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CMA STUDENTS' E-bulletin FOUNDATION

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THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

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Behind every successful business decision, there is always a CMA

Message from the President



Dear Students,

Greetings!!!

“Education is not the learning of facts, but the training of mind to think” – Albert Einstein

Education is a very vital tool that is used in the contemporary world to succeed. Education is like a candle in darkness which brings light. This light shows the correct way to follow. Education can only enable a human being to attain the greatest possible and also make a person ready to face any challenge in life.

I sincerely request you that everyday do something which will inch you closer to a better tomorrow. Push yourself because no one else is going to do it for you. Start believing in yourself, overcome fear of failure, develop from the negatives and if things don't work out take another shot, enjoy life, never give up, success is bound to come.

I have full faith on your capacity and strength and I believe that you will deliver your best in the years to come and will make your Institute and your country happy.

I hope you find E-bulletin helpful in your preparation and I am sure that you must capture good things out of it.

My sincere thanks goes to all the eminent academicians who are constantly giving input for it. I must appreciate the effort of Directorate of Studies for timely running the issues.

Best wishes

CMA Sanjay Gupta,

**President
The Institute of Cost Accountants of India**

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Message from the Vice-President



My Dear Student Friend,

“Work to Learn, Learn to Work”

We firmly believe that knowledge cannot be stolen or confiscated; neither can it be divided. Knowledge increases when it is shared, hence, knowledge is the greatest wealth. If your education imparts such knowledge then you have earned yourself the greatest asset. However, whether that knowledge can be correlated to success can only be decided by the way you put it to use.

Education is just the process of learning. Education doesn't stop because you have left college and does not stop because you started attending professional course.

A great career without a great education is only a dream. The Directorate of Studies of the Institute of Cost Accountants of India and CMA Manas Kumar Thakur President (2016-17) who is Chairman, Training, Education and Placement Committee ICAI and his team is ready to guide and co-operate with you to realize your dream that is, smart success. Please read the study materials, business newspapers for updates meticulously, follow the tips given by the experts, raise doubts and revert back with your queries.

We have enormous faith on our students and we trust that the future of the World is with us as our students will deliver their best to the society and help to build the pillars of future India in the years to come!

Our best wishes to all future CMAs whom we are sure will be part of the Government of India mission and its Nation Building Process, Grow and Let the Nation Grow.

Thanks and ensure CMA SHINES

CMA H Padmanabhan

**Vice President
The Institute of Cost Accountants of India**

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Message from the Chairman

Dear Students,
Greetings,

"When Educating the minds of our youth we must not forget to educate their hearts"- Dalai Lama.

Your professional journey must be a quest for knowledge that goes far beyond the limitations of conventional curricula, text books and standardised examinations. I believe that when the students are pursuing the course they must try to secure the ability, be strong in their principles and be confident to face challenges. We learn to do by doing and mistakes are proof that you are trying. He who is afraid of asking is ashamed of learning. So, if you want to be more powerful in life, educate yourself; it is that simple. Always keep in mind that the expert in anything was once a beginner and you should have the courage to follow your heart and intuition.

E-bulletin helps you in your preparation as I have received information from many of you and I am sure that you must capture good things out of it.

My sincere thanks go to all the eminent academicians who are constantly giving input for it. I must appreciate the effort of Directorate of Studies for their team spirit in making the timely issues.

Hope all of you have enjoyed Durga Puja, Dussehra & Onam festivals. As Diwali is approaching; I wish all of you A Happy Diwali!

Remember the sayings of M.K.Gandhi-"Live as if you were to die tomorrow, Learn as if were to die forever".

Best wishes to you all,

CMA Manas Kumar Thakur

**Chairman,
Training & Education Facilities (T& EF) Committee**

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KNOWLEDGE UPDATE



In this section of e-bulletin we shall have a series of discussion on each of these chapters to provide a meaningful assistance to the students in preparing themselves for the examination at the short end and equip them with sufficient knowledge to deal with real life complications at the long end.

Paper : 1, Part : - I

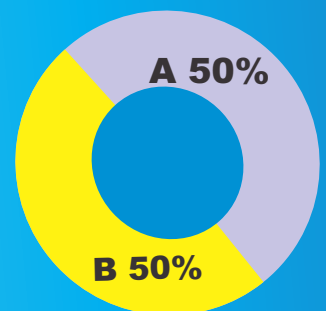
Fundamentals of Economics & Management (FEM) - Economics

CMA Sucharita Chakraborty
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Your Preparation Quick Takes

Syllabus Structure

A Fundamentals of Economics 50%
B Fundamentals of Management 50%



Behind every successful business decision, there is always a CMA

Learning Objectives:

In this issue of e-bulletin we reform our learning process through few M.C.Qs on Economics.

Try to choose the correct answer from the alternatives provided and thereafter check yourself from Answers given at the end of M.C.Qs.

MCQ-Part 1

In continuation to our discussion regarding various topics of Economics, in this issue we will refine our learning process through few M.C.Qs covering different topics.

1. Micro economics theory deals with
 - (a) Economic behavior of individual economic decision making units
 - (b) Economy as a whole
 - (c) Trade relations
 - (d) Economic growth of the society
2. Which of the following is a Central problem of every economy
 - (a) Abundance of resources
 - (b) Scarcity of economic resources
 - (c) Poverty
 - (d) Moral and ethical values
3. Equilibrium relates to which of these
 - (a) Market condition which oscillate
 - (b) Market state of falling price
 - (c) Market condition of rising price
 - (d) Market conditions which once achieved tends to persist
4. Normative economic theory deals with
 - (a) What is or how the economic problem facing the society are solved
 - (b) How the problem should be solved
 - (c) What to produce
 - (d) How to produce
5. Ceteris Paribus means
 - (a) Holding demand constant
 - (b) Holding supply constant
 - (c) Price being constant
 - (d) Other things being constant
6. Economic resources are
 - (a) Unlimited
 - (b) Limited in supply and use
 - (c) Limited in supply but have alternative uses
 - (d) Unproductive



7. Which of the following is /are an economic resource
- (a) Land
 - (b) Capital
 - (c) Labour
 - (d) All the three
8. Which of these is not land in economics
- (a) Tehri Dam
 - (b) Forest reserves of Assam
 - (c) Fish reserves in the Bay of Bengal
 - (d) Herbal plant of Uttaranchal
9. Which of these would be classified as a capital in economics
- (a) Bhankra Dam
 - (b) Indira canal
 - (c) Golden triangle
 - (d) All the three
10. Scarcity of resources leads to
- (a) Unsatisfaction of human wants
 - (b) Evaluation of alternative uses of scarce resources
 - (c) Both
 - (d) None
11. Who defined economics as "Science which deals with wealth"
- (a) J. B. Say
 - (b) A. C. Pigou
 - (c) Alfred Marshall
 - (d) Robbins
12. The basic assumption of an economic analysis is /are
- (a) Ceteris paribus
 - (b) Rational behavior
 - (c) Both
 - (d) None
13. The terms Micro economic and Macro economics were coined by
- (a) Professor A Samulson
 - (b) Giffen
 - (c) Prof. Ranger Frisch
 - (d) Eagle
14. ----- is known as father of economics
- (a) Adam Smith
 - (b) Professor A Samulson
 - (c) Alfred Marshall
 - (d) J R Hicks



15. The paradox of Diamond is more costly than water is explained by
- Marginal utility concept
 - Scarcity
 - Relative cost of production
 - All the three
16. The term "Micro" is derived from the World which means
- Latin, small
 - Greek, small
 - English, tiny
 - Roman , small
17. The famous book "An enquiry into the nature and causes of wealth of Nation" was published in –
- 1776
 - 1750
 - 1850
 - 1886
18. In free economy the decision about investment, saving and consumption are decided by
- Price mechanism
 - Central bank
 - Planning Commission
 - Finance budget
19. PPF is negative sloped due to
- Scarcity of production resources
 - Unlimited wants
 - Improvement in technology
 - Increasing opportunity cost
20. Economic efficiency means
- Production of goods of mass consumption at lower cost
 - Production of goods and services for those who have purchasing power
 - Greeting greatest satisfaction from available resources
 - Full employment of working force
21. Economic growth is best depicted by
- Outward shift in PPF
 - Upward movement in PPF
 - Inward movement in PPF
 - Downward movement in PPF

Answer :

- (a) Economic behavior of individual economic decision making units.
- (b) Scarcity of economic resources.
- (d) Market conditions which once achieved tends to persist.

4. (b) How the problem should be solved.
5. (d) Other things being constant.
6. (c) Limited in supply but have alternative uses.
7. (d) All the three.
8. (a) Tehri Dam.
9. (d) All the three.
10. (c) Both.
11. (a) J. B. Say.
12. (c) Both.
13. (c) Prof. Ranger Frisch.
14. (a) Adam Smith.
15. (b) Scarcity.
16. (b) Greek, small.
17. (a) 1776.
18. (a) Price mechanism.
19. (a) Scarcity of production resources.
20. (c) Greeting greatest satisfaction from available resources.
21. (a) Outward shift in PPF.



Paper : 1, Part : - II

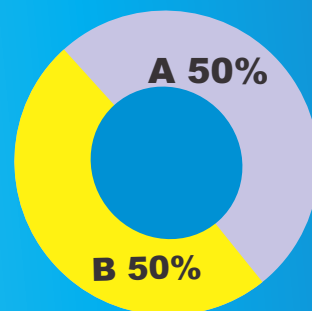
Fundamentals of Economics & Management (FEM) - Management

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Your Preparation Quick Takes

Syllabus Structure

A Fundamentals of Economics 50%
B Fundamentals of Management 50%



Behind every successful business decision, there is always a CMA

Learning Objectives:

- Students will demonstrate their knowledge of business and management principles
- Students will reveal effective written and oral communication
- Students will exhibit an awareness of the global environment in which businesses operate
- Students will display the ability to recognize when change is needed, adapt to change as it occurs, and lead change

The Evolution of Management Thought

Despite the inexactness and relative crudity of management theory and science, the development of thought on management dates back to the days when people first attempted to accomplish goals by working together on groups. We see that many different contributions of writers and practitioners have resulted in different approaches to management. **Frederick Taylor's** concern was productivity improvement through the application of the scientific method. **Henry Gantt** developed the Gantt chart in which he focussed on the selection of workers and cooperation between labour and management. **Frank Gilberth** is known for his time and motion studies, while **Lillian Gilberth** focussed on the human aspects of work. Henri Fayol, 'the father of modern management theory' formulated fourteen principles of management. **Max Weber** is known for his theory of bureaucracy. **Vilfredo Pareto** is considered 'the father of the social systems approach'. **Elton Mayo** became famous through the studies of the impact of the social attitudes and relationship of work groups on performance. **Chester Barnard** suggested a comprehensive social systems approach to managing.

There are many theories about management and each contributes something to our knowledge of what managers do.

Management is the Effective utilisation of Human and Material Resources to achieve the Enterprise Objectives:

A manager's job is to achieve the objectives of his enterprise. In order to achieve these objectives, he guides and directs the efforts of group of persons in the organisation. He defines the objectives of his group keeping in view the overall objectives of the enterprise. Each member of his group is assigned a specific task or duty so that the objectives of the group as a whole may be achieved which is, in turn, necessary for achieving the objectives of the enterprise.

Management Both Science and Art:

To be a successful manager, a person requires the knowledge of management principles and also the skills of how the knowledge can be utilised. Absence of either will result in inefficiency. A comparison between science and art is presented below which suggests that a manager requires both aspects of management to be successful.

Comparison between science and art as used in Management

Science	Art
Advances by knowledge	Advances by practice
Proves	Feels
Predicts	Guesses
Defines	Describes
Measures	Opines
Impresses	Expresses

It can be seen that management uses both scientific knowledge and art in managing an organisation. As the science of management increases so should the art of management. A balance between the two is needed. Neither should be overweighed or slighted.

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Social Responsibility of Managers:

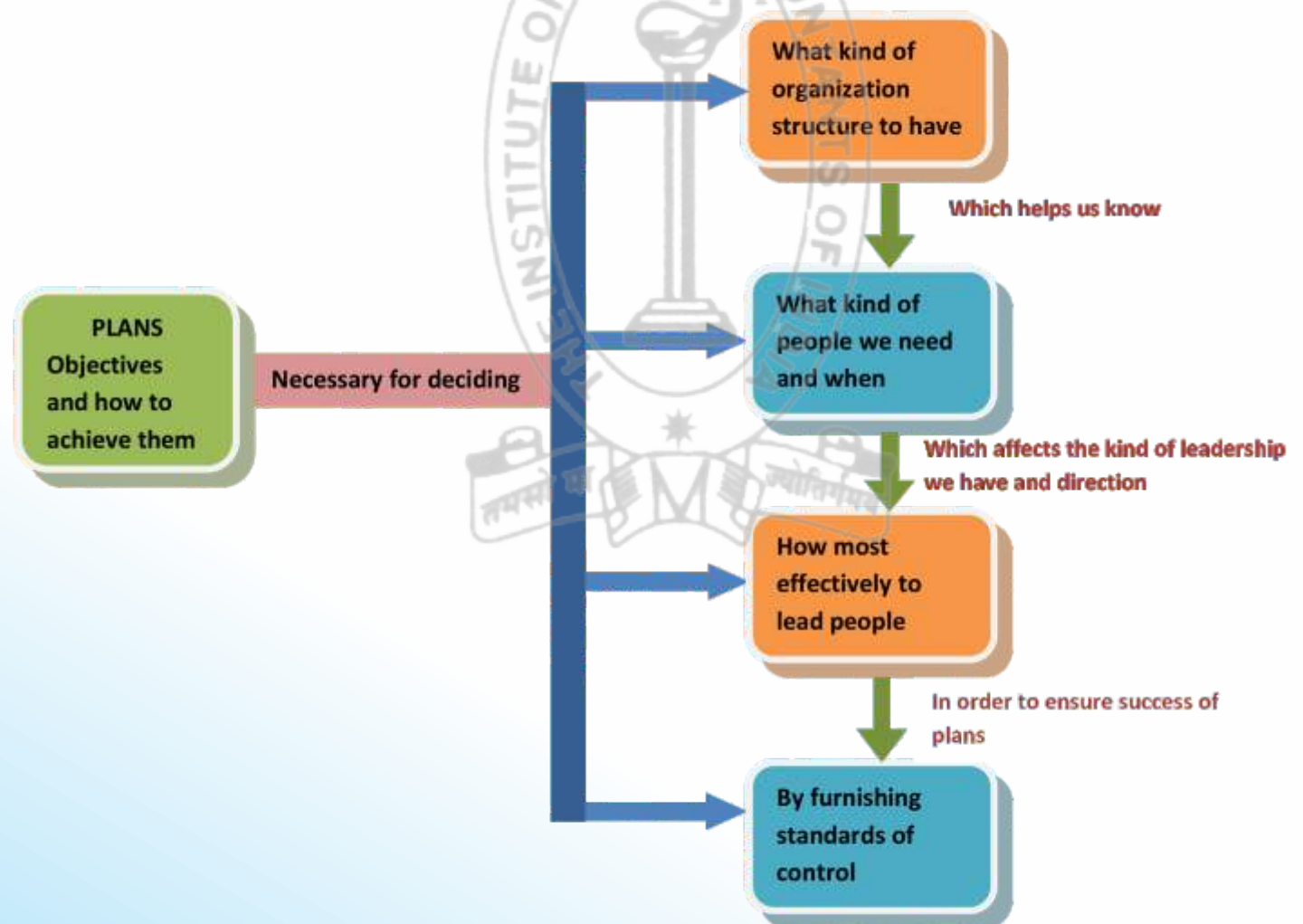
From conceptual point of view, Social Responsibilities refer to the businessman's decisions and actions taken to reasons at least partially beyond the firm's direct economic or technical interest.

Social responsibility of managers particularly in business organizations has, of late, been one of the most talked about and widely supported subjects.

The Primacy of Planning

As you can see in the picture below, since managerial operations in organising, staffing, leading and controlling are designed to support the accomplishment of enterprise objectives, planning logically precedes the execution of all other managerial functions. Although in practice all the functions mesh as a system of action, planning is unique in that it involves establishing the objectives necessary for all group efforts. Besides, a manager must plan in order to know what kinds of organisation relationships and personal qualifications are needed, along which course subordinates are to be led and what kind of control is to be applied. All the other managerial functions must be planned if they are to be effective.

Planning is the Foundation of Management:



Planning is a function of all managers, although the character and breadth of planning will vary with each manager's authority and with the nature of the policies and plans outlined by the superiors.

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Paper : 2

Fundamentals of Accounting (FOA)

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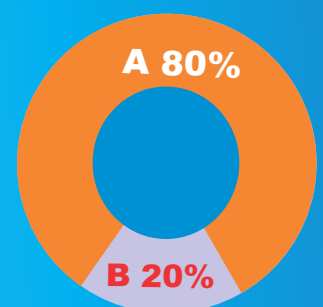
drnibirgoswami@gmail.com

Your Preparation Quick Takes

Syllabus Structure

A Fundamentals of Financial Accounting **80%**

B Fundamental of Accounting **20%**



Behind every successful business decision, there is always a CMA

Learning Objectives:

In order to internalize the concepts of subjects like accountancy one has to have an understanding of the learning objectives of the chapters. Try to go through the Statement of Objects and Reasons issued for every topics as it would give you a background to your study.

1. INTRODUCTION

Reconciliation is a process of analyzing causes of difference between two balances at a particular date. For example at any date the bank balance as per cash book and the bank balance as per pass book may vary for various reasons. So a bank reconciliation statement supports the accounting system and logically establishes the causes of such differences. Though it is not a part and parcel of the main books of account still without bank reconciliation statement the preparation of final account is incomplete. Auditor will raise question while checking the cash book about the discrepancy between the balances as per cash book and bank statement. In that case a bank reconciliation statement establishes the justification of such differences to satisfy an auditor.

2. POSSIBLE CAUSES OF DIFFERENCE

- Cheques issued but not yet presented.
- Cheques deposited but not yet credited.
- Interest credited but not yet entered in the cash book.
- Bank charges debited but not yet entered in the cash book.
- Amount debited as per standing instruction by bank not entered in cash book.
- Cheques deposited but later dishonored by bank.
- Dividend directly credited by bank.

Nowadays the banking system is getting more and more digitized and importance of online transactions are increasing day by day which results less occurrences of such differences. However, this does not reduce the importance of preparing bank reconciliation statement. For example NEFT made by debtor to repay his debt directly to the bank account but the message update of such transaction in the mobile phone is lost in transmission. Thus modern form of digital transaction may have problems to solve to reconcile.

3. PROCESS OF REONCILIATION

Step 1. Start with any bank balance or as provided in the problem.(bank balance as per cash book or pass book)

Step 2. Read the adjustment carefully and think where it affects first.

e.g. bank charges debited affects pass book first. Cheques issued affects cash book first.

Step 3. Keep in mind whatever adjustment (add/less) will be made

with such balance

Step 4. Make a table as follows and put a mark on the balance with which you started:

Cash book (v)	Pass book

Step 5. Put + or – sign in the appropriate table depending on the transaction.

e.g. bank charges debited Rs. 200 :

Cash book (v)	Pass book
	-200

Step 6. To make both side equal put the required sign on the column with ✓ mark.

e.g. in the above example you have to put – 200 in the cash book column to make both side equal.

Cash book (v)	Pass book
-200	-200

So, your final decision is to deduct Rs.200 from the balance as per cash book.

1. ILLUSTRATION

From the under mentioned items of a trader prepare a bank reconciliation statement as on July 31 2017

- Out of total amount of Rs.22170 in cash and cheques deposited into bank in the month of July a cheque for Rs.4500 appears to have been entered in the pass book on 3rd August
- The trader withdrew on 30th July a sum Rs.2100 from his bank for his personal use but has not been entered in the cash book
- On 29th July three cheques were paid out one to Taher for Rs.1500, one to Ravi for Rs.2400 and one to Sraboni for Rs.1800 but they appeared to have encashed their cheques on 31st July, 2nd august and 10th august

respectively.

4. During the month of July a customer has directly deposited in the name of the trader Rs.750 into his bank account but there is record of the same in the cash book.
5. The banker on 31st July debited the pass book with Rs.45 as bank charges but no entry for this was made in the cash book.
6. Bank balance as on 31st July 2017 was as per cash book Rs.46050.

Bank Reconciliation Statement as on 31st July 2017

Particulars	Rs	Rs
Bank balance as per cash book		46050
Less : cheque deposited but not credited	(4500)	
Less : cash withdrawn not entered in the cash book	(2100)	
Add : cheques issued presented after 31 st July	4200	
Add : direct deposit by customer into bank	750	
Less : bank charges debited	(45)	(1695)
Bank balance as per pass book		44355

ANALYSIS OF THE ADJUSTMENTS

1.

Cash book (v)	Pass book
+4500	
+4500	

2.

Cash book (v)	Pass book
-2100	-2100

3.

Cash book (v)	Pass book
- 4200	
+ 4200	

4.

Cash book (v)	Pass book
+ 750	+ 750

5.

Cash book (v)	Pass book
- 45	- 45

At the beginning this kind of workings will be very helpful. However after solving ten to twelve problems these kind of workings normally does not require as you get expert day by day. So keep practicing from the past year question papers and refer the books as listed below for more illustrations.

Paper : 3

Fundamentals of Laws and Ethics (FLE)

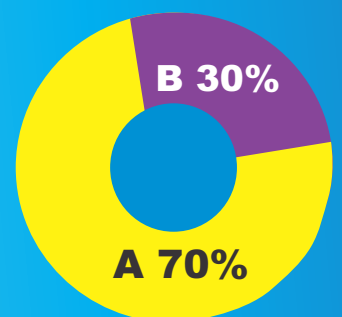
CMA (Dr.) Sumita Chakraborty
Jt. Director, Studies
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Your Preparation Quick Takes

Syllabus Structure

A Fundamentals of Commercial Laws 70%

B Fundamentals of Ethics 30%



Behind every successful business decision, there is always a CMA

Learning Objectives:

- Read the Study Material minutely.
- For details or if you don't understand Study Material or the section is important to identify the topic, then refer to Bare Act, otherwise reference to Bare Act is not necessary. For Company Law, book by Avtar Singh is recommended. For other laws Institute Study Material is sufficient.
- The words used in any of the texts as mentioned above should be understood by immediate reference to the Dictionary.
- The main points coming out in any of the provisions should be either underlined or written in separate copy which has to be repeated again and again.
- Theoretical knowledge should be adequate and clear before solving practical problems.
- Don't write wrong English. It changes the meaning and therefore answer may be wrong even when the student's conception is clear. Also don't make spelling mistakes.

Sale of Goods Act, 1930:

The Sale of Goods Act, came into force on 1st July, 1930. This Act extends to the whole of India except the State of Jammu and Kashmir. Here, we have discussed some important areas covered under the Act.

Essential Elements of Contract of Sale:

Following are the essential elements of a valid contract of sale. They are:

1. Two parties-Seller and Buyer
2. Subject matter-Goods (Movable property)
3. Transfer of Property- Transfer of ownership rights i.e. absolute ownership (General Property)
4. Delivery-Immediate, Delivery in installments, Delivery at a future date.
5. Price-It means money consideration for sale of goods.
6. A contract of sale may be absolute or conditional.
7. Essential elements of a valid contract.

Definition of Contract of Sale :

"A contract of sale of goods is a contract where by the seller transfers or agrees to transfer the property in the goods to the buyer for a price"-[Sec. 4(1)] of The Sale of Goods Act, 1930. Contract of Sale is a generic term which includes both sale as well as an agreement to sell.

"Where under a contract of sale the property in the goods is transferred from the seller to the buyer, the contract is called a sale"-[Sec. 4(3)] of The Sale of Goods Act, 1930.

Where the property in the goods (legal ownership of goods) is to be transferred to the buyer at some future date or on the fulfillment of a certain conditions, the contract of sale is called an agreement to sell"-[Sec. 4(3)] of The Sale of Goods Act, 1930.

Agreement to sell is called as Conditional Sale:

"Where an agreement to sell provides that the ownership of the goods shall be transferred at some future date, it becomes sale when that date arrives. If the ownership is to be transferred on the fulfillment of some conditions the agreement to sell becomes a sale when those conditions are fulfilled"-[Sec. 4(3)] of The Sale of Goods Act, 1930.

An agreement to sell becomes a sale, when the time lapses or the conditions are fulfilled subject to which the property in the goods is to be transferred.

Definition of Goods:

According to Section 2(7), "Goods means every kind of moveable property other than actionable claims and money; and includes stock and shares; growing crops, grass, trees and things attached to or forming part of the land which are agreed to be severed it before sale or under contract of sale".

Doctrine of Caveat Emptor

The term Caveat Emptor is a Latin word which means 'let buyer be aware'. This principle underlines the concept that it is for the buyer to satisfy himself that the goods which he is purchasing are of the quality required by him. It is a fundamental principle of law of sale of goods and implies that the seller is under no obligation to point out the defects in his own goods. The buyer must take care while purchasing the goods and if he makes a wrong selection he cannot blame the seller if the goods turn out to be defective or do not serve his purpose. This principle was applied in the case of Ward v Hobbs. However the doctrine of

Caveat Emptor does not mean that the buyer must take a chance, it only means he must take care. However this rule is not without any exception. With the passage of time this doctrine has been considered to be too unreasonable to the buyers. Hence the law in section 16 recognized certain exception to the rule.

The doctrine is however subject to following exceptions as provided in section 16 of the Act.

- (i) Where the buyer expressly or by implication makes known to the seller the particular purpose for which the goods are required and relied upon the skill and judgment of the seller and the goods are of description which it is the course of the sellers business to supply, there is an implied condition that the goods shall be reasonably fit for such purpose. Accordingly the seller cannot get any immunity on the grab of Caveat Emptor.
- (ii) Implied condition as to Merchantability where the goods are bought by description from the seller in goods of that description.
- (iii) Condition as to Wholesomeness in case of foodstuffs and other goods meant for human consumption.
- (iv) When the seller commits fraud.
- (v) When there is a usage of trade.



Paper : 4

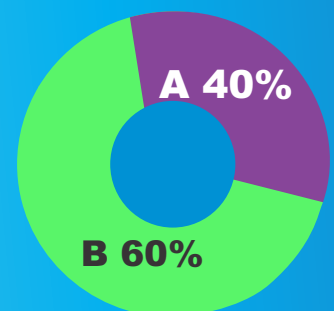
Fundamentals of Business Mathematics and Statistics (FBMS)

Dr. Lakshmi Kanta Roy
Guest Lecturer
Vidyasagar Mahavidyalaya

Your Preparation Quick Takes

Syllabus Structure

- A Fundamentals of Business Mathematics 40%
- B Fundamentals of Business Statistic 60%



Behind every successful business decision, there is always a CMA

Learning Objectives:

- appreciate the usefulness, power and beauty of mathematics
- enjoy mathematics and develop patience and persistence when solving problems
- understand and be able to use the language, symbols and notation of mathematics
- develop mathematical curiosity and use inductive and deductive reasoning when solving problems
- become confident in using mathematics to analyse and solve problems both in professional and in real-life situations

1.1 INTRODUCTION

It is supposed that a Borrower borrowed ₹ 100 from a Lender for one year under certain condition. After the end of one year the Borrower had to pay ₹ 120 to the Lender. It is found that the Borrower paid ₹ 20 extra in addition to ₹ 100. Now it is clear that the extra payment is due to the condition under which he borrowed the money. This extra amount is the interest on the money borrowed. Hence it can be concluded that ₹ 20 is the interest on ₹ 100, the amount of money borrowed called Principal for a period of one year. This interest is known as simple interest denoted by r and abbreviated as S.I. There is also another type of interest known as compound interest abbreviated as C.I. Here after the end of first year, the total amount which is the sum of the Principal and the interest becomes ₹ 120. This Amount is treated as the principal for the second year. Now after the end of

second year the interest on ₹ 120 is ₹ $(\frac{20}{100} \times 120)$ i.e, ₹ 24.

Therefore when second year ends, the Amount becomes (₹ 120 + ₹ 24) i.e, ₹ 144 which is again treated as the Principal for the Third year and soon.

So what we observe that the interest after the end of second year amounts to ₹ (144 – 100) i.e, ₹ 44. This amount of interest is known as Compound Interest.

Now we have arrived at the stage to define what is Simple interest and what is Compound interest.

1.2 DEFINITION:

Simple interest: When the interest is collected from the principal only for the time upto which the money borrowed is being used.

Compound Interest: If the interest due after a prefixed period is added to the Principal and again if the interest is calculated on the Amount this obtained for the next period, then the interest so obtained is called compound interest. This process is known as Compounding. The period after which the interest becomes due is termed as interest Period. The interest Period may be yearly, half-yearly quarterly monthly, weekly etc. In general the interest is payable yearly.

1.3 FORMULA FOR SIMPLE INTEREST:

Let P is the Principal

r is the rate of interest per cent per annum

i is the interest on unit sum for one year $\frac{r}{100}$

A is the Amount

N is the number of years.

Given that the interest on ₹ 100 for one year = r

$$\therefore \text{the interest on ₹ 1 for one year} = \frac{r}{100}$$

$$\therefore \text{the interest on ₹ } p \text{ for one year} = \frac{r}{100} \times p$$

$$\therefore \text{the interest on ₹ } p \text{ for } n \text{ years} = \frac{r}{100} \times p \times n = pin \left[\because i = \frac{r}{100} \right]$$

Hence the Amount after n years

= Principal + Interest

= $P + Pin$

$$= P (1 + in)$$

EXAMPLE: Find the simple interest on ₹ 1800 for 6 years at 14 % per annum.

SOLUTION: Given that $P = 1800$, $r = 14\%$

$$\text{Hence } i = \frac{r}{100} = \frac{14}{100}$$

$$N = 6$$

∴ The amount of simple interest

$$= Pin = 1800 \times \frac{14}{100} \times 6$$

$$= 18 \times 14 \times 6$$

$$= ₹ 1512$$

1.4 FORMULA FOR COMPOUND INTEREST :

Given that the original Principal = P

∴ Principal for the First year = P

∴ interest for the First year at r % p.a. = $P \times \frac{r}{100} = Pi$ [∵ $\frac{r}{100} = i$]

∴ Principal for the second year = Amount at the end of First year = Principal + Interest = $P + Pi = P(1+i)$

Interest for the second Year = $P(1+i) \times i$

Principal for the Third year = Amount at the end of second year = Principal + Interest

$$= P(1+i) + P(1+i)i$$

$$= P(1+i)(1+i)$$

$$= P(1+i)^2$$

$$\text{Interest for the third year} = P(1+i)^2 \times i$$

Principal for the Fourth year

$$= \text{Amount at the end of Third year}$$

$$= \text{Principal} + \text{Interest}$$

$$= P(1+i)^2 + P(1+i)^2 \times i$$

$$= P(1+i)^2(1+i)$$

$$= P(1+i)^3$$

Here the Amount after the end of three years = $P(1+i)^n$

Hence the Amount after the end of n years = $P(1+i)^n$

∴ Compound Interest after the end of n years = $A - P = P(1+i)^n - P = P[(1+i)^n - 1]$

EXAMPLE: Find the compound Interest on ₹ 12000 for 2 years at 5% p.a.

SOLUTION: Given that $P = 12000$

$$r = 5\%$$

$$\therefore i = \frac{5}{100} = 0.05 \text{ and } n = 2$$

$$\therefore \text{By the formula } A = P(1+i)^n \text{ we have } A = 12000(1+0.05)^2 = 12000(1.05)^2$$

$$= 12000 \times \frac{105}{100} \times \frac{105}{100} \text{ [without using log. Table]}$$

$$= 126 \times 105$$

$$= 13230$$

$$\therefore \text{The required Compound Interest} = A - P$$

$$= 13230 - 12000$$

$$= ₹ 1230$$

NOTE: (1) In general, Interest is payable yearly. But it is also payable half-yearly, quarterly, monthly even daily.

(a) If interest is payable half yearly then $A = P \left(1 + \frac{i}{2}\right)^{2n}$

(b) If interest is payable monthly then $A = P \left(1 + \frac{i}{4}\right)^{4n}$

(c) If interest is payable monthly then $A = P \left(1 + \frac{i}{12}\right)^{12n}$

(d) If interest is payable daily, then $A = P \left(1 + \frac{i}{365}\right)^{365n}$

(e) To generalize, if interest is payable in $\frac{1}{m}$ years, then $A = P \left(1 + \frac{i}{m}\right)^{mn}$

(2) In case of uniform increase in Compound Interest at a fixed rate, the formula $A = P (1 + i)^n$ is used, but in case of uniform decrease in the same at a fixed rate, the formula $A = P (1 - i)^n$ is to be used. This formula is also applicable for Depreciation related problems.

(3) In the formula $A = P (1 + i)^n$, it appears that the sum of rupees P has been converted to the sum of rupee A at the end of n years. Here P is called the Present value of the sum A and in this case P

$$\frac{A}{(1 + i)^n} = A(1 + i)^{-n}$$

(4) Let interest is payable half-yearly at the rate of 8% p.a. c.i. on ₹ 100 for one year. Then the interest on ₹ 100 after one year is 8.16. the interest 8.16 % is called. Effective Rate and the interest 8% is called Nominal Rate.

1.5 COMPARISON BETWEEN SIMPLE INTEREST AND COMPOUND INTEREST:

Simple Interest (S.I.)	Compound Interest (C.I.)
1. Principal remains unchanged	1. Principal increases gradually
2. Amount of interest decreases gradually during Loan Period	2. Amount of interest increases gradually during Loan-Period
3. Formula for Simple Interest = Pin	3. Formula for Compound Interest = $P \left[(1 + i)^n - 1 \right]$
4. Simple interest is less compared to Compound Interest	4. Compound Interest is greater Compared to simple Interest.

1.6 SUMMARISATION:

If P is the Principal, r is the interest on ₹ 100 for one year, I is the interest on unit sum for one year A is the Amount and n is the number of years

Then, Simple interest = Pin

Amount = Principal + Interest = P + Pin = P (i+in)

Amount in case of Compound Interest = $p(1 + in)^n$

Compound Interest = $A - P = P \left[(1 + i)^n - 1 \right]$

If Compound Interest is payable half-yearly, then $A = P \left(1 + \frac{i}{2}\right)^{2n}$

If C.I. is payable quarterly then $A = P\left(1 + \frac{i}{4}\right)^{4n}$

If C.I. is payable monthly then $A = P\left(1 + \frac{i}{12}\right)^{12n}$

If C.I. is payable daily then $A = P\left(1 + \frac{i}{365}\right)^{365n}$

If C.I. is payable in $\frac{1}{m}$ years, then $A = P\left(1 + \frac{i}{m}\right)^{mn}$

In case of depreciation, $A = p(1-i)^n$

1.7 ILLUSTRATIVE EXAMPLES:

1. In what time a sum of money double itself at 5% p.a. Compound Interest ? [Given $\log 2 = 0.3010$ and $\log 1.05 = 2.0212$]

SOLUTION: Let P is the Principal, n is the number of years, A is the Amount

\therefore According to the problem $A = 2P$

From the formula $A = P(1+i)^n$, We have

$$2P = P(1+i)^n = P\left(1 + \frac{5}{100}\right)^n = P(1+0.05)^n$$

$$\rightarrow 2 = (1+0.05)^n = (1.05)^n$$

$$\therefore \log 2 = \log(1.05)^n = n \log 1.05$$

$$\rightarrow 0.3010 = n \times 0.0212$$

$$\Rightarrow n = \frac{0.3010}{0.0212} = \frac{3010}{212} = 14.2(\text{Approx})$$

\therefore The required time = 14.2 years

2. The population in a town increases every year by 2% of the population of the town at the beginning of the year. In how many years will the total increase of population be 40 % [Given $\log 14 = 1.1461$, $\log 102 = 2.0086$]

SOLUTION:

Let the population of the town at the beginning of the year = 100, Rate of increase of population = 2 %.

If total increase of population be 40 % in n years, then by formula $A = P(1+i)^n$ we have

$$100 + 40 = 100\left(1 + \frac{2}{100}\right)^n \quad [\because P = 100, A = 100 + 40 = 140]$$

$$\Rightarrow 140 = 100(1 + 0.02)^n = 100(1.02)^n$$

$$\therefore \log 140 = \log 100 + n \log 1.02$$

$$\rightarrow 2.1461 = 2 + n \times 0.0086$$

$$\Rightarrow 0.1461 = 0.0086n$$

$$\rightarrow n = \frac{0.1461}{0.0086} = 17(\text{Approx})$$

\therefore The required number of years = 17

3. The difference between simple Interest and Compound Interest on a certain sum for 2 years at 5 % p.a. is ₹ 2.50. Find the sum

SOLUTION : Given that $r = 5\%$. $\therefore i = \frac{5}{100} = \frac{1}{20}$

$n = 2$ years

Let P is the principal.

\therefore Simple Interest on P for 2 years = $P \cdot i \cdot n = P \cdot \frac{1}{20} \cdot 2 = ₹ \frac{P}{10}$

Again, the Amount of the Principal P at 5 % compound Interest for 2 years = $P(1+i)^n$

$$= P \left(1 + \frac{1}{20}\right)^2 = P \left(\frac{21}{20}\right)^2 = \text{Rs. } \frac{441}{400} P$$

\therefore C.I. on the Principal $P = \text{Rs. } \left(\frac{441P}{400} - P\right) = \text{Rs. } \frac{41P}{400}$

Hence the difference between the C.I. and S.I. on P

For 2 years = $\text{Rs. } \left(\frac{41P}{400} - \frac{P}{10}\right) = \text{Rs. } \frac{P}{400}$

\therefore When the difference between C.I. and S.I. is $\text{Rs. } \frac{P}{400}$

The principal is $\text{Rs. } P$

\therefore When the difference between C.I. and S.I. is $\text{Rs. } 1$

$$\text{The Principal is Rs. } \frac{P}{400} = \text{Rs. } 400$$

\therefore when the difference between C.I. and S.I. is $\text{Rs. } 2\frac{1}{2}$

The Principal is $\text{Rs. } \left(400 \times \frac{5}{2}\right) = \text{Rs. } 1000$

Hence the required sum is $\text{Rs. } 1000$

4. In what time will a sum of money double itself at 10 % compound Interest payable half yearly ?
[Given $\log 2 = 0.3010$, $\log 1.05 = 0.0212$]

SOLUTION : Let the Principal is $₹ P$ and n years is the time required by P to double itself.

Given that $r = 10\%$. Then $i = \frac{r}{100} = \frac{10}{100}$

Since the Interest is payable half yearly, the principal

P amounts to $P \left(1 + \frac{i}{2}\right)^{2n}$ i.e., $P \left(1 + \frac{10}{100 \times 2}\right)^{2n}$

$$\text{i.e., } P \left(\frac{21}{20}\right)^{2n}$$

\therefore According to the problem, $P \left(\frac{21}{20}\right)^{2n} = 2P$

$$\Rightarrow (1.05)^{2n} = 2$$

$$\therefore 2n \log 1.05 = \log 2$$

$$\Rightarrow 2n \times 0.0212 = 0.3010$$

$$\Rightarrow n = \frac{0.3010}{2 \times 0.0212} = \frac{0.3010}{0.0424} = 7.1 (\text{Approx})$$

\therefore The required time is 7.1 year (Approx)

5. On what sum the difference between simple interest and Compound Interest for 3 years at the rate of 20 % is ₹ 1600 ?

SOLUTION: Let the sum of money is P,

Here i is the interest on unit sum for 1 year

$$= ₹ \frac{20}{100} = ₹ \frac{1}{5}$$

and n = 3 years

$$\therefore \text{Simple Interest} = Pin = P \cdot \frac{1}{5} \cdot 3 = ₹ \frac{3P}{5}$$

Amount at the rate of Compound Interest = $P(1+i)^n$

$$= P \left(1 + \frac{1}{5}\right)^3 = P \left(\frac{6}{5}\right)^3 = P \times \frac{6}{5} \times \frac{6}{5} \times \frac{6}{5} = \text{Rs. } \frac{216P}{125}$$

$$\therefore \text{Compound Interest} = A - P = \frac{216P}{125} - P = \frac{(216 - 125)P}{125} = \text{Rs. } \frac{91P}{125}$$

Hence the difference between Compound Interest and Simple Interest

$$= \frac{91P}{125} - \frac{3P}{5} = \frac{91P - 75P}{125} = \text{Rs. } \frac{16P}{125}$$

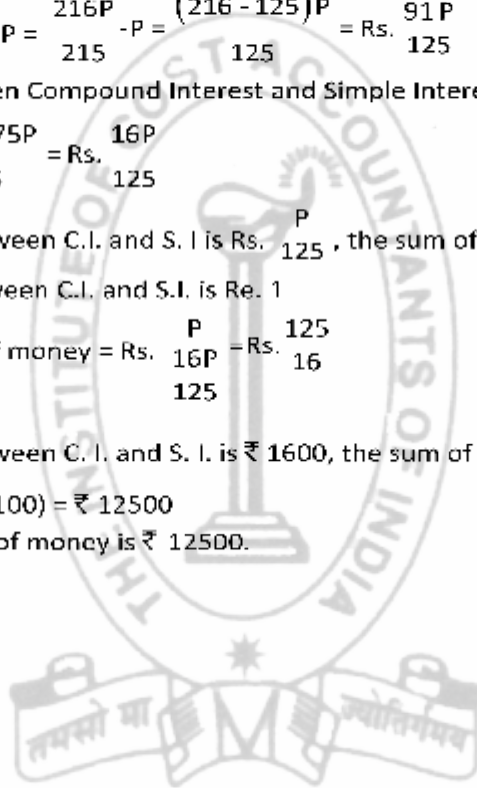
\therefore When the difference between C.I. and S.I. is Rs. $\frac{P}{125}$, the sum of money is Rs. P

\therefore When the difference between C.I. and S.I. is Re. 1

$$\text{The sum of money} = \text{Rs. } \frac{P}{\frac{16P}{125}} = \text{Rs. } \frac{125}{16}$$

\therefore When the difference between C.I. and S.I. is ₹ 1600, the sum of money = ₹ $\left(\frac{125}{16} \times 1600\right)$
 = ₹ (125 × 100) = ₹ 12500

Therefore the required sum of money is ₹ 12500.

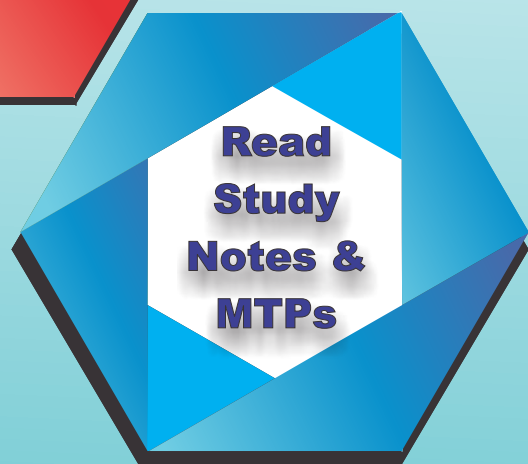
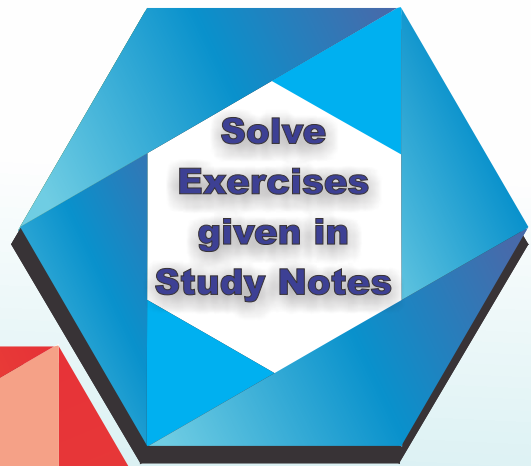
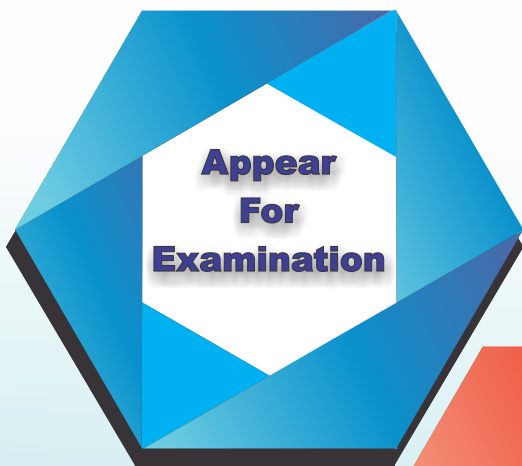




PRACTICAL ADVICE

ABOUT YOUR STUDIES - FOUNDATION COURSE

Practical support, information and advice to help you
get the most out of your studies.



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Submission

Dear Students,

We are very much delighted to receive responses from all of you; for whom our effort is! We have noted your queries and your requests will definitely be carried out. Further, requesting you to go through the current edition of the bulletin. All the areas will be covered gradually. Expecting your responses further to serve you better as we believe that there is no end of excellence! One of the mails received is acknowledged below.

I am CMA Vijay Pal Singh and I am a regular reader of e-bulletin which is being published every month and uploaded in our Institutes website for students. During my studies I always studied and referred Students Newsletter that helped me a lot to update my self and keep on doing value addition.

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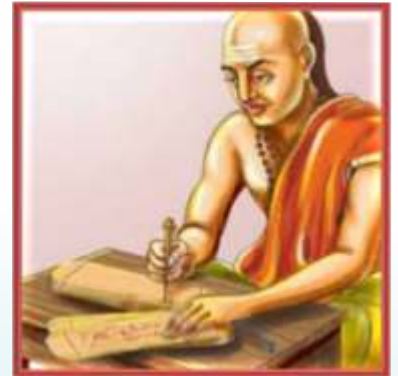
SWOT Matrix

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Acharya Chanakya

Over two thousand three hundred years ago, one fiery afternoon, a bare footed fuming scholar was taking long strides in a jungle road. Suddenly he was struck by a piercing thorn in his foot. The scholar dug out the thorn along with its bush, burnt it to ashes, mixed the ashes in water, and drank the water. A bewildered youngster who witnessed the entire episode greeted the scholar and sought enlightenment about the actions of the scholar. Pleased by the inquisitive youngster, the scholar explained that his actions are demonstrative as to how one should eliminate the evil powers from the surface of the mother earth.

The scholar was Acharya Chanakya and the youngster was Chandragupta Maurya. It was a chance meeting which laid foundations to the medieval Indian history. The moment they met, Chanakya was impressed by the young boy's personality and intelligence. He was able to sense the great military and executive abilities in Chandragupta and immediately took on the mentorship. And, Chandragupta became a willing disciple. Eventually Chanakya articulated Chandragupta's rise as the first Maurya emperor.



Chanakya was not just a teacher to Chandragupta; but also a friend, well-wisher and advisor. Chandragupta was not just a student to Chanakya; but also a perpetuator of gurus's dreams and wishes. Chanakya inspired Chandragupta to extend Mauryaempire from Bengal in the east to Afghanistan in the west, to the Himalayas and Kashmir in the north, and to the Deccan Plateau in the south. It was the largest empire yet seen in Indian history. Chanakya may, thus, be regarded as one of the earliest visionaries who envisaged the united India spanning the entire subcontinent.

Chanakya's Arthashastra discusses monetary and fiscal policies, welfare, international relations, and war strategies in detail. The text also outlines the duties of a ruler. As such, Chanakya is considered as the pioneer of the field of economics and political science in India, and his work is thought of as an important precursor to Classical Economics and to Modern Costnomics.

All said Chanakya is a mixture of Innovative Academics, Shrewd Politics and Welfare Economics – a Role Model Guru that every searching student would love to seek!

02.00 Role Model

The first thing that any aspiring professional can do to is to think of a Role Model. A role model is perceived as the person whose behaviour, example, or success can be emulated by others., especially by younger people. A role model stands for a clear set of values and is a perpetual inspirer.

A role model stands for a clear set of values and is a perpetual inspirer.

The term "role model" is credited to sociologist Robert K. Merton, who coined the phrase during his career. Merton hypothesized that individuals compare themselves with reference groups of people who occupy the social role to which

the individual aspires. An example being the way young fans will idolize and imitate professional athletes or entertainment artists.

A person's chosen role models may have a considerable impact on his or her career opportunities and choices. The suitability of a role model depends, in part, on the admirer's perceived commonality with the model, who should provide an image of an ambitious yet realistic goal. For example, Benjamin Franklin served as the role model for countless nineteenth-century white businessmen, including several notables.

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Parent role models also significantly influence a person's "education and training aspirations, task self-efficacy, and expectancy for an entrepreneurial career". It is well said that: "Being a role model is about being true to one self".

Acharya Chanakya stands tall not only in being a role model to Chandragupta, but also to a fleet of leading personalities from several walks of life. So, start with the analysis of the values, attitudes, behaviours, and the success factors that your role model stands for; And draw inspiration.

03.00 SWOT Matrix

Second important thing that a career seeker should do is to draw an SWOT matrix of own personality. A SWOT matrix is a framework for analyzing individual's strengths and weaknesses as well as the opportunities and threats (challenges) that one faces. This helps an individual to focus on strengths, remedy weaknesses, take the greatest possible advantage of opportunities and counter the threats.

The SWOT matrix enables identification of gaps in an individual and helps preparation to be the best candidate for the position being aspired. Here are a few sample questions that can help formulation of the SWOT matrix for an individual.



03.01 Strengths

What advantages do you have that others don't have (for example, skills, certifications, education, or connections)?

What do you do better than anyone else?

What personal resources can you access?

What do other people (and your boss, in particular) see as your strengths?

Which of your achievements are you most proud of?

What values do you believe in that others fail to exhibit?

Are you part of a network that no one else is involved in? If so, what connections do you have with influential people?

03.02 Weaknesses

What tasks do you usually avoid because you don't feel confident doing them?

What will the people around you see as your weaknesses?

Are you completely confident in your education and skills training? If not, where are you the weakest?

What are your negative work habits (for example, are you often late, are you disorganized, do you have a short temper, or are you poor at handling stress)?

Do you have personality traits that hold you back in your field? For instance, if you have to conduct meetings on a regular basis, a fear of public speaking would be a major weakness.

03.03 Opportunities

What new technology can help you? Or can you get help from others or from people via the Internet?

Is your industry growing? If so, how can you take advantage of the current market?

Do you have a network of strategic contacts to help you, or offer good advice?

What trends (management or otherwise) do you see in your company, and how can you take advantage of them?

Are any of your competitors failing to do something important? If so, can you take advantage of their mistakes?

Is there a need in your company or industry that no one is filling?

Do your customers or vendors complain about something in your company? If so, could you create an opportunity by offering a solution?

Could you share some of your colleague's projects to gain experience?

Is there any new role or project that forces you to learn new skills, like public speaking or international relations.

Do you have specific skills (like a second language) that could help with the process of a company expansion or acquisition?

03.04 Threats (Challenges)

What obstacles do you currently face at work?

Are any of your colleagues competing with you for projects or roles?

Is your job (or the demand for the things you do) changing?

Does changing technology threaten your position?

Could any of your weaknesses lead to threats?

04.00 Quick Bite

'Chance Meeting' with Chanakya was the opportunity that Chandragupta could convert into his 'Core Strength'. So, step back and look at yourself from the perspective of compatible employability. Choose a role model and be inspired. Think in terms of work experience, education, training, skill development, talents and abilities, technical knowledge, and personal characteristics. Map yourself; identify the gaps; and Pour in the fillers to build the gaps; and do reap the benefits of any chances that you may come across.



Examination TIME TABLE



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Day & Date	Foundation Course Examination Syllabus-2012 Time 2.00 p.m. to 5.00 p.m.	Foundation Course Examination Syllabus-2016 Time 2.00 p.m. to 5.00 p.m.
10th Dec, 2017 Sunday	Fundamentals of Economics & Management (FEM)	Fundamentals of Economics & Management (FEM)
11th Dec, 2017 Monday	Fundamentals of Accounting (FOA)	Fundamentals of Accounting (FOA)
12th Dec, 2017 Tuesday	Fundamentals of Laws & Ethics (FLE)	Fundamentals of Law & Ethics (FLE)
13th Dec, 2017 Wednesday	Fundamentals of Business Mathematics & Statistics (FBMS)	Fundamentals of Business Mathematics & Statistics (FBMS)

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Message from the Directorate of Studies

Dear Students,

For the smooth and flawless preparation. Directorate of studies have provided meaningful tips which will help you to gain sufficient knowledge about each subject.

“Tips” are given in this E-bulletin by the knowledge experts for the smooth encouragement in you preparation. We are sure that all students will definitely be benefitted by those tips and that will help them to brush up their knowledge and also to swim across.

Take the course seriously from the very beginning but don't be panicky. Please try to follow the general guidelines, mentioned below; which may help you in your preparation.

Essentials for Preparation:

- ▶▶ Conceptual understanding & Overall understanding of the subject both should be clear.
- ▶▶ Candidates are advised to go through the study material provided by the Institute in an analytical manner.
- ▶▶ Students Should improve basic understanding of the subject with focus on core concepts.
- ▶▶ The Candidates are expected to give to the point answer, which is a basic pre-requisite for any professional examination.
- ▶▶ To strengthen the answers candidates are advised to give answer precisely and in a structured manner.
- ▶▶ In-depth knowledge about specific terms required.
- ▶▶ Write question numbers correctly and prominently.
- ▶▶ Proper time management is also important while answering.

Be Prepared and Get Success;

Disclaimer:

Although due care and diligence have been taken in preparation and uploading this E-bulletin, the Institute shall not be responsible for any loss or damage, resulting from any action taken on the basis of the contents of this E-bulletin.

Photo Gallery



CMA Sanjay Gupta, President along with other dignitaries during the Inaugural Session of ASSOCHAM Global Summit on Corporate Restructuring, Insolvency Resolution and Sustainability held on August 19th, 2017 at Mumbai.



CMA Sanjay Gupta, President and CMA H Padmanabhan, Vice-President of the Institute greeting Shri Tapan Ray, IAS, Secretary to the Government of India, Ministry of Corporate Affairs in the presence of CMA P Raju Iyer, Council Member.

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