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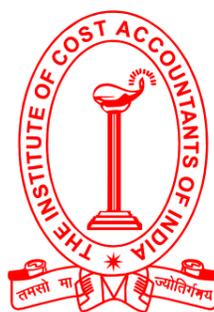
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CMA Student E - Bulletin

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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.



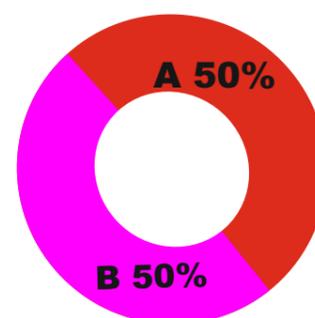
PAPER: 1, PART: I

FUNDAMENTALS

OF ECONOMICS & MANAGEMENT
(FEM) - ECONOMICS

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Your Preparation Quick Takes



Syllabus Structure

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

Learning Objectives:

- Studying economics, one will be able to develop the analytical skills needed to work successfully in the field, including the study of logical analysis.
- Students will be able to identify and explain economic concepts and theories related to the behaviour of economic agents, markets, industry and firm structures, legal institutions, social norms, and government policies.
- Students will be able to integrate theoretical knowledge with quantitative and qualitative evidence in order to explain past economic events and to formulate predictions on future ones.
- Students will be able to evaluate the consequences of economic activities and institutions for individual and social welfare.

Economics

Hi friends!! Subho Vijaya !! Hope you have had an excellent Durga puja celebration full of joy and happiness. But Corona virus has again struck with a vengeance. Lots of people are falling sick. So be very careful. Always use mask and sanitizer whenever you go out. Wash your hands frequently with soap and water. Try to avoid crowd. Take both the doses of vaccine in the first opportunity whenever your turn comes without any hesitation. The whole world is still reeling under Covid pandemic. We are lucky that we have survived the worst attack of Corona virus. Remember, health comes first, then comes education. You cannot pursue higher education with bad health. So be careful and stay safe.

Let us start our Mock Test.

I. Choose the correct answer:**1. Normally Indifference curve is**

- Concave to the origin
- Convex to the origin
- Parallel to the x-axis
- None of the above

2. Initial price P_1 =Rs.4, Initial demand Q_1 =25, final price P_2 =Rs.5, final demand Q_2 =20, find the price elasticity of demand.

- 0.5
- 0.6
- 0.7
- 0.8

3. From the question no. 2, find out the price elasticity of demand by the total outlay method

- 0.8
- 0.9
- 1.0
- 1.2

4. From question no,2, find out the Average (or Arc)price elasticity of demand

- 0.8
- 1.0
- 1.2
- 1.5

5. Suppose the total cost function is given by the equation $C=250Q +50$. Find out the total fixed cost

- 50
- 250
- 200
- 5

6. From question no.5, find out the average variable cost

- 5
- 50
- 200
- 250

7. From question no. 5, find out the shape of the average variable cost curve
- Rectangular hyperbola
 - Straight line passing through the origin
 - Straight line parallel to the x-axis
 - Straight line parallel to the y-axis
8. From question no.5, find out the shape of the average fixed cost curve
- Rectangular hyperbola
 - Straight line passing through the origin
 - Straight line parallel to the x-axis
 - Straight line parallel to the y-axis
9. The firm is indifferent between producing and shutting down when the firm under perfect competition is facing the following situation
- Price > Minimum AC
 - Price > Minimum AVC
 - Price = minimum AVC
 - Price < Minimum AVC
10. Name the model where the oligopolist can always lower the price until price is equal to cost of production
- Edgeworth model
 - Stackelberg model
 - Bertrand model
 - Cournot's model

KEY: 1. B, 2. D, 3. C, 4. B, 5. A, 6. D, 7. C, 8. A, 9. C, 10. C

II. Fill in the blanks:

- Money market is also called the Market
- IDA is affiliated to the Bank
- Normal profit is part of
- Supply curve for labour is
- Invisible hand is the other name of

KEY: 1. Credit, 2. World, 3. Total, cost, 4. Backward bending 5. Price system

III. True or False:

- Adam Smith is the father of Economics
- Short run means short period of time
- Product differentiation is the main characteristic of monopolistic competition
- HDFC Bank is a Govt. owned bank
- Under monopolistic competition in the long run, equilibrium will occur when $LAC=AR$

KEY: 1. True, 2. False, 3. True, 4. False, 5. True

IV. Matching:

1. Inflation	A. Exim bank
2. Fixed factor	B. Welfare definition
3. NBFIs	C. Gresham's law
4. Marshall	D. Cost push
5. Bad money	E. Short run

KEY: 1. D, 2. E, 3. A, 4. B, 5. C

So friends!! I hope you have enjoyed solving the problems in this mock test. The problems here have been designed to strengthen your mathematical concept of economics. You must have noticed that these problems are totally different from the earlier ones. It is really necessary to have a sound knowledge in these mathematical concepts. Only then you will be able to have a good grasp on the theory of economics. Best of luck!!!



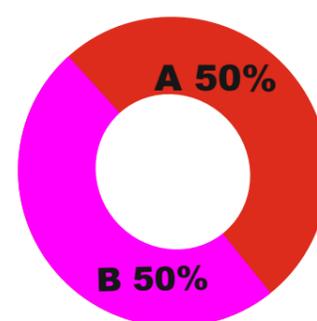
PAPER: 1, PART: II

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%

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

MANAGEMENT

1. To manage is to forecast and plan, to organize, to compound, to co-ordinate and to control. This definition was given by _____
- Peter F. Drucker.
 - Henry Fayol.
 - Louis Allan.
 - Terry.

ANSWER: B

2. Father of Administrative management _____
- Mary Parkett.
 - Lillian Gilbert.
 - Henry Fayol.
 - Elton Mayo.

ANSWER: C

3. Espirit de corps means _____
- Union is strength.
 - Service is our motto.
 - Buyer beware.
 - Product is our strength.

ANSWER: A

4. General and Industrial Management was written by _____
- Harold Koontz.
 - Terry.
 - Louis Allan.
 - Hendry Fayol.

ANSWER: D

5. The chain of command from the highest authority to the lowest level in the organization is _____
- Unity of direction.
 - Unity of command.
 - Centralization.
 - Scalar chain.

ANSWER: D

6. Study of the movements of both the workers and the machine to eliminate wasteful movement is _____
- Fatigue study.
 - Time study.
 - Motion study.
 - Work-study.

ANSWER: C

7. Planning lays down the overall objective, strategies and polices for the total enterprise is _____
- Corporate planning.
 - Divisions planning.
 - Unit planning.
 - Department planning.

ANSWER: A

8. The assumptions about future derived from forecasting and used in planning are known as _____
- A. Planning premises.
 - B. Freehold premises.
 - C. Business premises.
 - D. Corporate premises.

ANSWER: A

9. Strategic planning is _____
- A. Long term planning.
 - B. Medium term planning.
 - C. Short term planning.
 - D. Annual planning.

ANSWER: A

10. A chronological sequence of steps to be undertaken to enforce a policy and to attain an objective is known as _____
- A. Objective.
 - B. Strategies.
 - C. Procedures.
 - D. Rules.

ANSWER: C

11. CPM is:
- A. Critical Project Management
 - B. Critical Path Management
 - C. Critical Path Method
 - D. Crash Project Method

Answer: C

12. A rigid plan, no scope for discretion _____
- A. Rule.
 - B. Schedules.
 - C. Procedures.
 - D. Budgets.

ANSWER: A

13. _____ is the harmonizing or synchronizing of individual efforts with the purpose of achieving group goals.
- A. Coordination.
 - B. Control.
 - C. Ddecision making.
 - D. Delegation.

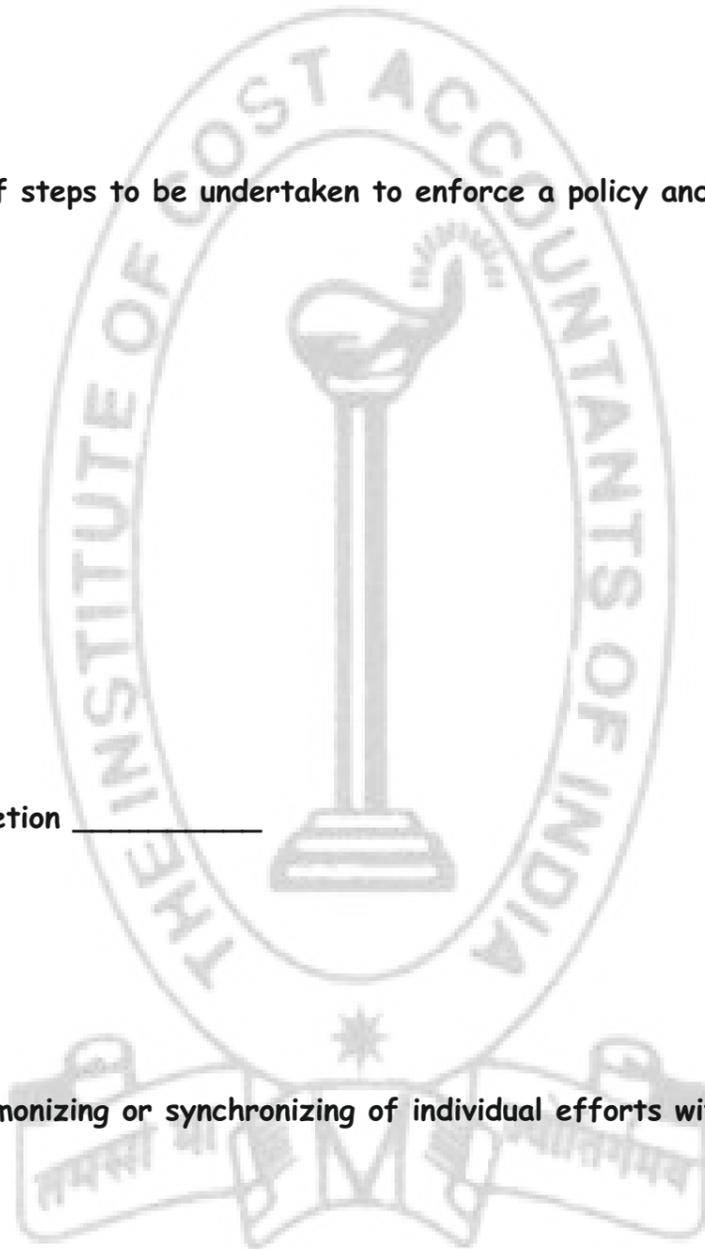
ANSWER: A

14. Set of clear instruction in a clear and logical sequence to perform a particular task _____
- A. Rules.
 - B. Programme.
 - C. Policy.
 - D. Methods.

ANSWER: B

15. Formal authority flows from upwards to downwards in _____
- A. Formal organization.
 - B. Informal organization.
 - C. Business or organisation.
 - D. Strategic organization.

ANSWER: A



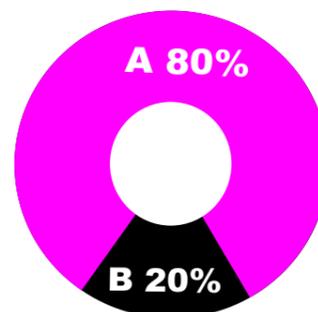


PAPER: 2

FUNDAMENTALS OF ACCOUNTING (FOA)

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Your Preparation Quick Takes



Syllabus Structure

A Fundamentals of Financial Accounting 80%

B Fundamental of Cost Accounting 20%

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.

FINANCIAL OF ACCOUNTING

"Desire is the starting point of all achievement, not a hope, not a wish, but a keen pulsating desire which transcends everything."
--Napoleon Hill

If you want something bad enough, you'll make it happen. However, if you don't want something that much, even the best of strategies won't serve you.

The right strategy will show itself when you are clear on what you want. So how do you know what you want? Most people are waiting for an epiphany. They're waiting for someone or something outside of them to rattle or shake them. Or they just want a quick fix. Hence the focus on strategy and not on vision and values.

If you're waiting for something to "wake you up" so you finally have the passion, motivation, or desire to put your whole soul into life, you'll be waiting a long time.

Rather than waiting, your only chance at fully living is to proactively do something yourself. When was the last time you did a workout where you honestly put everything into it? When was the last time you really tried, I mean REALLY tried, at anything? If you're like most people, you're probably putting half-thought and half-effort into most of what you're doing. Paul Arden, the famed designer and author, once said, "Too many people spend too much time trying to perfect something before they actually do it. Instead of waiting for perfection, run with what you got, and fix it along the way."

Not into tomorrow's workout, but today's workout.
Not into tomorrow's work, but today's work.
Not into tomorrow's people, but today's people.
Nothing feels better than trying your best. Nothing.
T: Today
I: Is
M: My
E: Everything

*"There is no tomorrow to remember if we don't do something today."
"No more tomorrows. Today is the day."*

*After a long waiting Government is permitting to open up : so let us again be socially close but safely close.
Do it now*

1. Retrospective Method and Prospective Method are generally used while:
 - a. Calculating provision for doubtful debt
 - b. Change in the method of depreciation
 - c. For preparation of Balance Sheet
 - d. For valuation of Goodwill
2. Sinking fund is created for :
 - a. Replacement of asset
 - b. Repayment of liability
 - c. Both a and b
 - d. None of the above
3. Secret reserve may be created if
 - a. Fixed assets are sold at a profit
 - b. Goodwill is written off
 - c. Patent is amortised
 - d. Closing stock is undervalued
4. While calculating consignment stock which of the following expense incurred by consignee will be taken?
 - a. Godown rent
 - b. Carriage to godown
 - c. Advertising expenses

d. Commission payable

5. Reserve is :

- a. Charge against profit
- b. Appropriation of profit
- c. An internal transaction
- d. All of the above

6. Provision for discount on debtors will be calculated after deducting thefrom debtors

- a. Discount allowed
- b. Bad debt only
- c. Both a and b
- d. Bad debt and provision for doubtful debt

7. Bad debt is a :

- a. Revenue loss
- b. Capital loss
- c. Revenue expense
- d. None of the above

8. Non refundable Life membership fees collected from new member of a club is :

- a. Revenue receipt
- b. Capital receipt
- c. To be credited to income and expenditure account
- d. None of the above

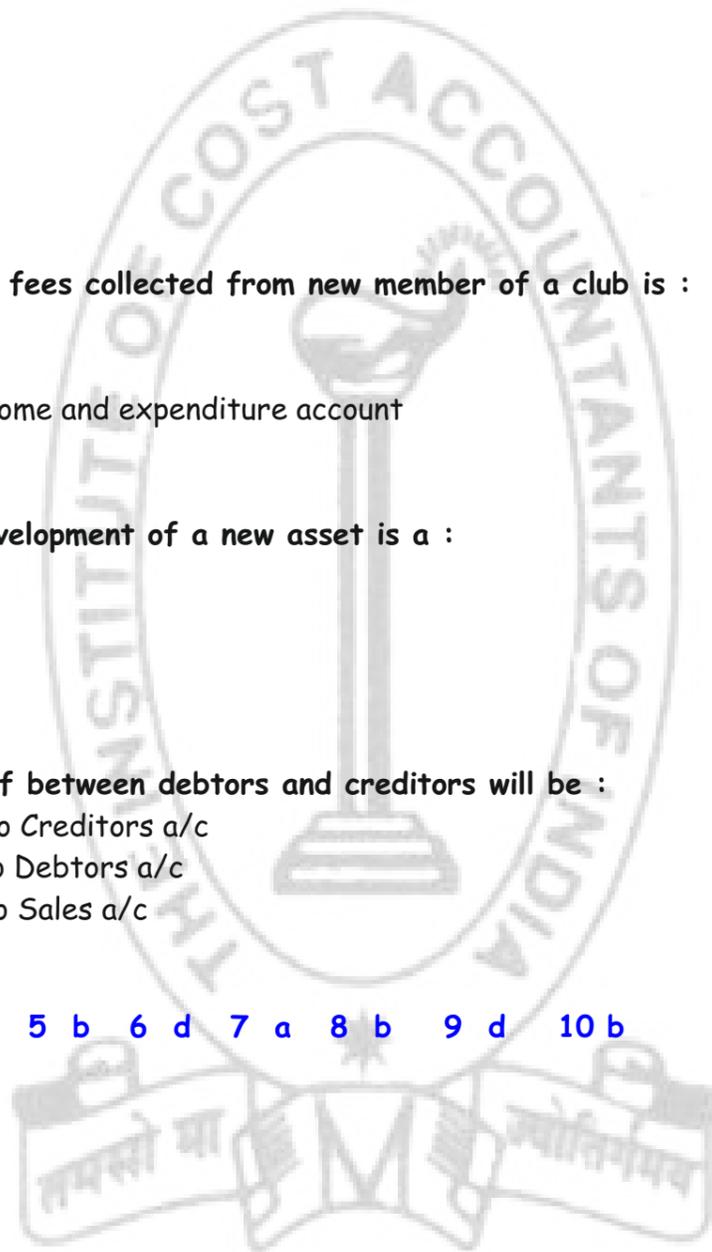
9. Dismantling cost incurred for development of a new asset is a :

- a. Revenue expenditure
- b. Revenue loss
- c. Capital loss
- d. Capital expenditure

10. Journal entry for mutual set off between debtors and creditors will be :

- a. Debtors a/c.... dr To Creditors a/c
- b. Creditors a/c...dr To Debtors a/c
- c. Purchase a/c.. dr To Sales a/c
- d. None of these

Answers : 1 b 2 c 3 d 4 b 5 b 6 d 7 a 8 b 9 d 10 b



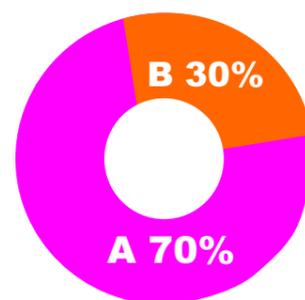


PAPER: 3

FUNDAMENTALS OF LAWS AND ETHICS (FLE)

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Your Preparation Quick Takes



Syllabus Structure

A Fundamentals of Commercial Laws 70%
B Fundamentals of Ethics 30%

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.

LAWS & ETHICS

Under the changed environment, where life is becoming unpredictable due to the COVID-19 pandemic, the future is uncertain but still life must go on. The examinations must be conducted while ensuring that the quality and standard of the professional examination is not compromised. **Exams have to be switched over to the Multiple Choice Question (MCQ) System and therefore, dear students, you have to initiate a Special Method of Preparation totally different from the essay type examination pattern. MCQ exams contain many more questions than essay exams. You can no longer resort to selective study based on past questions. You are expected to be studying in greater depth and gather more range of knowledge with no more chance to bluff the examiner.**

Under the MCQ pattern, you will be given several questions first and then asked to answer among a set of options where there may be one or more wrong answers. You must try to lay emphasis on details and therefore keep studying regularly every day and make short notes and keep revising repeatedly until your brain can retain it for a long term. You must pay particular emphasis on getting your concept clear with sound fundamentals. You must learn to think logically in normal sequence and develop the knack to distinguish between similarities and differences which might be confusing, yet be the basis used to distinguish correct choices from among the choices given with each question. **Always remember that MCQ tests are designed to test your knowledge and ability.**

Now, you will realize the importance of reading the Sections and definitions so that you understand what the Sections lays and/or what the definition means. **You will notice that the question-setter will actually be rephrasing the words in the Section and/or definition and placing them before you as MCQs. Therefore, please study carefully because under the MCQ pattern you can fall prey to misleading options that will distract you as the options will look similar to the correct answer.**

So, now please note the few suggestive Rules to be kept in mind for taking MCQ type exams :

1. Start a few deep breathing exercise before starting to read the entire question. **Never read the answers before reading the question.**
2. After reading the question, repeat the question mentally and find the correct answer. **Now check whether your answer matches with any of the options given. Select the best answer.**
3. In this manner keep answering the questions you know confidently. If you have doubts, simply mark (CROSS OUT) that question with a PENCIL and continue with the next question. **DO NOT WASTE ANY TIME.** Attempt to any these Crossed Out questions at the end.
4. In case you have confusion with words, in the options given, try to find your own logic. Answers that seem logical are generally ultimately incorrect. If your mind prompts you with a logical alternative, that means that, that word is just to misguide you. Therefore, that option is not correct.
5. Please remember that when you are given options such as "All the above" and "None of the above", never select "All the above" if you think that any one answer is incorrect. Similarly never select "None of the above" option, if you feel that at least one option is true. Interestingly, if you notice two correct options to a MCQ, you can choose "All the above".
6. A study of MCQ pattern reveals that **generally the correct answer gives out more information than the other options given with that question.**

Now, let us start revising part by part, what we have read in the previous issues.

The Sale of Goods Act, 1930

What are the implied conditions and warranties in a contract of sale of goods ?

Please read Sections 14 to 17 of the Sale of Goods Act. The implied conditions and warranties in a contract of sale of goods are as follows :

Implied Conditions -

1. Title - that the seller has the right to sell the goods and that he shall have the right to sell the goods at the time when the property in the goods is to pass.

2. Description - that the goods shall correspond to the description - physical characteristics, mention of trade mark, brand, etc. under which the sale agreement was made or those goods are normally sold. It is expected that the goods will be same as the goods described.
3. Sample - that goods shall be supplied as per the sample shown and agreed upon. That the buyer will get the opportunity of comparing the goods supplied with the earlier sample shown and the quality of the goods supplied matches with the quality of the sample shown and that the defects, if any, cannot be detected apparently on reasonable examination and inspection.
4. Sample and Description - where goods are sold by sample as well as by description, it is expected that the goods will correspond both - with the sample and the description.
5. Fitness or Quality - Where the buyer tells the seller about the purpose for which the goods are required, and relies on the seller's skill or judgment, it is implied that the seller agrees to the implied condition of fitness and description of the goods. Where the supplier deals in goods of such description laid by the buyer, it is implied that the goods shall be of desired quality and fit for sale - whether manufactured or traded by the supplier. However, if the goods are bought after inspection by the buyer, it will be implied that the inspection of the goods bought ought to have detected and revealed the defects.

Implied Warranties -

1. That the buyer shall have quiet possession of the goods, that is, the vendor has the right to transfer the goods,
2. That the goods are free from any charge or encumbrances in favour of any third party, not known to the buyer or not revealed to the buyer at the time of the contract.
3. That a warranty as to fitness for a particular purpose may be annexed to a contract of sale by normal practice in trade or a custom or usage.

Now, let us discuss about - Performance of the Contract of Sale

In any contract of sale, there has to be two parties - the **Buyer and the Seller**. Both are expected to perform as per agreed terms - **The Seller to deliver the goods and the buyer to accept the goods and pay the price.**

The seller is obliged to deliver the goods as per the terms of contract at the specified - time, place, quantity and quantity. The buyer is obliged to accept the goods and pay the agreed price. Depending on the terms of the contract, the payment can be taken in advance, or on stipulated period of credit and the delivery too can be off-the-shelf, ex-godown, free-on-board, staggered etc.

Performance of a contract depends on two criteria - **timely delivery by the supplier and agreed payment terms of the buyer.** The seller shall be ready to give possession of the goods in exchange for payment of the price and the buyer to be ready to take possession of the goods from the seller in exchange for price.

- 1) **Delivery can mean Physical or actual transfer of possession from one person to another**
- 2) **Delivery can be through different modes - viz.**
 - a) **Actual Delivery** - where the goods are physically delivered to the buyer by the seller - directly or through an agent.
 - b) **Symbolic** - just as we see in reality shows where the keys of a motor car is handed over to the winner
 - c) **Constructive** - where the delivery order is issued to a third party for making delivery - Example - A Company selling Potatoes, issuing Delivery Order to the Cold Storage in a different location asking them to deliver certain Number of Potato Bags to the buyer on receipt of the Issue Slip.

Rules with regard to delivery of goods.

Sections 31 to 44 of the Sale of Goods Act, lays Rules with regard to delivery of goods. Those are explained briefly:

1. **Mode of Delivery**: Can be anything agreed between the parties to put the goods in the possession of the buy or any other person authorized by the buyer.
2. **Delivery and Payment of Price**: Both parties, that is - the seller must be ready to deliver the goods and the buyer must be willing to take the delivery and pay the price for the goods. How the buyer will take possession of the goods or how the seller will send the goods to the buyer depends on the terms of the contract.
3. **Effect of part delivery**: Where the goods are delivered in part, it shall amount to passing on the possession of the goods but any part delivery will not be treated as delivery of the remainder if the intention of the seller is to sever the remaining part from the whole ordered quantity.
4. **Buyer to apply for delivery**: Unless agreed in writing, the seller is not bound to deliver goods until the buyer applies for delivery.
5. **Place of Delivery**: Unless agreed otherwise, between the buyer and the seller, goods must be delivered at the agreed time and place for the buyer to take possession of the goods or the seller to initiate dispatch of the goods to the buyer.
6. **Time of Delivery**: Unless specifically agreed between the seller and buyer, goods must be sent to the buyer within a reasonable period of time/ reasonable hour or else the delivery may be treated as ineffectual. Reasonableness has to be decided depending on various factors.
7. **Goods in the possession of a Third Party**: Suppose at the time of sale the goods being sold, are in the possession of a third party, there is no delivery by the seller to buyer, unless and until, such third party acknowledges to the buyer that, the goods are held by him on his behalf.
8. **Cost of Delivery**: Unless agreed between the buyer and seller, all expenses including incidental expenses incurred for putting

the goods in a deliverable state is borne by the seller.

9. Delivery of wrong quantity : There can be three possibilities :

- a) The seller may deliver to the buyer, a quantity which is **less than the quantity agreed** ; or
- b) The seller may deliver to the buyer, a quantity which is **more** than the quantity agreed ; or
- c) The seller may deliver to the buyer, a quantity which comprises of **goods as per contract , mixed with goods of other description** , not covered in the contract.

In such cases , the buyer may accept the lesser quantity actually received and pay for it at the contract rate , or in the second case, he may either accept only the ordered quantity and reject the excess quantity sent or accept the entire quantity sent and pay for it at the contract rate ; or in the third case, the buyer may accept the goods as per the contract and reject the rest , or he may even reject the whole quantity sent.

However, all decisions may be subject to usage of trade, special agreement and dealings between the seller and the buyer.

10. Installment Delivery :

- a) A buyer of goods is not bound to accept delivery in installments unless agreed otherwise ;
- b) There may be instances where the seller fails to make delivery or makes one or more defective deliveries or the buyer neglects or refuses to take delivery or pay or more installments, in such cases , the circumstances of each case shall decide whether there is a breach of contract calling for - repudiation of the whole contract or a case giving rise to claim for compensation but not to a right to treat the whole contract as repudiated.

11. Delivery to Carrier or Wharfinger :

- a) Where as per contract, the seller is authorized or is required to send the goods to the buyer, delivery of goods to the carrier or delivery of goods to the wharfinger for safe custody, is prima facie deemed to be a delivery of the goods to the buyer.
- b) The seller shall make a reasonable contract with the carrier or wharfinger on behalf of the buyer for transmission of the goods under the contract. If the seller omits to do so and the goods are lost or damaged , the buyer may decline to treat the delivery to the carrier or the wharfinger as a delivery to himself(the buyer) and /or may hold the seller responsible for any damage.
- c) Unless otherwise agreed, if the seller sends goods to the buyer via. Sea route, where it is usual to get the goods insured, the goods shall be deemed to be at risk during the sea transit.

12. Risk where goods are delivered at Distant Place :

Where the seller undertakes to deliver the goods **at his (the seller's) own risk** , at a place other than that where the goods were when sold, the buyer shall nevertheless, unless otherwise agreed, take any risk of deterioration in the goods necessarily incidental to the course of transit.

13. Buyer's right of examining the goods :

Where the goods were not examined by the buyer before hand, the delivered goods shall not be deemed to have been accepted unless and until the buyer has got a reasonable opportunity of examining those goods for the sake of ascertaining that they are in conformity with the contract.

14. Acceptance :

Only after the Buyer intimates to the Seller that he has accepted the goods , the goods shall be deemed to have been accepted. Moreover, if after receiving delivery of the goods, the buyer does not act within a reasonable time and still retains those goods, without intimating about any rejection of the goods to the seller, the goods shall be deemed to have been accepted.

15. Buyer not bound to return rejected goods :

Unless otherwise agreed, where the buyer legally holding the right to reject any goods sent by the seller, rejects any goods after receiving delivery, he (the buyer) is not bound to return the goods to the seller. In such case, the buyer just has to intimate the seller that he refuses to accept the goods sent.

16. Liability of Buyer :

Where the seller intimates to the buyer that he (the seller) is ready and willing to deliver the goods and also requests the buyer to take delivery and the buyer fails to take delivery within a reasonable time, the buyer becomes liable to the seller for any loss incidental to negligence or refusal of the buyer to take delivery and is responsible to pay the seller for a reasonable charge for the care and custody of the goods in question.

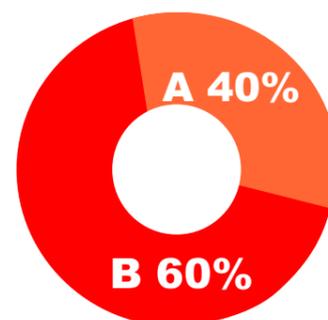


PAPER: 4

FUNDAMENTALS OF BUSINESS MATHEMATICS AND STATISTICS (FBMS)

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Your Preparation Quick Takes



Syllabus Structure

A Fundamentals of Business Mathematics 40%

B Fundamentals of Business Statistic 60%

Learning Objectives:

- To understand the basic concepts and needs of Business Mathematics.
- To Know the reasonableness and explanation in calculation.
- To know the application of various mathematical techniques.

BUSINESS MATHEMATICS AND STATISTICS

In this issue we are placing some MCQs & Conventional questions in Statistics Part of the paper.

Q1. For a group of 10 items, $\Sigma X = 452$, $\Sigma X^2 = 24270$, and $Mode = 43.7$; find the Pearson's coefficient of Skewness

Ans:

$$\text{Mean } (\bar{X}) = \frac{\Sigma X}{n} = \frac{452}{10} = 45.2$$

$$\text{S.D. } (\sigma) = \sqrt{\frac{\Sigma X^2}{n} - \left(\frac{\Sigma X}{n}\right)^2} = \sqrt{\frac{24270}{10} - (45.2)^2} = 19.59$$

Pearson's coefficient of skewness:

$$Sk = \frac{\text{Mean} - \text{Mode}}{\text{Standard Deviation}} = \frac{45.2 - 43.7}{19.59} = 0.08$$

Q2. Facet of Statistics namely computing the chance that something will occur in the future is called

- Statistical probability
- Statistical Interpretation
- Statistical Inference
- Statistical measurement

Q3. Consider the following table

Frequency	Deviation from A(= 5) [d = x-5]
7	- 4
11	- 3
16	- 2
17	- 1
26	0
31	1
11	2
1	3
1	4

From above arithmetic mean is computed as

- (a) 1.59
- (b) 3.59
- (c) 5.59
- (d) 4.59

Q4. If $A = 500$, $i = 1000$ & $\Sigma fd' = 232$ & $\Sigma f = 120$ \bar{x} is

- (a) 2433.33;
- (b) 527.84;
- (c) 501.93;
- (d) 1017.24;

Q5. If b_{XY} & b_{YX} are regression coefficients of series X on series Y and regression coefficients of series Y on series X respectively then which one of the following is correct?

- (a) b_{XY} & $b_{YX} = r$, where r is the correlation coefficient
- (b) b_{XY} & $b_{YX} = r^2$, where r is the correlation coefficient
- (c) b_{XY} & $b_{YX} = -r$, where r is the correlation coefficient
- (d) b_{XY} & $b_{YX} = 1/r$, where r is the correlation coefficient

Q6. The environmental protection agency is conducting a study of the relationship between age and systolic blood pressure. A small subset of the huge data base is given below:

X (Age)	30	55	60	45	40	65	50	75
Y (Blood Pressure)	120	160	170	180	130	140	150	180

Find out Coefficient of determination.

Ans:

We know regression equation: $Y = a + bX$

Where $b = \frac{\Sigma XY - n\bar{X}\bar{Y}}{\Sigma X^2 - n\bar{X}^2}$ & $a = \bar{Y} - b\bar{X}$

	X	Y	XY	X ²
	30	120	3600	900
	55	160	8800	3025
	60	170	10200	3600
	45	180	8100	2025
	40	130	5200	1600
	65	140	9100	4225
	50	150	7500	2500
	75	180	13500	5625
Σ	420	1230	66000	23500

\bar{X}	\bar{Y}	a	b
52.5	153.75	102.16	0.98

X	Y	XY	Y^2
30	120	3600	14400
55	160	8800	25600
60	170	10200	28900
45	180	8100	32400
40	130	5200	16900
65	140	9100	19600
50	150	7500	22500
75	180	13500	32400
Σ	1230	66000	192700

$$r^2 = \frac{a\Sigma Y + b\Sigma XY - n\bar{Y}^2}{\Sigma Y^2 - n\bar{Y}^2} = \frac{(102.16 \cdot 1230 + 0.98 \cdot 66000 - 8 \cdot 153.75^2)}{192700 - 8 \cdot 153.75^2}$$

$$= 0.341$$

Q7. The following table shows the results of purity test on some compound.

Observed percent of impurity				
0.04	0.14	0.17	0.19	0.22
0.06	0.14	0.17	0.21	0.24
0.12	0.15	0.18	0.21	0.25

Compute the standard deviation

Answer:

$$\sigma^2 = \frac{\Sigma(x-\mu)^2}{N} = \frac{0.051}{15} = 0.0034 \text{ percent squared or}$$

$$\sigma^2 = \frac{\Sigma x^2}{N} - \mu^2 = \frac{0.4643}{15} - (0.166)^2 = 0.0034 \text{ percent squared}$$

$$\sigma = \sqrt{\sigma^2} = \sqrt{0.0034} = 0.058\%$$

Detailed computations are as follows:

Sr No	Observation	Mean (2.49/15)	Deviation from mean	Deviation Squared	Observation Squared
1	0.04	0.166	-0.126	0.016	0.0016
2	0.06	0.166	-0.106	0.011	0.0036
3	0.12	0.166	-0.046	0.002	0.0144
4	0.14	0.166	-0.026	0.001	0.0196
5	0.14	0.166	-0.026	0.001	0.0196
6	0.15	0.166	-0.016	0.000	0.0225
7	0.17	0.166	0.004	0.000	0.0289
8	0.17	0.166	0.004	0.000	0.0289
9	0.18	0.166	0.014	0.000	0.0324
10	0.19	0.166	0.024	0.001	0.0361
11	0.21	0.166	0.044	0.002	0.0441
12	0.21	0.166	0.044	0.002	0.0441
13	0.22	0.166	0.054	0.003	0.0484
14	0.24	0.166	0.074	0.005	0.0576
15	0.25	0.166	0.084	0.007	0.0625
Σ	2.49			0.051	0.4643

Q8. Calculate the population variance for the following set grouped data:

Class	0-199	200-399	400-599	600-799	800-999
Frequency	8	13	20	12	7

Ans:

We know that population variance is computed as $\sigma^2 = \frac{\Sigma f(x-\mu)^2}{N} = \frac{\Sigma fx^2}{N} - \mu^2$

Class	Class Mark (x)	Frequency (f)	(f) * (x)	Mean μ	x - μ	(x - μ) ²	f(x - μ) ²
0-199	99.5	8	796	489.5	-390	152100	1216800
200-399	299.5	13	3893.5	489.5	-190	36100	469300
400-599	499.5	20	9990	489.5	10	100	2000
600-799	699.5	12	8394	489.5	210	44100	529200
800-999	899.5	7	6296.5	489.5	410	168100	1176700
Total		60	29370				3394000

$$\text{So } \sigma^2 = \frac{\Sigma f(x-\mu)^2}{N} = \frac{3394000}{60} = 56566.67$$

Q9. Kolkata telephones is considering the distribution of funds for a campaign to increase long distance calls in the state. The following table lists the markets in the state that the company considers worthy of focused promotions:

Market Segment	Cost of Special Campaign aimed at group
A) Minorities	Rs.500000

B) Businesspeople	Rs.750000
C) Women	Rs.250000
D) Professionals	Rs.250000
E) Working Class	Rs.500000

There is up to Rs1 million available for these special campaigns.

- Are the market segments listed in the table collectively exhaustive? Are they mutually exclusive?
- Make a collectively exhaustive and mutually exhaustive list of the possible events of the spending decision.
- Suppose the company has decided to spend the entire Rs1 million on special campaigns. Does this change your answer to part (b)? If so what is your new answer?

Ans:

- The market segments listed in the table is collectively exhaustive. They are not mutually exclusive
- A, B, C, D, E, AC, AD, AE, ACD, BC, BD, CD, CE, CDE, DE;
- AE, ACD, BC, BD, CDE;

Q10. Given that the probabilities of three events A, B and C occurring are $P(A) = 0.5$, $P(B) = 0.3$ and $P(C) = 0.2$. Assuming that A, B or C has occurred, the probabilities of another event, X, occurring are $P(X|A) = 0.6$, $P(X|B) = 0.8$ and $P(X|C) = 0.4$. Find $P(A|X)$, $P(B|X)$ & $P(C|X)$.

Answer: In this problem $P(A) + P(B) + P(C) = 0.5 + 0.3 + 0.2 = 1$, so A, B & C are elementary events.

Ans:

The requisite computation is given in the following table:

ELEMENTARY EVENT	Probability of ELEMENTARY EVENT	P(X ELEMENTARY EVENT)	P(X, ELEMENTARY EVENT)
A	0.5	0.6	$0.5 \times 0.60 = 0.30$
B	0.3	0.8	$0.3 \times 0.80 = 0.24$
C	0.2	0.4	$0.2 \times 0.40 = 0.08$
	1	$\neq 1$	$P(X) = 0.62$

So

$$P(X|A) = \frac{P(XA)}{P(X)} = \frac{0.3}{0.62} = 0.483$$

$$P(X|B) = \frac{P(XB)}{P(X)} = \frac{0.24}{0.62} = 0.387$$

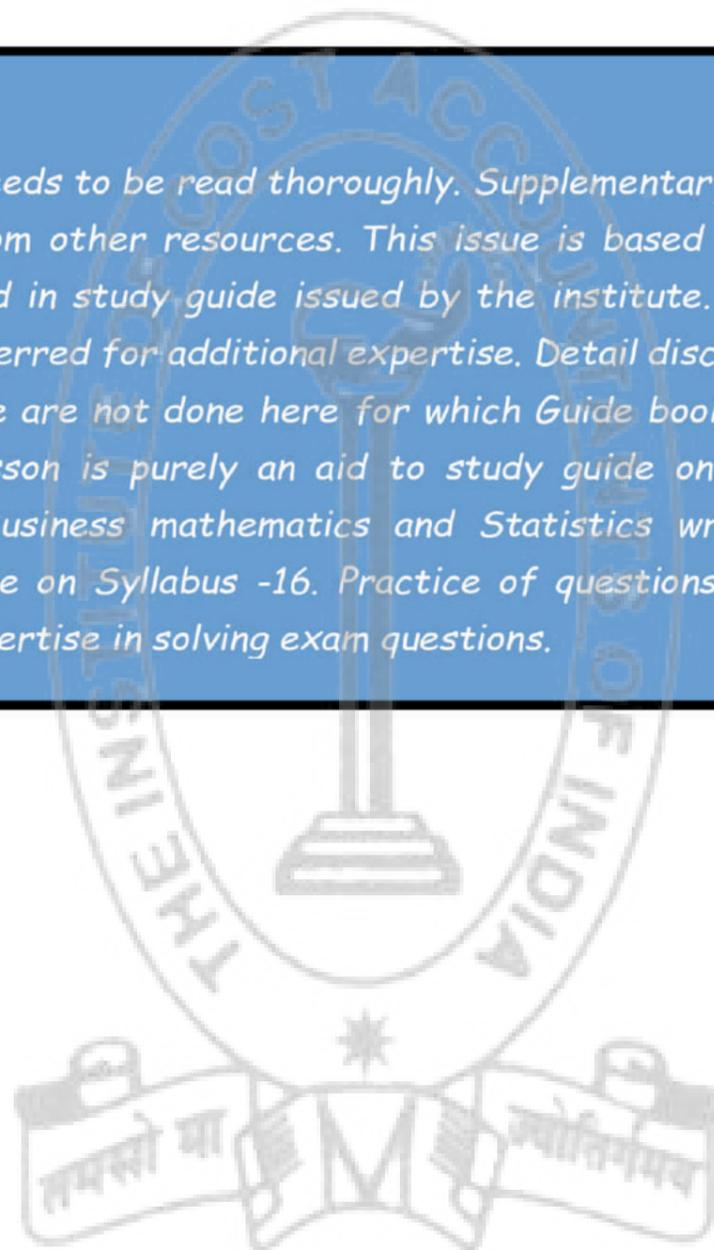
$$P(X|C) = \frac{P(XC)}{P(X)} = \frac{0.08}{0.62} = 0.129$$

Answer to MCQ

Q2	c
Q3	d
Q4	a
Q5	b

Suggestions:

The study guide needs to be read thoroughly. Supplementary readings could be made from other resources. This issue is based totally on teachings imparted in study guide issued by the institute. Standard books could be referred for additional expertise. Detail discussions on different formulae are not done here for which Guide book could be referred. This lesson is purely an aid to study guide on paper 4- Fundamental of Business mathematics and Statistics written and issued by Institute on Syllabus -16. Practice of questions of these sorts may give expertise in solving exam questions.

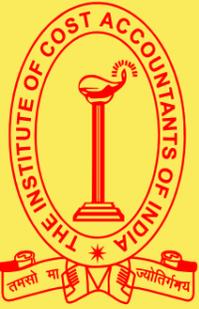




Examination TIME TABLE

Day & Date	Foundation Examination Syllabus-2016	
	Time 10.00 A.M. to 12.00 NOON. Paper - 1 & 2 (200 Marks)	Time 2.00 P.M. to 4.00 P.M. Paper - 3 & 4 (200 Marks)
Sunday, 2nd January, 2022	Paper - 1 : Fundamentals of Economics & Management (100 Marks 50 Multiple Choice Questions)	Paper - 3 : Fundamentals of Laws & Ethics (100 Marks 50 Multiple Choice Questions)
	Paper - 2 : Fundamentals of Accounting (100 Marks 50 Multiple Choice Questions)	Paper - 4 : Fundamentals of Business Mathematics & Statistics (100 Marks 50 Multiple Choice Questions)

STAY HOME STAY SAFE



PRACTICAL Advice

ABOUT YOUR STUDIES - FOUNDATION COURSE

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

START

01

Read Study Notes, MTPs, E-Bulletin, Work Books, Attend Webinar sessions

Solve Exercises given in Study Note

02

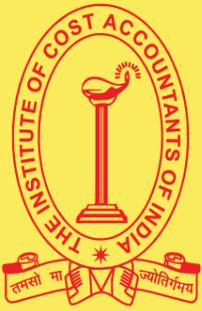
03

Assess Yourself

Appear For Examination

04

FINISHED



SUBMISSIONS

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.

Please put your opinions so that we can make your e-bulletin everything that you want it to be.

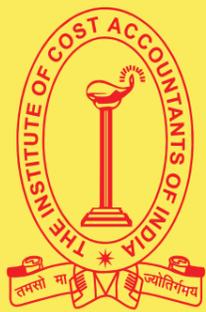
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Send your Feedback to:
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Updation of E-Mail Address/Mobile:

Students are advised to update their E-Mail id and Mobile Numbers timely so that important communications are not missed as the same are sent through bulk mail/SMS nowadays. Student may update their E-Mail id/ Mobile Number instantly after logging into their account at www.icmai.in at request option.





Message from Directorate of Studies

Dear Students,

Passing the exam is a happy event. Congratulations on all that you have accomplished! There is no secret of success. It is the result of preparation, hard work and learning from failure. Well done! It is clear that the future holds great opportunities for you.

Those who could not pass, failing in an exam does not mean failing in life. All of us face failure at one time or another. Try to focus your attention on the importance of perseverance and mind it that dedication and determination plays the lead role in shaping a person's life.

We from the Directorate of studies know your expectations from us and accordingly we are trying to deliver some meaningful tips through the publications of monthly E-bulletins. Other than this we are trying to help you through, Mock Test Papers (MTPs), Work Books, MCQs and we have conducted Webinar sessions.

You know that the nation is celebrating 150th birth anniversary of the father of the nation **M.K. Gandhi**. One of his inspirational message towards the students were:

"You must be the Change you wish to see in the World",

Let us observe his memory, following the above message.

Certain general guidelines are listed below and which will help you in preparing yourselves:

- Conceptual understanding & Overall understanding of the subject 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 is required.
- Write question numbers correctly and prominently.
- Proper time management is also important while answering.

Please refer the link mentioned below :

<https://icmai.in/studentswebsite/>

- Don't give up
- Don't give in
- Don't give out

You can win!

The Institute is pleased to inform that the University Grants Commission (UGC) Ministry of Education, Govt. of India has announced that CMA qualification be Considered equivalent to PG Degree.

GOOD LUCK

Be Prepared and Get Success;

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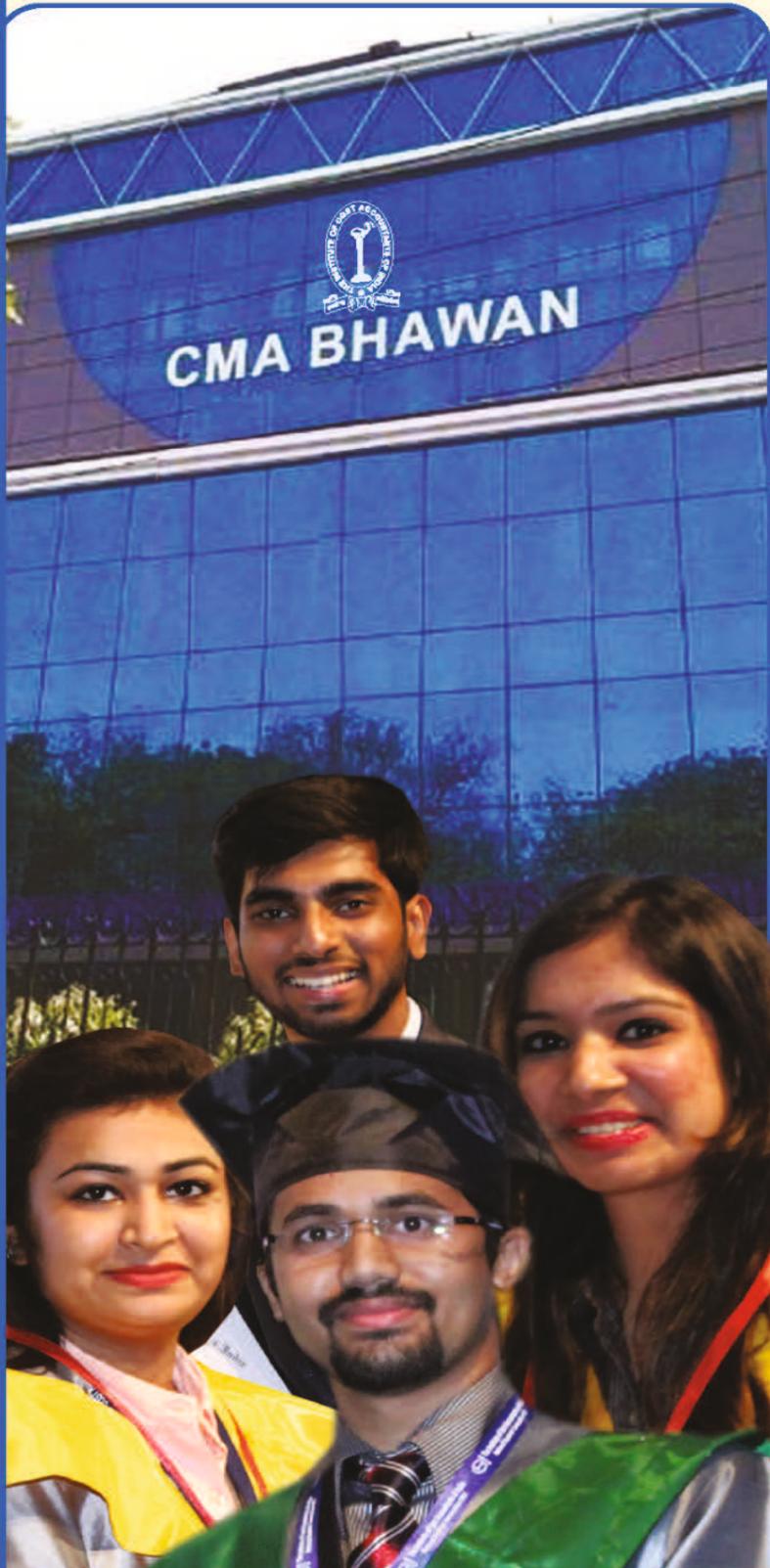
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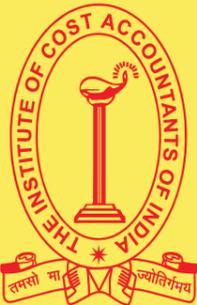


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Few Snapshots



Glimpses of the Child Literacy Program organised by the Institute to commemorate Azadi Ka Amrit Mahotsav on 24.09.2021 at CMA Bhawan, New Delhi.



Glimpses of Swachhta Abhiyan program organised by the Institute to commemorate Azadi Ka Amrit Mahotsav on 01.10.2021 at CMA Bhawan, New Delhi.



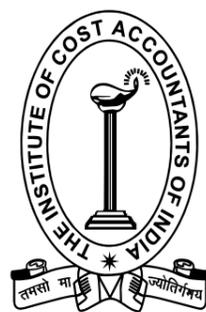
CMA P. Raju Iyer, Vice-President along with CMA Neeraj Joshi, Council Member of the Institute and CMA B.B. Goyal, Former Addl. Chief Adviser (Cost), Ministry of Finance, GoI, extending greetings to Shri Arun Goel, IAS, Secretary to the Government of India, Ministry for Heavy Industries during a meeting on 1st October, 2021 to submit a detailed representation relating to Cost Audit in the notified PLI Scheme for Automotives and Auto Components.



CMA (Dr.) Ashish P. Thatte, Chairman, Corporate Laws Committee along with CMA Neeraj D. Joshi, Chairman, Management Accounting Committee extending greetings to Shri Narayan Tatu Rane, Hon'ble Union Minister for Micro, Small and Medium Enterprises on 2nd August, 2021



CMA P. Raju Iyer, Vice President along with CMA Chittaranjan Chattopadhyay, Chairman BFSI Board & Indirect Taxation Committee of the Institute and CMA B.B. Goyal, Advisor, ICWAI MARF & Former Addl. Chief Adviser (Cost), Ministry of Finance, GoI extending greetings to CMA (Dr.) Manoj Anand, Whole Time Member (Finance), Pension Fund Regulatory and Development Authority (PFRDA) on 25.08.2021.



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