

Knowledge Update -

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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.


## Your Preparactitan Quidk Tehes



## Syllabus Structure

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

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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.
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## Economics

Hi friends! Hope you all are keeping fine. All the restrictions imposed by the government to combat Covid 19 have been withdrawn. But for heaven's sake don't feel complacent. Some European countries are still reeling under the third wave of Covid. Corona virus may return with a vengeance and with a different guise through mutation. So please do not take any risk. Use a mask whenever you go out. Use hand sanitizer extensively. While at home wash your hands frequently. Always avoid crowd. Maintain safe distance from sick people. This is for your own safety and for the safety of your near and dear ones. You will be able to study hard only if you are healthy. So, be very careful. Let us start our exercise of mock test.
I. Choose the correct answer:

1. When the total product curve(TP) becomes an upward sloping straight line through the origin, then the MP=AP curve becomes
A. Horizontal
B. Vertical
C. Upward sloping
D. Downward sloping
2. If the variable factor is used beyond the optimum factor proportion during short run, then there will arise
A. Increasing returns to the variable factor
B. Diminishing returns to a variable factor
C. Negative returns to the variable factor
D. None of the above
3. When TP is falling, then
A. $\quad M P=0$
B. $\quad M P>0$
C. $\quad \mathrm{MP}<0$
D. None of the above
4. The negative slope of a normal demand curve can be explained by
A. Only the substitution effect
B. Only the income effect
C. The income and substitution effects jointly
D. None of the above
5. According to the marginal utility $(M U)$ theory, a consumer gains maximum utility when
A. $M U=P$
B. $\quad M U$ is falling
C. Both $A$ and $B$ are satisfied
D. None of the above
6. If there is conspicuous consumption of a product, the demand curve will be
A. Positively sloped
B. Negatively sloped
C. Horizontal
D. Vertical
7. If the demand curve takes the shape of a rectangular hyperbola, then it implies
A. Elastic demand (e>1)
B. Inelastic demand ( $e<1$ )
C. Unit elastic demand ( $e=1$ )
D. None of the above
8. An increase in the price of a commodity when demand is inelastic, causes the total expenditure of the consumers on that commodity
A. To fall
B. Torise
C. Toremain unchanged
D. None of the above
9. At higher prices, the price elasticity of demand for the commodity will be
A. Relatively elastic (e>1)
B. Relatively inelastic (e<1)
C. Unit elastic ( $e=1$ )
D. None of the above
10. The mid-point of a linear demand curve shows a price elasticity of demand which is
A. Relatively elastic
B. Relatively inelastic
C. Unit elastic
D. None of the above

KEY: 1. A, 2. B, 3. C, 4. C, 5. C, 6. A, 7. C, 8, B, 9. A, 10. C
II. Fill in the blanks:

1. Adam Smith's invisible hands are also called $\qquad$
2. The firm has excess production capacity in the long run in
3. Electricity supply service is an example of $\qquad$

4. Price rigidity is the feature of .................. market
5. The demand for monopoly product is

KEY: 1. Price system, 2. Monopolistic competition, 3. Discriminating monopoly, 4. Oligopolistic, 5. Highly inelastic
III. True or False:

1. Commercial paper has risen out of the changing industrial scenario.
2. Call money represent the amount borrowed by banks from each other for the short term requirement.
3. Collateral loans are given by commercial banks without security
4. Money market is controlled by SBI
5. Profit is the main motto of Central bank.

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

| 1. Limit price | A. Perfect competition |
| :--- | :--- |
| 2. $A R=M R=P=M C$ | B. IMF |
| 3. $A d v e r t i s e m e n t$ | C. OPEC |
| 4. $S D R$ | D. Monopoly |
| 5. Collusive oligopoly | E. Selling cost |

KEY: 1. D, 2. A, 3. E, 4. B, 5. C
So friends! Hope you have enjoyed the mock test. Remember, thousands of such MCQ can be set from each and every section of your study notes. So try to read between the lines of your study material. One thing is sure that no question will come from outside the study material. Try to solve as much MCQ as you can. Also try to keep track of your performance. This will help you to improve your preparation for the exam. Best of luck!!!



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Syllabus Structure
A Fundamentals of Economics 50\%
B Fundamentals of Management 50\%

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

## MANAGEMENT

1. One good thing about the Principles of Management is that it helps understand the relationship between human and material resources in achieving organizational goals. Which feature of the Principles of Management is described in the above statement?
A. Behavioral
B. Cause and effect relationships
C. Use of resources and effective administration
D. None of the above

Answer: A
2. Which of the following is true about managers within an organization?
A. Management skills apply to managers at top levels in an organization
B. Management skills apply to managers at all levels in an organization
C. Management skills apply to managers at middle levels in an organization
D. Management skills apply to managers at executive levels in an organization Answer: B
3. Which of the following describes the principle of harmony, not discord?
A. The management should properly investigate any task
B. The management should engage in scientific enquiry
C. The management should focus on observation and analysis
D. The management should share the gains or profits of a company with their workers

Answer: D
4. Which of the following is the main objective of standardization within a business?
A. It helps to establish standards of excellence within a company
B. It helps to reduce products to fixed sizes, features or types
C. It helps to bring in more significant exchangeability of various parts
D. All of the above

Answer: D
5. Which of the following is the correct meaning of concentration of decision-making authority?
A. Span of management
B. Centralization
C. Decentralization
D. None of the above

Answer: B

6. Which of the following is the main objective of the Principle of Order?
A. It focuses on providing orderly arrangements for the resources within an organization
B. It concentrates on building a framework for giving orders to the employees within an organization
C. It focuses on creating a framework for receiving orders from the top management within an organization
D. None of the above

Answer: A
7. Henri Fayol is known as $\qquad$ .
A. The father of general management
B. The father of shop floor management
C. The father of scientific management
D. All of the above

Answer: A
8. Which Principle of Scientific Management says that employees must be rewarded when they make suggestions that lead to cost savings within the company?
A. Cooperation not individualism
B. Harmony not discord
C. Science, not a rule of thumb
D. All of the above

Answer: A
9. Which of the following is the main reason for the existence of an organization?
A. The vision of an organization
B. The mission of an organization
C. The objectives of an organization
D. The Chief Executive Officer (CEO) of an organization

Answer: B
10. The first man who advocated the view that the management should and can be taught is:
A. Harold Koonntz
B. Terry
C. Louis Allan
D. Henry Fayol

Answer: D
11. Specifying the manner of executing policy is known as:
A. Objectives
B. Schedules
C. Procedures
D. Budgets

Answer: $C$
12. Goal or target to be achieved is known as:
A. Schedule
B. Budget
C. Procedure
D. Objective

Answer: D
13. Penalty is levied for violation of:
A. Procedures
B. Rules
C. Policy
D. Methods

Answer: B
14. Expectancy motivation theory is given by:
A. Vroom
B. Maslow
C. Herzberg
D. Mc Gregor

Answer: A
15. Depart mentation on the basis of production process is called:
A. Equipment department
B. Departmentation by products
C. Departmentation by territory
D. Departmentation by customers

Answer: A

PAPER: 2


Syllabus Structure
A Fundamentals of Financial Accounting 80\%
B Fundamental of Cost Accounting 20\%


#### Abstract

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

In 1985 Michael Porter introduced a concept of value chain analysis to gain sustainable competitive advantage. According to him to add value is a continuous process. To fight against the competitors, you have to introduce a new feature in your product so that your competitor faces a new challenge. The theory developed by Porter is confined to product only. However, I request you to apply the theory in your own life. Make it a continuous process to add something new to your knowledge so that you can get a competitive advantage over others in the world of competition among the professionals. Every day ask yourself whether you have added something new to you from yesterday. If the answer is yes, you are alive and prosperous.
Students who are studying in $12^{\text {th }}$ standard or under graduate courses its high time to start preparing for this course which will give you a value addition and a prolonged competitive advantage. A simple graduate or graduate with an additional professional degree? choice is yours. Time will not wait, because TIME means - Today Is Most Essential. So, no delaying, Go for it today. Like earlier issues here is also some simple exercise to practice. Wish you all a grand success in life.

1. A sale of goods to $X$ for cash should be debited to
(A) $\times A / C$
(B) Cash A/C
(C) Sales A/C
(D) Capital A/C
2. The debts written off earlier as bad, subsequently recovered are
(A) Debited to profit and loss A/C
(B) Credited to bad debt recovery A/C
(C) Credited to trade receivable A/C
(D) Credited to debtors A/C
3. Which one of the following is an external cause for depreciation?
(A) Over use
(B) Abnormal occurrence
(C) Time element
(D) Obsolescence
4. Original cost of a machine is Rs. 300000, residual value Rs. 30000 after 9 years, if depreciation is charged under SLM method the depreciation for 3rd year will be
(A) Rs. 2700
(B) Rs. 9000
(C) Rs. 27000
(D) Rs. 30000
5. On which of the following asset, depreciation is not charged
(A) Furniture
(B) Plant and Machinery
(C) Land
(D) Wasting asset like mine and quarries
6. If a sum of Rs. 21,500 received from $X$ (debtor) has not been recorded in the books, the
(A) Profit would show an increase of Rs 1,500
(B) Profit would show a decrease of Rs 1,500
(C) Assets would show a decrease of Rs. 1,500
(D) None of the above
7. If goods worth Rs. 1750 returned to suppler is wrongly entered in sales returned book as Rs. 1,570 then
(A) Gross profit will decrease by Rs. 3,320
(B) Gross profit will decrease by Rs. 3,500
(C) Gross profit will increase by Rs. 3,320
(D) Net profit will decrease by Rs. 3140

True or False:
8. Fixed cost per unit remains fixed but variable cost per unit vary with variation in output (False)
9. Cost accounting is an instrument of management control (True)
10. In construction industry, contract costing is used (True)
11. Depreciation is an out of pocket cost (false)
12. Variable cost per unit varies with increase or decrease in volume of output (false)
13. Discount to customer comes under "distribution cost" (false)
14. Abnormal cost is controllable (True)
15. In sole trading business income tax is treated as drawings from business(True)
16. Match the following:

| Column A |  |  | Column B |
| :---: | :---: | :---: | :---: |
| 1 | Preliminary Expenses | a | Revenue Received |
| 2 | Interestreceived | b | Bill of Exchange |
| 3 | Patent Account | c | Fictitious Asset |
| 4 | Obsolescence | d | Current Liability |
| 5 | Days of Grace | e | External Cause of Depreciation |
| 6 | Outstanding Salary | $f$ | Real Account |

Answer:- 1-c, 2-a, 3-f, 4-e, 5-b, 6-d

## PAPER: 3

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## Your Prepparaction Quick Tches



## Syllabus Structure

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


#### Abstract

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

First of all, please appreciate why this paper is really very important for all of you who are aspiring to be true professionals and are all eager to proudly proclaim aloud that - Yes, behind every successful decision, there is a CMA. With Mission CMA in mind, you the students, are advised to study this paper with a practical approach, as if the points concern you and you are given to deal with it as a professional. As a CMA in the making whether you decide to get employed or be self-employed and employ people, you will have to deal with people and establishments legally and establish Legal relationship for lawful consideration and perform your professional duties. Keeping that in mind, you have to study this subject seriously.

It is hoped that you keep on reading and recapitulating all that you have read for which you must prepare a time-table with time allotted for each subject - to read, write and revise.

The first TIP is that you start studying the subject and raise questions to yourself first and then find your own answers. Even as a student now, you must start thinking like A Teacher. Now, we will deal with the full Syllabus -Paper 3 Chapter by Chapter.

Indian Contract Act,1872
To start with, let us cover Essential Elements of Contract, Offer and Acceptance.
In every contract, there has to be two or more persons. One party will offer/propose to do something and the other party will agree/accept the offer /proposal. However, a party may even offer not to do something and the other party may agree/accept that.

The question arises - Will all agreements be contracts? The answer is - No, only those agreements that can be enforced in the court of law are contracts. For example, an agreement to play chess or sing a song just for fun.

So, now ask yourself - What is an Offer?
The Answer is simple. An offer is just an act of making a Proposal. Read Sec.2(a) and understand that. The person making the Offer is the Offeror /Proposer/Promisee and the person to whom you propose is the Offeree. The offer has to be for a Consideration and when that is accepted by the other party, the other party becomes the Acceptor and there is a contract.

## Well, ask yourself -How do I make an offer?

The answer is that that are certain Rules regarding Offer which are: 1.(i). An offer can be in words spoken or written and (ii). An offer can be implied by conduct. For example: X tells $Y$ by word of mouth or in writing that he wants to sell his Mobile Phone for Rs. 5000 that is an offer when $Y$ accepts it, there is a contract.
The State Transport Corporation runs a Bus from Location A to location B along a fixed route. Here it is implied by conduct that the bus is offering to carry passengers against a specific fare structure. When a passenger boards the bus it is implied that he accepts to offer and wants to become a passenger. Here too, there is a implied contract. 2. The terms of offer must be certain. Example :When the passenger boards the bus, he accepts to pay the specific fare and follow certain terms offered. 3. A simple intention to sell is not an offer or an advertisement is an invitation to make an offer but is not an offer. For example: A told $C$ that his old mobile phone was fetching him Rs. 5000 but he did not say that he was willing to sell at that price. Here there is no contract between $A$ and $C$. 4 . An offer must be communicated and the offeree must be aware of such offer. 5 . If an offer is conditional, such conditions must be clearly communicated to the offeree.

So, we arrive at the obvious question -
How should I communicate the offer to other person/s?
As said above, an offer can be in words spoken or written and (ii). An offer can be implied by conduct. The offer by the bus to move along a specified route and carry passengers is a clear example of an offer by conduct.

Section 2(b) states that a proposal when accepted becomes a promise. So, the question arises - What are the Rules regarding Acceptance?

The answer is that -1. Sec.7(1) lays that an acceptance must be absolute and unqualified. Even, if a insignificant point of variation between the terms of offer and the terms of acceptance is found, there is no contract. For example : You offer to sell your Office

Premises to $Y$ for Rs.5,00,000 and no payment term was laid. Y sends you a bank draft for Rs.1,00,000 and promises to pay the balance Rs, $4,00,000$ after 2 months. So, here the acceptance is conditional and so there is no contract. 2. An acceptance must be expressed in a usual or reasonable manner. (Refer Sec,7(2). Such acceptance can be by word of mouth, in writing or by post or even by conduct, but the offeree must do what the offeror wants him to do. (Refer Sec.8). 3. A mental acceptance is not a contract. Moreover, an acceptance which is not communicated is not a contract. For example : You write to your friend $X$ that you want to sell your Motorcycle for Rs. 10,000 . Your friend mentally decides to buy the motorcycle and even writes a letter addressed to you, but forgets to post the letter to you or verbally inform you. This does not result in a contract. 4. If the Offeror prescribes a specific mode of acceptance, the Offeree must follow that particular mode unless the offeror waives it. (Read Sec.7(2), 5. Both the Communication of the Offer and he communication of the Acceptance must be complete. Another point is that the acceptance must be made till the offer is in force. For example : A desires to sell his Motor Car for Rs.50,000 before $31^{\text {st }}$ January,2018, such an offer is not valid after $31^{\text {st }}$ January,2018.

## NEGOTIABLE INSTRUMENTS ACT

To start with, let us ask ourselves a basic question - What is a Negotiable Instrument?
For that we need to understand two things -1. Meaning of "Negotiable" ; and 2. Meaning of "Instrument".
Negotiable means transferable by delivery.
Instrument means a written document. Such written document creates a right in favour for some person.
The written document can be a-a Promissory note, a bill of exchange or a cheque payment either to Order or to the Bearer of such document.

Naturally, the obvious question coming to mind shall now be - What is a Promissory Note ? :
A Promissory Note is not a currency note. It is an instrument (document) in writing which contains unconditional undertaking, duly signed by the maker, who agrees to pay a certain sum of money, only to the order of a certain person or to the bearer holding the instrument.
The person signing the instrument is called the Maker and the person who will get the money is called the Payee.

## Next question is - What is a Bill of Exchange?

A Bill of Exchange is also an instrument in writing containing an unconditional order, duly signed by the Maker, directing a certain person to pay a certain sum of money only to, or to the order of a certain person or to the bearer of the instrument.
The Maker of the Bill of Exchange is called the Drawer and the person who is directed to pay is called the Drawee. Here, the Payee must present the bill to the Drawee for his acceptance by signing on the bill and thereby signifying his acceptance. After Acceptance, the Drawee becomes the Acceptor.

The remaining question is - what is a Cheque?
A Cheque is a Bill of Exchange drawn upon a specified banker and payable on demand. A cheque can be either a Bearer Cheque or an Order cheque but in both cases, it is payable on demand. The Specified banker, named has to pay the cheque, when it is presented to him during official banking/office hours at his office. However, the cheque must be validly drawn and the Drawee must have sufficient funds to his credit in his bank account in ordered to be duly honoured for payment.

Now, let us deal with the Sale of Goods Act,1930
In respect of such papers, the students are reminded that since they are taking an exam, they must first focus on securing marks. For that, they must study the relevant Sections of the Act, write what the question wants and then attempt to elaborate by analyzing and commenting on the interpretations of the Act.

At the very start, let us be clear that Sale of Goods Act relate to sale and purchase of goods, but the contract of sale is regulated by the Indian Contracts Act,1872.
At the very start, we must clear our conception about the following terms -
Goods, Specific Goods, Unascertained goods, Future goods and Contingent goods.
The immediate question coming to mind is - What are goods? It is clarified that every kind of movable property is goods but Actionable Claims and Money are excluded. (All things attached to the earth are not movable and are therefore not goods under the Act. However, standing crops, grass and fruits on trees that can be separated are covered under the definition of movable goods ).

So, the question arises - What are Actionable Claims? Actionable claims are debt or a claim for money which a person may have from another person, which may be recovered by suit.

So, what is Money? Money here simply means legal tender.
Specific Goods are goods that can be clearly identified and recognized
Unspecific Goods are those goods that can be indicated by description but cannot be separately identified. For example, as long as the bags of sugar, kept in a godown for sale, are not identified with any specific buyer, they remain Unspecified Goods. As soon as a some bags are brought out, marked, separated and issued to a buyer, they become identifiable and become Specific goods.

Future Goods are goods which have not yet been manufactured or produced or acquired by the seller after entering into a contract of sale. For example, $X$ agrees to sell Apples to $Z$ that he will grow in his orchard in the coming fruit season. Such a contract is for sale of future goods.

Contingent Goods, are goods that can be sold only depending on the happening of an uncertain event, called a Contingency. For example $M$ enters into a contract to sell a particular watch to $N$ if $M$ manages to buy it from $C$ - the current owner of the watch. The watch here is considered - Contingent Goods.

## ETHICS AND BUSINESS

let us discuss Ethics and Business - Meaning , importance
Ethics: Please remember that Ethics is truly the pillar on which you, - the would-be professionals will be expected by the society and the world-at-large, to stand, during your professional career.

Right from the day an individual is born, the world accepts him/her as a member of a Society, a Clan, a Culture and a Tradition and each of those categories are governed by respective Standards and Ethics. We may therefore, explain that Ethics are such standards that are consistently followed over the years depending on the philosophy that, that system has been following based on the terms of right, obligations and the benefits derived by the society depending on their geographical location and demographic characteristics.
It is known that, right after his/her birth, from the day a person, begins to see, hear, understand and realize the customs, beliefs, traditions and culture into which he/she is born, he/she is told to do or not to do something, to speak or not to speak something, to wear or not to wear certain dresses, to eat or not to eat certain foods and vegetables or to behave in a certain manner, etc. However, we must never be confused but should be able to distinguish between Morals and Ethics.

It must be appreciated that all ethical traditions and customs are generally followed based on systematic and scientific reasons depending on how much the individual has bonded and established his relationship within that category where he/she belongs or interacts with, but such reasons may not be always known to every individual existing within that system. Let us take an example. When you enter or pass through a place where the environment is good, peaceful and congenial, you tend to prolong your stay over there, but in a reverse situation, you will definitely either avoid such place or quickly leave that place. In the former case, the individuals gathered there have not breached their ethics but in the latter case, the ethics have been definitely breached and violated.
That prompts us to raise a question - should ethics be rigid or does it need changes? The answer is that we must remember that ethics is something which is generally prompted by your conscience. Ethics, helps us to realize what is right and wrong and what we should refrain from doing. Moreover, since the time-machines keeps ticking and changes are bound to take place depending on situations and circumstances, ethics actually guides us to study and analyze an existing system first before showing the path towards development and fine-tuning of an existing system that needs a change.

Ethics: Please recollect what you read in the initial paragraph, that Ethics is truly the pillar on which you, - the would-be professionals will be expected by the society and the world-at-large, to stand, during your professional career.

Moral and Ethics, depends on how we interpret the meaning. Morals, deal with customs and practiced principles followed by certain groups, depending on religion, culture and traditions. Ethics, on the other hand, lays emphasis on character, conduct and individual behavior. What is ethically moral, may not be morally wrong. For example, eating fish on Saturdays may not be ethically wrong but it may be morally wrong for certain community members.
Ethics and Morals are certain laid practices which reminds the members of the society about their duties and restrictions, so that those community members stay within set acceptable limits. Breaching the restrictions cause conflicts and disturbs human peace and harmony between different social relationships such as - father and son, husband and wife, between friends and relatives and even between communities.
Ethics, demands that we follow certain disciplines, standard practices and conventions more than what is prescribed by law. It all depends on how we apply and practice ethics in our daily life and general practices.
Ethics in general life must be followed differently. Ethics in office must not be mixed with ethics at home. For example, watching television (TV) during working hours in office may not be permitted but, at home it is allowed. However, playing a TV at home while a student is studying there is ethically wrong if it disturbs or distracts the attention of that student there. This is called Value-based Ethics and discipline.

Ethics is linked to Principles and principles are aimed at bringing methods, systems, procedures, orderliness, happiness and for leading the path towards good mutual co-existence between individuals and their way of life. These are Social Ethics, but what the society expects from the businessman can be called Professional Principles and Practices.

PAPER: 4
FUNDAMENTALS OF BUSINESS MATHEMATICS AND STATISTICS (FBMS)

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## Wordr

Syllabus Structure
A Fundamentals of Business Mathematics 40\%
B Fundamentals of Business Statistic 60\%

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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.
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## BUSINESS MATHEMATICS AND STATISTICS

In this issue let me discuss some MCQ problems on variation.
Q1. In $R$ is in direct variation with square of $S$ and when $R=12, S=2$. What is the value of $R$ when $S=5$ ?
(a) $R=75$
(b) $R=25$
(c) $R=50$
(d) $R=150$

Q2. If an online session of 3 hours takes 2 mobiles to attend such session, how many mobiles would be required if the session would be conducted for 12 hours?
(a) 6 mobiles
(b) 4 mobiles
(c) 10 mobiles
(d) 8 mobiles

Q3. If $A$ varies inversely as $R$, if $A=R^{2}$ with the value of $R=4$ when $A=8$, find $R$ when $A=32$.
(a) $R=+2$
(b) $R=-2$
(c) Either of ' $a$ ' or ' $b$ '
(d) Neither of ' $a$ ' nor ' $b$ '

Q4. If 5 women takes 8 days to write 10 articles, apply the principle of variation to find out how many days 8 women would take to type 2 articles?
(a) 1 day
(b) 3 days
(c) 2 days
(d) 4 days

Q5. Apply the principle of variation to find how many men will be tested in 32 centers in 4 days, if 15 men are tested in 20 centers in 3 days?
(a) 18 men
(b) 16 men
(c) 15 men
(d) 19 men


Q6. If $Q$ varies directly as $P$ and the value of $P$ is 25 and $Q$ is 15 , what is the equation that describes this direct variation between $Q$ and $E$ ?
(a) $k=3 / 5$
(b) $k=5 / 3$
(c) $k=3 / 7$
(d) $k=9 / 5$

Q7. If Relationship between variables exist based on formula, in such cases, the variation would be called $\qquad$ . Example of such variation is $\qquad$ .
(a) Partial Variation; Quadratic Equation.
(b) Partial Variation; Straight Line Equation
(c) Combined Variation; Straight Line Equation
(d) Combined Variation; Quadratic Equation

Q8. If $T$ varies inversely as $Y$ when $T=4$ and $Y=10$, find $T$ when $Y=8$.
(a) $T=7$
(b) $\mathrm{T}=5$
(c) $T=6$
(d) $T=3$

Q9.-Q11. Answer the following questions based on Theorem of Variation.
In any mathematical equation, either both the variables are related directly or one variable changes with the change in the product of two variables, such variation is referred as $\qquad$ —.
(a) Direct Variation
(b) Partial Variation
(c) Joint Variation
(d) Indirect Variation

Q10. When the proportionate change in all the variables are same or equal, such variation is termed as $\qquad$ -.
(a) Indirect Variation
(b) Constant
(c) Disjoint Variation
(d) Direct Variation

Q11. In an equation, if three or more variables exist, the change in variables is direct and indirect variation or joint and indirect variation in any groupings of variables, such variation is called $\qquad$ _.
(a) Direct Variation
(b) Combined Variation
(c) Indirect Variation
(d) Joint Variation

Q12. If a bike runs at a constant speed, for running a distance of 300 km taking 6 hours, what time would it take to run for 200 km?
(a) 4 hours
(b) 3 hours
(c) 5 hours
(d) 7 hours

Q13.-16. Area of a rectangle is jointly related to the length and the width of the rectangle. Answer the following questions Q13. If length of the rectangle is doubled and the width is halved, how much area would be increased or decreased?
(a) Increase by 5\%
(b) Decrease by 5\%
(c) No Change
(d) None of the Above

Q14. If length of the rectangle is halved and the width is doubled, how much area would be increased or decreased?
(a) No Change
(b) Decrease by $5 \%$
(c) Increase by $5 \%$
(d) None of the Above

Q15. If length of the rectangle is halved and the width is halved, how much area would be increased or decreased?
(a) Decrease by $25 \%$
(b) Decrease by $75 \%$
(c) No Change
(d) None of the Above

Q16. If length of the rectangle is doubled and the width is doubled, how much area would be increased or decreased?
(a) Increase by 4\%
(b) Decrease by $40 \%$
(c) No Change
(d) None of the Above

Q17. If a cycle runs at a speed of $60 \mathrm{~km} / \mathrm{h}$ and takes 3 hours to run a distance, what time it will take to run a speed of 40 km ?
(a) 3 hours 30 minutes
(b) 4 hours 30 minutes
(c) 2 hours 30 minutes
(d) 4 hours 15 minutes

Q18. In $P$ is in indirect variation with square of $T$ and when $P$ is $3, T$ is 4 . What is the value of $P$ when $T$ is 2 ?
(a) $P=6$
(b) $P=8$
(c) $P=12$
(d) $P=16$

Q19. In a mathematical equation of $a+b=8$, if the values of $a$ and $b$, do not change even if equation is squared on both sides, $a$ and $b$ are termed as $\qquad$
(a) Constant
(b) Variables
(c) Direct Variation
(d) None of the Above

Q20. Apply the principle of variation to find how long 25 men will take to vaccinate 30 rows, if 5 men take 9 days to vaccinate 10 (a) $6 \frac{4}{5}$ days
(b) $5 \frac{1}{5}$ days
(c) $6 \frac{3}{5}$ days
(d) $5 \frac{2}{5}$ days

Q21.-24. the area of a triangle is jointly related to the height and the base of the triangle. Answer the following questions Q21. If the base is increased by $20 \%$ and the height is decreased by $10 \%$, what will be the percentage change of the area?
(a) Increase by $8 \%$
(b) Increase by $10 \%$
(c) Decrease by $12 \%$
(d) Decrease by $15 \%$

Q22. If the base is decreased by $15 \%$ and the height is decreased by $20 \%$, what will be the percentage change of the area?
(a) Increase by $30 \%$
(b) Decrease by 30\%
(c) Increase by $32 \%$
(d) Decrease by $32 \%$

Q23. If the base is decreased by $15 \%$ and the height is increased by $25 \%$, what will be the percentage change of the area?
(a) Decrease by $9 \%$
(b) Increase by $6.25 \%$
(c) Increase by 9\%
(d) Decrease by 6.25\%


Q24. If the base is increased by $15 \%$ and the height is increased by $20 \%$, what will be the percentage change of the area?
(a) Decrease by $42 \%$
(b) Decrease by $38 \%$
(c) Increase by $38 \%$
(d) Increase by $42 \%$

Q25. The area of an umbrella directly varies with the square of its radius. When the radius of the umbrella is doubled, how much will be the area of the umbrella?
(a) Area would be 2 times the normal area of umbrella.
(b) Area would be 4 times the normal area of umbrella.
(c) Area would be 3 times the normal area of umbrella.
(d) Area would be 6 times the normal area of umbrella.
sUGGESTIVE ANSWERS:

| Q. No. | Answer | Q Remarks |
| :---: | :---: | :---: |
| 1 | a | $R$ is in direct variation with square of $S$, it can written as $R=S^{2}=k \times S^{2}$ <br> When $R=12, S=2$, <br> $R=k \times S^{2}$ <br> $12=k \times 2^{2}$ $12=k \times 4$ $k=\frac{12}{4}=3$ <br> Value of $R$ when $S=5, k=3$ $R=k \times S^{2}$ $R=3 \times 5^{2}$ $R=3 \times 25=75$ |
| 2 | d | If 3 hours takes 2 mobiles, $\begin{aligned} & M=H \\ & M=k \times H \\ & 2=k \times 3 \\ & k=\frac{2}{3} \end{aligned}$ <br> When 12 hours, $k=2 / 3$ $M=k \times H 2 M=\times 123$ $M=2 \times 4=8$ |


| 3 | c | A varies inversely as $r, A=k \times \frac{1}{R}$ <br> if $A=R^{2}$ then $A=k \times \frac{1}{R^{2}}$ <br> with the value of $R=4$ when $A=8$, $\begin{aligned} & 8=k \times \frac{1}{4^{2}} \\ & 8=k \times \frac{1}{16} \\ & k=8 \times 16=128 \end{aligned}$ <br> When $A=32, k=128$ $32=128 \times \frac{1}{R^{2}}$ $32 \times R^{2}=128$ $R^{2}=\frac{128}{32}=4$ <br> $R= \pm 2$ |
| :---: | :---: | :---: |
| 4 | a | $N$ would be the number of women, $D$ would be the days and $A$ would be the number of Articles <br> $N$ and $D$ share indirect variation since with increase in number of women, the days required would decrease. <br> While, $N$ and $A$ share direct variation, since when the women are increased, they can type more or more Articles can be typed. <br> Applying Joint Theorem. $\begin{aligned} & N \propto \frac{A}{D} \\ & N=k \times \frac{A}{D} \end{aligned}$ <br> When $N=5, A=10$ and $D=8$, $\begin{aligned} & 5=k \times \frac{10}{8} \\ & k=5 \times \frac{8}{10} \\ & k=\frac{8}{2}=4 \end{aligned}$ <br> For 8 women to write 2 articles, $k=4$ $\begin{aligned} & N=k \times \frac{A}{D} \\ & 8=4 \times \frac{2}{D} \\ & 8=8 \times \frac{1}{D} \\ & 1=\frac{1}{D} \\ & D=1 \end{aligned}$ |
| 5 | b | Using the joint variation theorem, $M \propto A \times \frac{1}{D}$ <br> Given that $M=15$, when $A=20$ and $D=3$ $\begin{aligned} & 15=k \times 20 \times \frac{1}{3} \\ & 15=k \times \frac{20}{3} \\ & k=15 \times \frac{3}{20} \\ & k=\frac{9}{4} \end{aligned}$ <br> So, When $D=4$ and $A=32, k=\frac{9}{4}$ |


|  |  | $\begin{aligned} & M=k \times A \times \frac{1}{D} \\ & M=\frac{9}{4} \times 32 \times \frac{1}{4} \\ & M=9 \times 2=18 \end{aligned}$ |
| :---: | :---: | :---: |
| 6 | a | Since $Q$ varies directly with $E, Q=E$ $\begin{aligned} & Q=15, E=25 \\ & Q=k^{\star} E \\ & 15=k^{*} 25 \\ & k=15 / 25 \\ & k=3 / 5 \end{aligned}$ |
| 7 | b | If Relationship between variables exist based on formula, in such cases, the variation would be called Partial Variation. Example of such variation is Straight Line Equation. |
| 8 | b | $\begin{aligned} & \mathrm{T} \text { varies inversely as } \mathrm{Y} \text {, So } \mathrm{Ta} \frac{1}{\mathrm{Y}} \\ & \text { when } \mathrm{T}=4 \text { and } \mathrm{Y}=10, \\ & \mathrm{~T}=\mathrm{ka} \frac{1}{\mathrm{y}} \\ & 4=\mathrm{ka} \frac{1}{10} \\ & \mathrm{k}=4 \times 10=40 \\ & \text { When } \mathrm{y}=8, \mathrm{k}=40 \text {, } \\ & \mathrm{T}=\mathrm{ka} \frac{1}{\mathrm{Y}} \\ & \mathrm{~T}=40 a \frac{1}{8}=5 \end{aligned}$ |
| 9 | c | In any mathematical equation, either both the variables are related directly or one variable changes with the change in the product of two variables, such variation is referred as Joint Variation. |
| 10 | d | When the proportionate change in all the variables are same or equal, such variation is termed as Direct Variation. |
| 11 | b | In an equation, if three or more variables exist, the change in variables is direct and indirect variation or joint and indirect variation in any groupings of variables, such variation is called Combined Variation. |
| 12 | a | Bike runs at a constant speed (S), <br> Equation for Speed, velocity and Time: $S=V T$, <br> For bike running a distance of 300 km taking 6 hours, $\begin{aligned} & S=V T \\ & 300=V \times 6 \\ & V=\frac{300}{6}=50 \end{aligned}$ <br> When Bike run for $200 \mathrm{~km}, \mathrm{~V}=50$, $\begin{aligned} & S=V T \\ & 200=50 \times T \\ & T=\frac{200}{50}=4 \end{aligned}$ |
| 13 | c | A be the area $=1^{*} w$, where $I$ be the length and $w$ be the width, <br> This would be joint variation equation with 1 as constant, <br> Initial Area: $A=1 \times w$ <br> For New Area when length of the rectangle is doubled and the width is halved, <br> New Length would be $1 \times 2=21$ <br> New Width would be $w \times \frac{1}{2}=\frac{w}{2}$ <br> New Area would be $A^{\prime}=21 \times \frac{w}{2}$ $\begin{aligned} & A^{\prime}=21 \times \frac{w}{2} \\ & A^{\prime}=1 \times w=A \end{aligned}$ |


|  |  | Since $A^{\prime}=A$, there is no change in the Area of Rectangle. |
| :---: | :---: | :---: |
| 14 | a | A be the area $=1 * w$, where $I$ be the length and $w$ be the width, <br> This would be joint variation equation with 1 as constant, <br> Initial Area: $A=1 \times w$ <br> For New Area when length of the rectangle is halved and the width is doubled, <br> New Length would be $1 \times \frac{1}{2}=\frac{1}{2}$ <br> New Width would be w $\times 2=2 \times w$ <br> New Area would be $A^{\prime}=\frac{1}{2} \times 2 w$ $\begin{aligned} & A^{\prime}=\frac{1}{2} \times 2 w \\ & A^{\prime}=1 \times w=A \end{aligned}$ <br> Since $A^{\prime}=A$, there is no change in the Area of Rectangle. |
| 15 | b | A be the area $=1 * w$, where $I$ be the length and $w$ be the width, <br> This would be joint variation equation with 1 as constant, <br> Initial Area: $A=1 \times w$ <br> For New Area length of the rectangle is halved and the width is halved, <br> New length would bel $\times \frac{1}{2}=\frac{1}{2}$ <br> New Width would be $w \times \frac{1}{2}=\frac{w}{2}$ <br> New Area would be $A^{\prime}=\frac{1}{2} \times \frac{w}{2}$ $\begin{aligned} & A^{\prime}=\frac{1}{2} \times \frac{w}{2} \\ & A^{\prime}=\frac{1}{4}(1 \times w)=\frac{1}{4} A \end{aligned}$ <br> Since $A^{\prime}=\frac{1}{4} A$, the Area of Rectangle would be decreased $1 / 4^{\text {th }}$ of the original area or decrease by $75 \%$. |
| 16 | d | A be the area $=1^{*} w$, where $I$ be the length and $w$ be the width, <br> This would be joint variation equation with 1 as constant, <br> Initial Area: $A=1 \times w$ <br> For New Area when length of the rectangle is doubled and the width is doubled, <br> New Length would be $1 \times 2=21$ <br> New Width would be $w \times 2=2 w$ <br> New Area would be $A^{\prime}=21 \times 2 w$ $\begin{aligned} & A^{\prime}=21 \times 2 w \\ & A^{\prime}=4 \times(1 \times w)=4 \times A \end{aligned}$ <br> Since $A^{\prime}=4^{\star} A$, the Area of Rectangle would be increased 4 times of the original area or increase by $400 \%$. |
| 17 | b | If $T$ is the time taken by the cycle to cover the distance, $D$ is the distance covered by cycle and $S$ is the speed of the cycle, the indirect variation is $S=\frac{D}{T}$ <br> where $S$ is Constant and $D$ and $T$ are variables. <br> When cycle runs at a speed of 60 kmph and takes 3 hours, $\begin{aligned} & S=\frac{D}{T} \\ & 60=\frac{D}{3} \\ & D=60 \times 3=180 \mathrm{~km} \end{aligned}$ <br> When cycle runs a speed of 40 kmph , time required would be $\begin{aligned} & S=\frac{D}{T} \\ & 40=\frac{180}{T} \\ & T=\frac{180}{40}=4.50 \end{aligned}$ <br> $T=4$ hours 30 minutes |


| 18 | c | Indirect Variation between $P$ and $T$, $P=k \times \frac{1}{T^{2}}$ <br> When $P=3, T=4$ $\begin{aligned} & 3=k \times \frac{1}{4^{2}} \\ & 3=k \times \frac{1}{16} \\ & k=3 \times 16=48 \end{aligned}$ <br> When $T=2, k=48$ $\begin{aligned} & P=k \times \frac{1}{T^{2}} \\ & P=48 \times \frac{1}{2^{2}} \\ & P=48 \times \frac{1}{4}=12 \end{aligned}$ |
| :---: | :---: | :---: |
| 19 | a | In a mathematical equation of $a+b=8$, if the values of $a$ and $b$, do not change even if equation is squared on both sides, $a$ and $b$ are termed as Constant. <br> Since, the values of $a$ and $b$ do not change with any changes in the situation. |
| 20 | d | Using the joint variation theorem, <br> $\operatorname{MaAx} \frac{1}{D}$ <br> Given that $M=5$, when $A=10$ and $D=9$ $\begin{aligned} & 5=k \times 10 \times \frac{1}{9} \\ & 5=k \times \frac{10}{9} \\ & k=5 \times \frac{9}{10} \\ & k=\frac{9}{2} \end{aligned}$ <br> So, When $M=25$ and $A=30, k=\frac{9}{2}$ $\begin{aligned} & M=k \times A \times \frac{1}{D} \\ & 25=\frac{9}{2} \times 30 \times \frac{1}{D} \\ & 25=9 \times 15 \times \frac{1}{D} \\ & D \times 25=9 \times 15 \\ & D=\frac{9 \times 15}{25}=\frac{27}{5} \text { or } 5 \frac{2}{5} \end{aligned}$ |
| 21 | a | $A$ is Area, $b$ is the Base and $h$ is the Height Equation for triangle $A$ would be $A=b h / 2$ <br> Since, $\frac{1}{2}$ is the Constant in the Equation, with $A, b$ and $h$ as variables. <br> Base is increased by $20 \%$ and the Height is decreased by $10 \%$, <br> New Base would be b $\times \frac{120}{100}=\frac{12}{10}$ b <br> New Height would be $h \times \frac{90}{100}=\frac{9}{10} h$ <br> New Area would be $\frac{\frac{12}{10} \mathrm{~b} \times \frac{9}{10} \mathrm{~h}}{2}$ $\begin{aligned} & \frac{\frac{12}{10} b \times \frac{9}{10} h}{2} \\ & \frac{\frac{108}{100} b h}{2} \end{aligned}$ |


|  |  | $\begin{aligned} & \frac{108}{100} \times \frac{b h}{2} \\ & \frac{108}{100} \times A \\ & 1.08 \mathrm{~A}-\mathrm{A}=0.08 \text { or } 8 \% \text { increase } \end{aligned}$ |
| :---: | :---: | :---: |
| 22 | d | $A$ is Area, $b$ is the Base and $h$ is the Haight Equation for triangle $A$ would be $A=\frac{1}{2}$ <br> Since, $\frac{1}{2}$ is the Constant in the Equation, with $A, b$ and $h$ as variables. Base is decreased by $15 \%$ and the Height is decreased by $20 \%$ <br> New Base would be $b \times \frac{85}{100}=\frac{8.50}{10} b$ <br> New Height would be $h \times \frac{80}{100}=\frac{8}{10} h$ <br> New Area would be $\frac{\frac{8.50}{10} b \times \frac{8}{10} h}{2}$ <br> $\frac{\frac{8.50}{10} b \times \frac{8}{10} h}{2}$ <br> $\frac{\frac{68}{100} \mathrm{bh}}{2}$ <br> $\frac{68}{100} \times \frac{b h}{2}$ <br> $\frac{68}{100} \times A$ <br> $A-0.68 A=0.32$ or $32 \%$ decrease. |
| 23 | b | A is Area, $b$ is the Base and $h$ is the Height Equation for triangle $A$ would be $A=\frac{b h}{2}$ <br> Since, $\frac{1}{2}$ is the Constant in the Equation, with $A, b$ and $h$ as variables. Base is decreased by $15 \%$ and the Height is increased by $25 \%$ <br> New Base would be $b \times \frac{85}{100}=\frac{8.50}{10} b$ <br> New Height would be $h \times \frac{125}{100}=\frac{12.5}{10} h$ <br> New Area would be $\frac{\frac{8.50}{10} b \times \frac{12.5}{10} h}{2}$ $\begin{aligned} & \frac{\frac{8.50}{10} b \times \frac{12.50}{10} h}{2} \\ & \frac{\frac{106.25}{100} b h}{2} \\ & \frac{106.25}{100} \times \frac{b h}{2} \\ & \frac{106.25}{100} \times A \\ & 1.0625 A-A=0.0625 \text { or } 6.25 \% \text { increase. } \end{aligned}$ |
| 24 | c | $A$ is Area, $b$ is the Base and $h$ is the Height Equation for triangle $A$ would be $A=\frac{b h}{2}$ <br> Since, $\frac{1}{2}$ is the Constant in the Equation, with $A, b$ and $h$ as variables. <br> Base is increased by $15 \%$ and the Height is increased by $20 \%$ <br> New Base would be $b \times \frac{115}{100}=\frac{11.50}{10} b$ <br> New Height would be $h \times \frac{120}{100}=\frac{12}{10} h$ <br> New Area would be $\frac{\frac{11.50}{10} b \times \frac{12}{10} h}{2}$ |


|  |  | $\begin{aligned} & \frac{\frac{11.50}{10} b \times \frac{12}{10} h}{2} \\ & \frac{\frac{138}{100} b h}{2} \\ & \frac{138}{100} \times \frac{b h}{2} \\ & \frac{138}{100} \times A \\ & 1.38 A-A=0.38 \text { or } 38 \% \text { increase. } \end{aligned}$ |
| :---: | :---: | :---: |
| 25 | b | Area of Umbrella is $A$, radius of the circle is $R$, <br> Area (A) $=R^{2}=k R^{2}$ <br> $K$ being the constant of variation. <br> If radius is doubled, Area would be $k(2 R)^{2}=k 4 R^{2}=4 A$ <br> Since, new area would be 4A, it would be 4 times the area of the umbrella. |

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## D) Dr A C C C A



Advice

## ABOUT YOUR STUDIES - FOUNDATION COURSE

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

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


Appear For Examination
FINISHED


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 ebulletin everything that you want it to be.

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## Send your Feedback to:

e-mail: studies.ebulletin@icmai.in
website: http://www.icmai.in


Dear Students,

## Message from Directorate of Studies

Heartfelt wishes to you for passing the exam!! All who passed out have been sincere and diligent since day one and never failed to amaze us with your dedication. You've proved that dedication and learning end at resulting in excellent outcomes. Best wishes for achieving the best place. So proud to call you our student! Congratulations and best wishes for your life. May your future be filled with many great achievements like this.

Those who could not pass out please be steady and we believe, everyone has intellect and presence of mind. But only a few students who can deliver the right thing at right time and with right courage become the winner in the examination. So, please try to deliver your best in your next examination.

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. If you sincerely follow those tips, we hope, you will be successful in your endeavor.

To celebrate 75 years of independence and commemorate it as India is celebrating, 'Azadi Ka Amrut Mahotsav' , across the country and amid the coronavirus pandemic and also organizing various events. India's freedom fighters fought a long and hard struggle for the country's independence from the British and, for years, their word's have inspired us. We hope that our students will also participate and pay their homage to the freedom fighters.

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

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Don't give up
- Don't give in
- Don't give out
You can win!
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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;


#### Abstract

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.





CMA P. Raju Iyer, President along with CMA (Dr.) Balwinder Singh, Past President \& Council Member and CMA B.B. Goyal, Former Addl. Chief Adviser (Cost), Ministry of Finance, GoI, extending greetings to Smt. Nirmala Sitharaman, Hon' ble Union Minister of Finance and Corporate Affairs on 11th April, 2022.


Glimpses of the MOU signing ceremony between the Institute of Cost Accountants of India and Maharaja Sayajirao University Baroda on 30th March, 2022.


CMA Vijender Sharma, Vice President of the Institute along with CMA (Dr.) Sreehari Chava, Convenor, Task Force on Agri Cost Management and CMA NRaveendranath Kaushik, Member, Task Force on Agri Cost Management of the Institute extending greetings to Kum. Shobha Karandlaje, Hon'ble Union Minister of State for Agriculture \& Farmers Welfare.


Valedictory Session of Pre-Placement Orientation Programme at Kolkata HQ on 26-03-2022

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[^0]:    Suggestions:
    The study guide needs to be read thoroughly. Supplementary readings could be made from other resources. In this issue discussions are held with to have competence in solving MCQs. These could be used as supplement to the study guide. Students should go thoroughly for clear conception on variation, special relations applicable in the topic variation from Guide book on the paper 4- Fundamental of Business mathematics and Statistics written and issued by Institute on Syllabus -16.

