

(b) If the company wants to earn a profit of ₹35,000 instead of breaking even, what is the amount of sales or revenue dollars the company must achieve?

Solution:

(a) The contribution margin is sales minus variable expenses. The contribution margin ratio is the contribution margin expressed as a percentage of sales or revenues. In this question the variable expenses are 70% (58%+7%+5%) of sales. That means the contribution margin ratio is 30%.

(b) ₹1,12,000 (the total of the fixed expenses plus the desired profit) gets divided by the contribution margin of 30% to arrive at the required sales of ₹ 3,73,333.

(v) On January 1, 2008 an asset was acquired for ₹30,000. Its useful life was expected to be 10 years and the salvage value is expected to be ₹ 0. After four years of use, the company realized the asset would be useful for only three more years. (In other words, the total useful life of the asset will be seven years instead of the original 10 years.) The company uses the straight-line method of depreciation. The Depreciation Expense in each of the years 2012, 2013, and 2014 will be ₹ _____.

Solution:

Cost of ₹30,000 minus Estimated Salvage Value of ₹ 0 = Amount to be Depreciated.
₹30,000 divided by 10 years = ₹3,000 per year for the years 2008, 2009, 2010 and 2011.

After 4 years the Book Value is ₹ 18,000 (₹30,000 minus ₹12,000. The Book Value of ₹18,000 will have to be depreciated over the remaining life of 3 years = ₹6,000 per year.

(vi) A and B are co-venturers in a Joint Venture sharing profit and loss in the ratio of 2:3. A supplied goods to the value of ₹ 60,000 and incurred expenses amounting to ₹ 5,900, B supplied goods worth ₹ 15,000 and incurred expenses ₹ 1,800. B sold the goods and realized ₹ 95,000. B is entitled to a commission of 4% on the total sales. Calculate the profit of joint venture.

Solution:

₹ 9,500 – (₹ 60,000 + 5,900 + 15,000 + 1,800) – 4% of 95,000
₹ 95,000 – 82,700 – 3,800 = ₹ 8,500

(vii) Based on the following data, what is the gross profit for the company?

Sales	**₹1,000,000**
Net purchases of raw materials	**600,000**
Cost of goods manufactured	**800,000**
Marketing and administrative expenses	**250,000**
Indirect manufacturing costs	**500,000**

	Beginning inventory	**Ending inventory**
Work in process	**₹500,000**	**₹400,000**
Finished goods	**100,000**	**500,000**

Solution:

Gross Profit = Sales - (Beginning finished goods inventory + Cost of goods manufactured - Ending finished goods inventory)

Gross Profit = ₹ 10,00,000 – (₹ 1,00,000 + 8,00,000 – 5,00,000)= ₹ 6,00,000

(viii) State College is using cost-volume-profit analysis to determine tuition rates for the upcoming school year. Projected costs for the year are as follows:

Contribution margin per student	**₹1,800**
Variable expenses per student	**1,000**
Total fixed expenses	**360,000**

Based on these estimates, what is the approximate break-even point in number of students?

Solution:

Breakeven point in students = Fixed costs ÷ Contribution margin per student
= ₹360,000 ÷ ₹1,800 = 200

(ix) X consigned 1000 boxes of grapes costing ₹ 200 per box to Y. X incurred ₹ 4,500 towards transportation and insurance. Y paid ₹ 4,000 as godown rent and ₹ 500 as salesman commission. During road transportation 50 boxes were stolen. Find the value of abnormal loss.

Solution:

$$\frac{₹200 + (₹4500 \div 1000)}{1000} \times 50 = ₹10,225$$

(x) A Motor Car which was purchased for ₹ 20,000 had its book value ₹ 12,000 was sold for ₹ 25,000. Calculate the capital profits on sale.

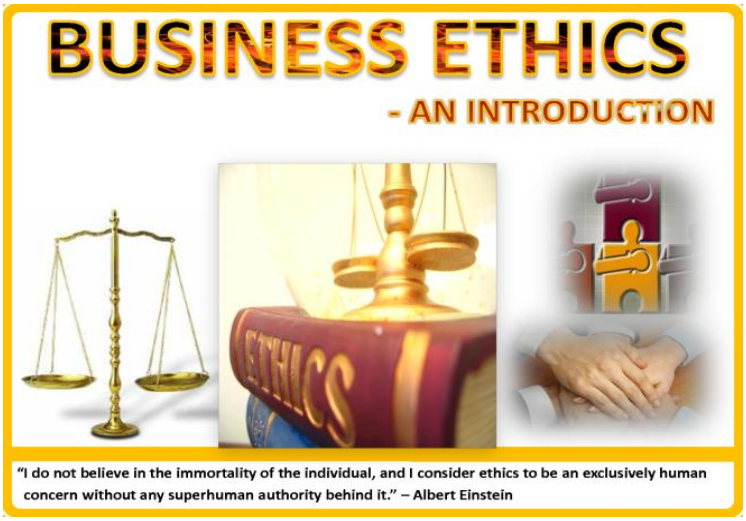
Solution:

Book value consider for the calculation of capital profit.
Capital profit = ₹25,000 - 12,000 = ₹ 13,000

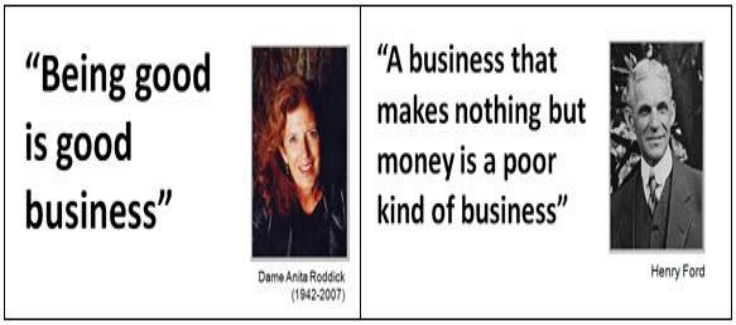
Paper 3: Fundamentals of Laws and Ethics (FLE)

ETHICS AND BUSINESS

Man is a social animal. Though rules of nature control the humans as they control the other living beings, the man himself has derived certain principles to govern his own individual and group behaviour. These rules, in the form of behavioural standards, may differ across cultures and times but their basic objectives are always mutual existence and peace within the particular community or the social group. By ensuring security and protection of the group, these standards help in the survival of the particular community or a social group. These standards of behaviour are called 'ethics.'



Like individuals, organizations are also monitored and evaluated by a set of ethical standards. As in any social group, ethics is inevitable in organizations. Research has already shown that ethics does pay. Since unethical practices cost the industries billions of dollars a year and damage the images of corporations, the emphasis on ethical behaviour in organizations has increased over the recent years.



Business ethics are moral principles that guide the way a business behaves. The same principles that determine an individual's actions also apply to business.

Acting in an ethical way involves distinguishing between "right" and "wrong" and then making the "right" choice. It is relatively easy to identify unethical business practices. For example, companies should not use child labour. They should not unlawfully use copyrighted materials and processes. They should not engage in bribery.

However, it is not always easy to create similar hard-and-fast definitions of good ethical practice. A company must make a competitive return for its shareholders and treat its employees fairly. A company also has wider

responsibilities. It should minimise any harm to the environment and work in ways that do not damage the communities in which it operates. This is known as **corporate social responsibility (CSR)**.

In the complex global business environment of the 21st century, companies of every size face a multitude of ethical issues. Businesses have the responsibility to develop codes of conduct and ethics that every member of the organization must abide by and put into action. Fundamental ethical issues include concepts such and integrity and trust, but more complex issues include accommodating diversity, decision-making, compliance and governance.

All over the world, there is a growing realisation that ethics is important for any business and to achieve the progress of any society. Ethics give rise to efficient economy. It is not the government or law which will protect the society. But ethics alone can protect it. Ethics are good in itself. Ethics and profits go together in the long run. An ethically responsible company is one which has developed a culture of caring for people and environment, a culture which flows downwards from the top managers and leaders. Ethics can be described as the conscious appeal to norms and values to which, on reasonable grounds, we hold ourselves obliged, as reciprocally, we hold others obliged to the same norms and values. As a reflection, ethics are the methodical and systematic elaboration of the norms and values we appeal to in our daily activities. Where these activities are organised under business issues, we face ethics in the practical and reflective variety of business ethics.

On innumerable occasions, people in business are facing ethical questions in which a balance has to be found between the different and often conflicting rights and interests of the parties involved. One may even say that the weighing of rights and interests, at stake in determinate circumstances, constitutes the common domain of business ethics.

Ethical rules are guides to moral behaviour. For example: All societies have ethical rules forbidding, lying, stealing, deceiving and harming others, similar to the other ethical rules that approve of honesty, keeping promises, helping others and respecting the right of others. These are the basic rules of behaviour which are of much use for the preservation and continuation of organised life.

Most of the people find major source of ethical guidance and moral meaning in religious beliefs and organisations. The family institution is equally important as it imparts a sense of right and wrong in children when they grow up, as schools and other similar institutions like cultural associations and television etc. The totality of these exposures will create in them a concept of ethics, morality and socially desirable behaviour.

Ethical rules are present in all societies, all organisations and all individuals, though they may vary greatly from one to another. What is considered ethical by one society may be forbidden by another society. One particular religious notion of morality may differ with others. Still ethics is a universal human trait. All people wherever they are, need rules to govern their conduct, rules that tell them whether their actions are right or wrong, moral or immoral, approved or disapproved.

Paper 4: Fundamentals of Business Mathematics and Statistics (FBMS)

SIMULTANEOUS LINEAR EQUATIONS

What are simultaneous linear equations?

Simultaneous linear equations have two variables in them. Let us say x and y. Since there are two variables in the equation we cannot solve it by itself. We need another equation with the same variable values to find the answer. When these two equations are solved together we get the values of the variables x and y.

Before studying the Vedic approach to solving simultaneous linear equations (SLE's) let us recall the traditional method of solving them.

(Q) Find the values of x and y given the equations 2x + 4y = 10 and 3x + 2y = 11.

2x + 4y = 10 _____ (1)

3x + 2y = 11 _____ (2)

The co-efficients of x are 2 and 3 respectively, and the co-efficients of y are 4 and 2 respectively. In order to proceed with the solution we have to equalize either the co-efficients of x or the co-efficients of y. This can be done by multiplying the equations with suitable numbers.

In this case, we shall multiply equation (1) with 3 and equation (2) with 2. The new equations are:

6x + 12y = 30 _____ (1)

6x + 4y = 22 _____ (2)

We can see that the co-efficient of x is same in both equations. Now, we subtract the second equation from the first and get the value of y.

6x + 12y = 30 _____ (1)

$$\begin{array}{r} 6x + 4y = 22 \\ \hline 8y = 8 \end{array}$$ ---------- (2)

We get 8y = 8 and therefore value of y is 1. Next, we substitute the value of y in the first equation.

2x + 4(1) = 10

2x = 6

x = 3

Answer: The values of x and y are 3 and 1 respectively.

In the traditional method a new set of equations is formed in order to equalize the co-efficients of any one variable. But forming new equations is a time-consuming procedure.

Secondly, equalizing the co-efficients is not always an easy task. If the co-efficients have big numbers or decimal values it becomes very difficult to equalize them by multiplying them with suitable numbers. If the values of x are numbers like 0.5 or 0.2 or big numbers like 32 or 54 then it becomes difficult to calculate their values. In each of the two examples mentioned above it is not easy to equalize the co-efficient and involves some effort. Secondly, the possibility of making a mistake with this method is pretty high.

We will now study an alternate approach.

METHOD

In this method we will not be forming new equations but instead we will calculate the values of x and y with the given equations only. The value of the variables x and y will be expressed in the form of numerator upon denominator.

$$x = \frac{\text{Numerator}}{\text{Denominator}} \qquad y = \frac{\text{Numerator}}{\text{Denominator}}$$

It should be noted that although one can find the values of both x and y there is no need for doing it. If we obtain the value of either x or y then the value of the other variable can easily be obtained by substitution. We will solve three examples by calculating the value of x and two examples by calculating the value of y.

Calculating the value of 'x'

(Q) Find the values of x and y for the equations 2x + 4y = 10 and 3x + 2y = 11.

As I said, we will calculate the value of x as numerator upon denominator. The value of numerator will be:

$2x + 4y = 10$ _____ (1)

$3x + 2y = 11$ _____ (2)

The numerator is obtained by cross-multiplying (4 x 11) and subtracting from it the cross product of (2 x 10) as shown by the arrows in the diagram above.

$$x = \frac{\text{Numerator}}{\text{Denominator}} = \frac{(4\times11)-(2\times10)}{\text{Denominator}} = \frac{24}{\text{Denominator}}$$

Next, we will calculate the value of the denominator.

$2x + 4y = 10$ _____ (1)

$3x + 2y = 11$ _____ (2)

The denominator is obtained by cross-multiplying (4 x 3) and subtracting from it the cross product of (2 x 2) as shown by the arrows in the diagram above.

$$x = \frac{\text{Numerator}}{\text{Denominator}} = \frac{24}{(4\times3)-(2\times2)} = \frac{24}{8} = 3$$

Thus, we have obtained the value of x as 3. Now, we will substitute the value of x in the equation 2x + 4y = 10

2(3) + 4y = 10

6 + 4y = 10

y = 1

Therefore, the values of x and y are 3 and 1 respectively.

(Q) Solve the equations 2x + y = 5 and 3x - 4y = 2.

Numerator	**Denominator**
2x + 1y = 5 3x – 4y = 2	2x + 1y = 5 3x – 4y = 2
= (1 x 2) - (-4 x 5) = 22	= (1 x 3) - (-4 x 2) = 11
$x = \frac{\text{Numerator}}{\text{Denominator}} = \frac{22}{11} = 2$	

On substituting the value of x = 2 in equation (1) we get the value of y as 1. The solution set is (2, 1)

Calculating the value of 'y'

The value of y will also be calculated in the form of numerator upon denominator. However, the technique of calculating the denominator is same as the previous technique (in case of x) and so we have to study the technique of calculating the numerator only.

(Q) Solve the equations 6x + 4y = 50 and 5x + 5y = 50.

Numerator	**Denominator**
6x + 4y = 50 5x + 5y = 50	6x + 4y = 50 5 x + 5y = 50
= (50 x 5) - (50 x 6) = -50	= (4 x 5) - (6 x 5) = -10

$y = \frac{\text{Numerator}}{\text{Denominator}} = \frac{-50}{-10} = 5$	

In this case, we have obtained the value of y as 5. We substitute the value of y in equation (1) and get the value of x as 5. The solution set is (5, 5).

(Q) Solve 5x + 4y = 3, 2x - 3y + 8 = 0.

The second equation 2x - 3y + 8 = 0 can be written as 2x - 3y = -8. We will solve for the value of y and then substitute to find the value of x

Numerator	**Denominator**
5x + 4y = 3 2x – 3y = -8 = (3 x 2) - (-8 x 5) = 46 $y = \frac{\text{Numerator}}{\text{Denominator}} = \frac{46}{23} = 2$	5x + 4y = 3 2 x - 3y = -8 = 8 - (-15) = 23

Substituting the value of y as 2 in equation (1) we get the value of x as -1. The solution set is (-1, 2).

It can be observed that the technique for calculating the denominator is same in either method, viz. solving for x or solving for y. However, the technique of calculating the numerator is different in the second method.

When confronted with a problem, a student can calculate either the value of x or y and substitute its value in the other variable. However, one rule of thumb can be stated here which will help you in deciding which variable to solve.

If the co-efficients of x are big numbers than calculate the value of x and substitute for y and if the co-efficients of y are big numbers than calculate the value of y and substitute for x.

(This happens because when you calculate the value of x you will be dealing with the y co-efficients twice and hence avoiding the big x co-efficients and vice versa.)

SPECIFIC CASE

There is a special sutra of Vedic Mathematics called the 'Sunyam Anyat' which says 'If one is in ratio, the other is zero.' This sutra is useful when the co-efficients of either x or y are in a certain ratio.

Example: 1

$$5x + 8y = 40$$

$$\underline{10x + 11y = 80}$$

In the above case, the x co-efficients are in the ratio of 1:2 (5:10) and the constants are also in the ratio of 1:2 (40:80). Now, our sutra says that 'if one (variable) is in ratio, the other one (the other variable) is zero.'

In this case, we see that the variable x is in ratio with the constant terms and therefore 'the other', namely, variable y, is zero. Thus, value of y is zero. The value of y can be substituted as zero in the above equation. If we take equation (1) and substitute the value of y as zero, we have 5x = 40 and hence x=8.

Example: 2

$$67x + 302y = 1510$$

$$\underline{466x + 906y = 4530}$$

The y co-efficients are in the ratio of 1:3 (302:906) and the constants are also in the ratio of 1:3 (1510:4530). Since the variable y is in the same ratio as the constant terms, the value of variable x is zero. We now substitute the value of x as zero in the first equation and get the value of y as 5. The values of x and y are 0 and 5 respectively.

In this example, since the co-efficient and constant terms are big numbers it would have been very difficult to calculate the answer. But, thanks to the Sunyam Anyat rule, we can easily solve them by detecting a ratio amongst the variable y.