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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.

PAPER: 1, PART: I
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OF ECONOMICS \& MANAGEMENT (FEM) - ECONOMICS


## 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!! It is heartening to note that Indian Govt. has allowed all the educational institution to reopen after a prolonged two years forced holiday because of Covid 19 pandemic. A few days back a small news item attracted the attention of the whole world. Within 24 hours more than 65 thousand people in Germany were tested covid positive in the fourth wave of the pandemic. Hence, friends there is no scope for complacency. You have to be cautious while going out. Particularly when you are mixing with a crowd. Mask is a must. Avoid touching the outer side of the musk that you are using. Best thing is to avoid crowd. This is absolutely necessary for you because you have not been vaccinated. I hope you are washing your hands frequently when at home and sanitizing the hands when you are out. Take care. Now we start our Mock Test to refresh our concepts.
I. Choose the correct answer:

1. Suppose the demand curve is $D=50-2 p$ and the supply curve is $S=8+5 p$. Find out the equilibrium price.
A. 5
B. 6
C. 7
D. 8
2. If the total utility from 7 units of consumption is 38 and the total utility from 8 units of consumption is 41 . Calculate the marginal utility from the $8^{\text {th }}$ unit.
A. 5
B. 4
C. 3
D. 2
3. If the total utility curve is given by the equation $T U=30+5 Q$, find out the marginal utility

| A. | 5 |
| :--- | :--- |
| B. | 4 |
| C. | 3 |
| D. | 2 |

4. In the above problem, what will be the shape of the marginal utility curve?
A. Downward falling to the right
B. Upward rising to the right
C. Parallel to the $x$-axis
D. Parallel to the $y$-axis
5. Deficit financing means
A. Govt. has deficit in foreign exchange reserve
B. Govt,'s current account deficit
C. Govt. spending increases beyond what can be financed by taxation
D. None of the above
6. If the total value of transaction(in real terms) $=10000$, total money supply=Rs. 50000 and the velocity of money=2, find out the price level.
A. 5
B. 10
C. 20
D. 100
7. If the price of petroleum rises, it will result in
A. A fall in the demand for petroleum as it has elastic demand
B. A deflation
C. An inflation
D. None of the above
8. The impact of internal dis-economies is
A. A shift of the LAC curve upwards
B. A movement along the LAC curve upwards
C. A movement along the LAC curve downward
D. None of the above
9. Under perfect competition
A. There is no supply curve
B. The products are substitutes
C. There are many sellers and many buyers
D. None of the above
10. Monopoly is a market
A. Where there is no supply curve
B. Where there is a few sellers
C. Products are strong substitutes to each other
D. None of the above

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

1. In case of inferior goods, if income rises, then the demand will $\qquad$
2. Consumer surplus is the difference between willing price and . price.
3. Net investment = gross investment minus $\qquad$ .....
4. A bank must keep ............ Cash in hand to meet the closing of deposotors
5. Generally commercial bills are prepared for the period of $\qquad$ days

KEY: 1. Fall, 2. Actual, 3. Depreciation, 4. Idle, 5. 90
III. True or false:

1. The purchasing of new shares of a company is called portfolio investment
2. Higher taxes on goods will increase their supply
3. Production function expresses the relationship between the physical inputs and physical output of a firm
4. Average revenue is the revenue per unit of output
5. If the two markets are separated by tariff barrier, the monopolist will follow the principle of monopolistic competition

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

| 1. Homogeneous product | A. Money |
| :--- | :--- |
| 2. Giffen good | B. perfect competition |
| 3. Store of value | C. violets demand law |
| 4. SDR | D. Keynes |
| 5. Fiscal policy | E. IMF |

KEY: $\quad$ 1. B, 2. C, 3. A, 4. E, 5. D
Hullow friends!! Hope you have enjoyed the mock test. Here we have tried to put greater emphasis on the mathematical concepts in economics. Clarity of the concepts in economics largely depends on sound mathematical knowledge. It will be better if you brush up your knowledge on mathematics. Best of luck!!!

PAPER: 1, PART: II
FUNDAMENTALS OF ECONOMICS \& MANAGEMENT (FEM) - MANAGEMENT

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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. Which of the following statements is correct?
A. Controlling is a substitute for planning
B. Controlling is a part of the planning process
C. A control process is meaningless without pre-set goals
D. Planning and controlling are essentially one and the same

Answer: C
2. Which one of the following is not a disadvantage of planning?
A. Time Consuming
B. Rigidity
C. False sense of Security
D. Reduces Employee's Morale

Answer: D
3. According to Management 2.0, leaders will no longer be seen as (), instead, they will need to become ( )Which one is the correct option?
A. Grand visionaries, social architects
B. Constitution writers, all-wise decision makers
C. Entrepreneurs of meaning, ironfisted disciplinarians
D. All of the above

Answer: D
4. Managers make rational decisions but within the limits of their mental capabilities and information available to them.

This theory is known as:
A. Limited Rationality
B. Bounded Rationality
C. Pragmatic Rationality
D. None of these

Answer: B
5. "To manage is to forecast and plan, to organize, to compound, to co-ordinate and to control" This definition was given by:
A. Peter Drucker
B. Henri Fayol
C. Louis Allan
D. Terry

Answer: B
6. In Line and Staff organization, the authority lies in:
A. Line
B. Staff
C. Both Line and Staff
D. None of the above

Answer: A
7. Which of the following is correct definition of management?
A. Management is an art or technique of getting things done
B. Management is a process of planning, organizing, staffing, directing and controlling.
C. Management is set of activities directed and effective utilization of resources in the pursuit of one or more goals
D. All of the above

Answer: D
8. The extent to which power and authority are retained at the top management is called as:
A. Centralization
B. Decentralization
C. Responsibility
D. Accountability

Answer: A
9. The process involved in recruiting, hiring, training, evaluating, compensating, and laying off people is called:
A. Selection
B. $S$
C. Leader
D. Liaison

Answer: B
10. Which is the second level need as per Maslow's Need Hierarchy Theory?
A. Self-Actualization need
B. Belongingness need
C. Physiological need
D. Safety/security need

Answer: D
11. Which of Fayol's principle states that workers should be encouraged to develop and carry out plans for improvement?
A. Initiative
B. Unity of direction
C. Discipline
D. Coordination

Answer: A
12. Men, Money, Material and Machines are included in:
A. Factors of production
B. Resources
C. Budget Preparation
D. Cost analysis

Answer: B

13. According to the principle of "Span of control" there is:
A. A limit to delegation of authority to the subordinate.
B. A tendency of overload supervisors with too much of work
C. No limit to the number of subordinates a supervisor can supervise.
D. A limit to the number of subordinates a supervisor can effectively supervise.

Answer: A
14. A person who encourages staff participation in decision-making process is which type of leader?
A. Participative
B. Situational
C. Charismatic
D. Bureaucratic

Answer: A
15. Recruitment can be best described as:
A. Invitation of potential employees to an organization
B. Selection of potential employees to an organization
C. Scrutiny of potential employees to an organization
D. Attraction of potential employees to an organization

Answer: D.

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

Once there was a great king, who was traveling alone in a forest. Soon, he lost his way and was looking around from a hilltop but could not see any people or villages nearby
It was becoming dark. After some time, he saw some kind of light at a long distance. He started walking in that direction and soon reached a hut.

Outside the hut, there was an old woman who was cleaning the place. After seeing the king, she welcomed him thinking that he was a soldier from King's army.
She gave the king some water to clean himself and some water to drink. She then spread a mat for him to relax. King started relaxing.

After some time, she bought a plate of hot rice and curry and placed it before him. The king was so hungry that he quickly put his fingers on the hot food. The hot food burnt his" fingers and he spilled some rice on the floor during the process.
The old woman saw this and Said, "Oh, you seem too impatient and hasty like your king, that's why you have burnt your fingers and lost some food".
Hearing the old woman's words, the king was surprised and asked her "why do you think our king is impatient and hasty?."

The old woman smiled and begins to explain to him. "My dear son, our king is having a big dream of capturing all his enemy forts. During the process, he is ignoring all the small forts of his enemy and trying to capture only the big forts."
The king interrupted the old woman and Said "That's the good thing right. What's the problem with that?"
She smiled and replied, "Wait, my son. Like your impatience in eating the food, you burned your fingers and wasted some food, In the same way, the king's impatience to defeat the enemies quickly, causing him the loss of men in his army as well as a worry to him.

So, instead, if you would have eaten the food at the edge of the plate which was cooler, and then at the center, you would not have burnt your fingers as well as not wasted your food.
Similarly, the king should target the small forts and strengthen his position. This will help him to capture the bigger forts without loss of men from his army".
Hearing this, the king understood his mistake and realized that one should have patience and avoid making any haste in any situation.

Moral of the story:

When you want to achieve something in life, first understood the process of what it takes to achieve it and work on it. Instead, if you are looking for quick results you will become impatient and never achieve what you want in your life.

WRITE WHETHER THE FOLLOWING STATEMENTS ARE TRUE OR FALSE:

1. ACCOUNTING IS AS OLD AS MONEY
2. A TRANSACTION WHICH INCREASES THE CAPITAL IS INCOME
3. AMOUNT OWED TO CREDITORS IS CALLED CAPITAL
4. ACCOUNTING IS A SERVICE FUNCTION
5. RECEIPTS AND PAYMENTS ACCOUNT IS BASED ON ACCRUAL BASIS

WRITE WHICH OF THE FOLLOWING STATEMENTS ARE TRANSACTIONS:
6. AN EMPLOYEE IS DISMISSED FROM JOB
7. GOODS ARE ORDERED FOR DELIVERY NEXT MONTH
8. LAND IS PURCHAED FOR CASH
9. GOODS ARE PURCHASED ON CREDIT
10. INSURANCE CLAIM ADMITTED BY INSURANCE COMPANY AGAINST LOSS BY FIRE

STATE WHICH OF THE FOLLOWING OPTIONS ARE CORRECT:
11. THE INFORMATION PROVIDED IN THE ANNUAL FINANCIAL STATEMENT OF AN ENTERPRISE PERTAINS TO A. INDIVIDUAL BUSINESS ENTERPRISE
B. BUSINESS INDUSTRIES
C. THE ECONOMY AS A WHOLE
D. NONE OF THE ABOVE
12. WHICH OF THE FOLLOWING IS CORRECT?
A. CLOSING CAPITAL = OPENING CAPITAL+ ADDITIONA L CAPITAL-PROFIT-DRAWINGS
B. CLOSING CAPITAL = OPENING CAPITAL+ ADDITIONA L CAPITAL-+PROFIT - DRAWINGS
C. CLOSING CAPITAL = OPENING CAPITAL- ADDITIONA L CAPITAL-LOSS - DRAWINGS
D. NONE OF THE ABOVE
13. WHICH OF THE FOLLOWING IS A CREDIT TRANSACTION?
A. SOLD GOODS
B. SOLD GOODS FOR CASH
C. SOLD GOODS TO HARISH FOR CASH
D. SOLD GOODS TO HARISH
14. WHICH OF THYE FOLLOWING ACCOUNT WILL HAVE A CREDIT BALANCE?
A. CARRIAGE INWARD
B. CARRIAGE OUTWARD
C. RETURN INW ARD
D. RETURN OUTWARD
15. LEDGER FOLIO COLUMN IN TE JOURNAL IS FILLED WHILE:
A. JOURNALISING
B. BALANCING
C. POSTING
D. CASTING
16. DEPRECIATION IS:
A. A FALL IN THE ORIGINAL COST OF AN ASSET
B. A FALL IN THE BOOK VALUE OF AN ASSSET
C. A FALL IN THE MARKET VALUE OF AN ASSET
D. NONE OF THE ABOVE
17. PROVISION FOR DEPRECIATION IS:
A. AN APPROPRIATION OF PROFIT
B. A CHARGE AGAINST PROFIT
C. A CHARGE AGAINT ASSET
D. NONE OF THE ABOVE
18. PURCHASE BOOKS RECORDS:
A. ALL PURCHASES
B. ONLY CASH PURCHASES
c. ONLY CREDIT PURCHASES
D. NONE OF THE ABOVE

## ANSWERS

$1 \mathrm{~T}, 2 \mathrm{~T}, 3 \mathrm{~F}, 4 \mathrm{~T}, 5 \mathrm{~F}, 6 \mathrm{NO}, 7 \mathrm{NO}, 8$ YES, 9 YES, 10 YES, $11 \mathrm{~A} 12 \mathrm{~B}, 13 \mathrm{D}, 14 \mathrm{D}, 15 \mathrm{C}, 16 \mathrm{~B}, 17 \mathrm{~B}, 18 \mathrm{C}$


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## PAPER: 3

## Your Preparrection 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

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.

Now, let us understand 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, 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 Offers and Acceptances legally and establish Legal relationship for lawful consideration and perform your professional duties. Keeping that in mind, you have to study this subject seriously.

The first TIP is that you must start thinking like A Teacher. You must start studying the subject and raise questions to yourself and find your own answers.

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

## Sale of Goods Act,1930

## Auction Sale :

In an auction sale, there is an Auctioneer who is appointed by the owner of a property to sell property by inviting bids publicly and the property is sold to the highest bidder. However, the Auctioneer warrants the following :-

1. That the auctioneer has authority to sell
2. That the auctioneer has no knowledge that property under sale on behalf of his principal has any defects as to title ; and
3. The buyer shall get quiet title to the possession of the property against payment of a price.

The question arises, what could be the Rules regarding Sales by auction?
Section 64 of the Sale of Goods Acts lays the rules which are as follows:

1. Where the goods are put to sale in lots, each lot is deemed to be subject to separate contract of sale:
2. The sale is complete only after the customary fall of the hammer when the auctioneer repeats the final offer three times and announces the completion of the sale. Until the fall of the hammer the bidder may retract his/her bid. The fall of the hammer amounts to acceptance of the offer.
3. The Seller may expressly reserve his right to bid in the auction. Such a sale has to be notified in advance. If such a right is expressly reserved, seller or any other person on his behalf may, bid at the auction. It may be kept in mind that without any express reservation and advance notification, the seller or any person on his behalf, cannot bid at an auction as it shall not be lawful and considered as fraudulent by the buyer acting on behalf of the seller.
4. The sale may be notified to be subject to a Reserved Price, that is, a price below which the goods/property will not be sold. The Reserve Price can be kept secret.
5. Where the seller resorts to pretended bidding, just to raise the price, the sale becomes voidable at the opinion of the buyer.

Who is an unpaid vendor/seller of goods?
The answer must be thought logically. A seller is considered unpaid if -

1. If the entire price of the goods sold has not been paid or remitted; or
2. If a Bill of Exchange or Negotiable Instrument has been received from the buyer by the seller as a conditional payment but that instrument has been dishonoured or the conditions on which it was issued has not been fulfilled. Please refer Sec.45(1)
That obviously raises a question - What shall be the Unpaid Seller's / Vendor's Right. It has may be remembered that the Vendor can exercise his rights even where the property in the goods has passed to the buyer.

## The following are the Rights of the Unpaid Vendor/Seller :-

## 1. Vendor's Lien :

The unpaid Vendor, who still holds possession of the goods, is entitled to retain possession of the goods (this is called exercising the right of lien, for non-payment of the price but not for any other charges. For example, the godown charges, if any, paid by
the seller for storing the undelivered goods cannot be a reason for exercising lien ) until the payment is made or remitted provided -
a) The goods were sold without any stipulation as to credit '
b) The goods were sold on credit, but the terms of credit has expired (it may be noted that the seller cannot refuse to hand over possession of the goods unless the terms of credit has expired); or
c) The buyer has become insolvent.

A question may come to mind - what happens if the seller has made part delivery of the goods? in such a case, the seller can exercise lien on the balance of the goods not yet delivered provided the part delivery was not made with an intention to waive the lien.
2. The Right of Stoppage in Transit .

Suppose the goods were dispatched to the buyer, but before the goods were delivered or before the seller got payment of the price, the buyer became insolvent, in such a case, the seller can resume possession of the goods from the carrier.

This is called the right of stoppage in transit. Please note the following points :
a. Goods are in transit from the time they are delivered to the carrier, till the time they are delivered to the buyer or his agent.
b. The right to stoppage in transit comes to an end as soon as the goods are delivered to the buyer or his agent. However, if the after arrival of the goods at the destination, the carrier intimates to the buyer that the goods are being held by him (the carrier) on behalf of the buyer, the seller's right to take back possession comes to an end.
c. If the carrier wrongfully refuses to deliver the goods to the buyer, the transit of the goods comes to an end and the seller's right to stop transit too ceases.
d. Where the seller made part delivery of the goods, in such a case, the seller can only stop the goods in transit, provided it can be proved that the part delivery was not made with an intention to waive the lien.
e. The buyer need not be declared insolvent in the court of law. Insolvency here, denotes that the buyer has become financially embarrassed.
f. The vendor/seller can exercise right of stoppage, by either taking actual possession of the goods or by directing the carrier to send back the goods to him or his agent and the expense of such return delivery shall be borne by the seller.

## The Right to Resale

The unpaid seller/vendor who has retained possession of the goods by exercising his lien or has taken back possession from the carrier upon insolvency of the buyer can resell the goods, under the following circumstances : If the goods are perishable, those can be sold off without notice to the buyer; otherwise
a) By first giving notice to the buyer and allowing him reasonable opportunity and time to pay/ remit the price, and then resell only if the buyer fails to pay;
Here too, if the seller, upon resale, gets more value for the goods, he can retain the excess amount, but, if the sale value is less than what was due from the buyer, the seller can sue the buyer for the balance. The buyer remains liable to compensate the seller for damages, if any, suffered by the seller. The next buyer gets good title of the goods .

## 3. Suit for Price :

a) Under a contract of sale, where the property in the goods has passed on to the buyer, and the buyer does not act as per term s of the contract and fails to pay or neglects to pay, the seller can sue the buyer for the price of the goods:
b) If under the terms of a contract, the buyer is to pay the price on a certain day irrespective of the actual delivery of the goods and the buyer fails to pay or neglects to pay, the seller can sue the buyer for the price even though the property in the goods has not passed to the buyer

Let us recapitulate something we read earlier in The Indian Contracts Act, 1872 :

## Quasi Contracts , Contingent Contracts

Quasi-contract is also an implied contract. A Quasi-contract can be best understood with the help of examples. Mr. X placed an order for home delivery of certain foods on a local Restaurant for dinner at fixed rates, terms and condition, payable on delivery. The delivery person arrives with the dinner packets along with 2 Cups of Ice cream. You accept everything and sign the Proof of Delivery (POD) Slip and pay to the delivery person. In this case you did not ask for the ice creams, you accepted those and did not pay for those. So here, your acceptance is implied and you make a Quasi-contract. The restaurant could have asked for payment but it did not.
c) Another example : Suppose you have a neighbor who is the only earning member in his family, living with his wife and a minor son. He becomes incapacitated after a road accident and loses his memory completely. You take the responsibility of supplying necessary food and medicines to that family. In such cases you are entitled to be reimbursed only out of the property of the incapacitated person to the extent the price of your supplies are reasonable.
d) Let us take another example - Your brother borrowed money from a bank but was unable to pay the bank at that time even though he was bound to do so. You paid off the loan on his behalf. In this case, your are entitled to get reimbursement from your brother under Sec.69.
e) In another case, suppose a delivery man came to deliver some goods that you had ordered online. After that man left, you find that he has left a bag full of some other items which you picked up and kept as if those were yours. In such a case, you are bound to compensate for those items in cash or return the same items - Sec.70.
f) In another case, suppose you find a child on the street. You must take reasonable care of that child till you trace the guardian or deposit the child legally to a custodian. In this case the true guardian must reimburse to you the
total costs and expenses you incurred while the child was under your care and protection.
g) In another case, suppose you and your friend both went to a shop and bought a shirt for Rs. 500 on credit. The next day your friend went to the shop before you and paid-off Rs. 500 to the shopkeeper. In the evening you went to the same shop and again paid Rs. 500 to the shopkeeper. In this case, the shopkeeper is bound to repay Rs. 500 to you-Sec. 72
h) All the above examples are of Quasi-contracts.

I So, let us understand why they are called Quasi-contracts. In each case, one person obtains a benefit at the expense of another and even though there is no contract between the parties, the law compels the beneficiary to pay. In such contracts, a relationship between the parties is established as if a contract was created.

Now let us discuss Contingent Contracts.
First let us understand what is Contingency. It is some future event, which is possible, but cannot be predicted with certainty. For example, an accident which can always happen but no one can say that it will definitely happen. Now, let us take a practical example. You tell your friend that you will pay Rs.50,000 for his (your friend's) son's admission into college if, he (your friend) dies. This is a contingent contract. So, we realize two things in a Contingent Contract-1. The performance depends on a contingency; and 2. The contingency is uncertain.

Now, please read Sections 32 to 36 of the Contract Act, 1872 carefully and remember the Rules regarding Contingent Contracts which are as follows -.

1. Contingent contracts cannot be enforced by law unless and until that event has happened.
2. Contracts contingent on the non-happening of an uncertain event can be enforced only when that event becomes impossible. Example : A promises to pay Rs. 10,000 to $B$ if $B^{\prime} s$ son gets a $1^{\text {st }}$ Class in the B. Com. examination. The results are declared and the son get a $2^{\text {nd }}$ Class. B cannot enforce the contract as it is Impossible for the son to get a $1^{\text {st }}$ Class any longer in the same examination.
3) A contract which is contingent upon how a person shall act at an unspecified time shall become impossible when that person does something that renders it impossible to perform. For example - A promises to pay $B, R s .1,00,000$ if B's daughter marries A's son. B's daughter marries somebody else's son. Here the contract becomes impossible even though it is possible that $B$ 's daughter may marry $A$ 's son later, if her present husband dies and $A$; s son is eligible to marry.
4) A contract which is contingent upon the happening of an event within a fixed time, becomes void if the event does not happen within the fixed time or if it cannot happen within that fixed time. For example - $A$ enters into a contract to buy B's house within 6 months at a certain price. The contract cannot be enforced after 6 months or if the building gets destroyed due to an earthquake within those 6 months.
5) A contingent agreement to do something that is impossible to perform is void, whether such an event was known or not known to the parties to such agreement at the time the agreement was made. For example $X$ agrees to pay Rs. 2 lalks to $Y$ if $Y$ marries $X$ 's daughter $Z$. $Z$ was already dead at the time of the agreement. Therefore, this agreement is void.


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

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## Your Proppararilon Quick Takes



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 we will discuss MCQs \& other short type questions on Ratio Proportions Progressions
Q1. The ratio between Rs. 10 and Rs. 12 is
(a) Rs. $\frac{10}{12}$
(b) $\frac{10}{12}$
(c) $\frac{R s . ~}{\text { Rs. } 12}$
(d) $\frac{10}{12}$ Rs.

Q2. If $x: y=\frac{x}{y}$ then $\frac{x}{y}$ is equal to
(a) $\frac{p x}{m y}$
(b) $\frac{p x}{y}$
(c) $\frac{x}{m y}$
(d) $\frac{p m x}{p m y}$

Q3. In a fraction $\frac{a}{b}$
(a) The numerator $a$ is called the antecedent of the ratio and denominator $b$ is called the consequent of the ratio
(b) The numerator $a$ is called the consequent of the ratio and denominator $b$ is called the antecedent of the ratio
(c) The antecedent $a$ is called the numerator of the ratio and consequent $b$ is called the denominator of the ratio
(d) The consequent $a$ is called the numerator of the ratio and antecedent $b$ is called the denominator of the ratio

Q4. Which one of the following is correct?
(a) $8: 9$ is greater than 7:6
(b) $8: 9$ is less than $7: 6$
(c) $8: 9$ is equal to $7: 6$
(d) Ratios cannot be compared like this

Q5. A ratio $a: b$ is said to be of less inequality if
(a) $a<b$
(b) $a>b$
(c) $a=b$
(d) $a \leq b$

Q6. Ratio $a: b$ is inverse of ratio $c: d$ if
(a) $\frac{a}{b} \times \frac{d}{c}=1$
(b) $\frac{a}{b} \times \frac{c}{d}>1$
(c) $\frac{a}{b} \times \frac{c}{d}=1$
(d) $\frac{b}{a} \times \frac{c}{d}=1$

Q7. With two given ratios $a: b$ and $c: d$
(a) ab: cd is said to be compounded of the two given ratios
(b) ac : bd is said to be compounded of the two given ratios
(c) $b c$ : ad is said to be compounded of the two given ratios
(d) ad : bc is said to be compounded of the two given ratios

Q8. For the ratio X:Y
(a) The duplicate ratio is $2 X: 2 Y$
(b) The duplicate ratio is $(X / 2):(Y / 2)$
(c) The duplicate ratio is $\left(X^{2}\right):\left(Y^{2}\right)$
(d) The duplicate ratio is $\sqrt{X}: \sqrt{Y}$

Q9. For the ratio $X: Y$, Sub triplicate ratio is
(a) $\sqrt[5]{x}: \sqrt[5]{y}$
(b) $x^{3}: y^{3}$
(c) $3 X: 3 Y$
(d) 1
(d) $\sqrt[\frac{s}{X}]{x}: \sqrt[\bar{s}]{y}$

Q10. Say True or False
The ratio of any two quantities cannot always be expressed as the ratio of two integers.
Q11. Which one of the following is correct?
(a) Two quantities are said to be commensurable if the ratio between them can be expressed as the sub duplicate ratio
(b) Two quantities are said to be commensurable if the ratio between them can be expressed as the sub triplicate ratio
(c) Two quantities are said to be commensurable if the ratio between them can be expressed as the ratio of two integers
(d) Two quantities are said to be commensurable if the ratio between them can be expressed as the triplicate ratio of any integers

Q12. If the yearly earnings of three persons $A, B$ and $C$ be R20000, R30000 and R40000 then
(a) Earnings of $A, B, C$ are in the continued ratio of 6:12:8
(b) Earnings of $A, B, C$ are in the continued ratio of $2: 3: 4$
(c) Earnings of $A, B, C$ are in the continued ratio of 6:4:3
(d) Earnings of $A, B, C$ are in the continued ratio of 2:1.33:1

Q13. A ratio of greater inequality
(a) is increased by adding the same positive number to both its antecedent and consequent
(b) is increased by multiplying the same positive number to both its antecedent and consequent
(c) is diminished by adding the same positive number to both its antecedent and consequent
(d) is diminished by multiplying the same positive number to both its antecedent and consequent

Q14. If in a ratio $X: Y$ it is given $X>Y$ and $A$ is a number which must be less than either $X$ or $Y$ then
(a) $\frac{X+A}{Y+A}>\frac{X}{Y}$
(b) $\frac{X-A}{Y-A}>1$
(c) $\frac{X+A}{Y+A}<1$

(d) $\frac{X-A}{Y-A}>\frac{X}{Y}$

Q15. Which one of the following is correct?
(a) A ratio of greater inequality when compounded with another ratio of greater inequality increases it
(b) A ratio of greater inequality when compounded with another ratio of less inequality increases it
(c) A ratio of greater inequality when compounded with another ratio of greater inequality decreases it
(d) A ratio of greater inequality when compounded with another ratio of less inequality decreases it

Q16. If $m$ th term of an AP is $\frac{1}{n}$ and $n$th term is $\frac{1}{m}, m \quad n$, show that the first term is equal to the common difference Ans:
Let a denote the first term and $d$ the common difference. So by question we can write
$\frac{1}{n}=a+(m-1) d \& \frac{1}{m}=a+(n-1) d$
Or, $\frac{1}{n}-\frac{1}{m}=(m-1) d-(n-1) d$
Or, $\frac{m-n}{m n}=(m-n) d$
Or, $d=\frac{1}{m n}$

Now we can write $a=\frac{1}{n}-(m-1) d=\frac{1}{n}-(m-1) \frac{1}{m n}=\frac{1}{n}-\frac{m}{m n}+\frac{1}{m n}+\frac{1}{m n}=\frac{1}{m n}=d$
Q17. The sum of first $n$ terms of two AP are $3 n+8,7 n+15$. The ratio of their $15^{\text {th }}$ term is
(a) $95 / 218$
(b) $38 / 120$
(c) $38 / 95$
(d) $120 / 218$

Q18. If $\frac{b-a}{c+b}=\frac{c-b}{b+a}$ which one of the following is correct?
(a) $(a-b),(b-c),(c-a)$ are in AP
(b) $a, b$, care in AP
(c) $a^{2}, b^{2}, c^{2}$ are in AP
(d) $(a+b),(b+c),(c+a)$ are in AP

Q19 If $1^{\text {st }}$ term and $3^{\text {rd }}$ term of an A.P is $\frac{3}{4} \& \frac{7}{12}$ respectively, then sum of first 19 terms of the series is
(a) -19
(b) 1
(c) 19
(d) 0

Q20. If $p$ th, $q$ th, $r$ th terms of an AP are $a, b, c$ respectively. Show that $(q-r) a+(r-p) b+(p-q) c=0$

## Ans:

By question we can write

$$
\begin{aligned}
& a=A+(p-1) d \\
& \text {..................(i) } 1
\end{aligned}
$$

Where $A$ is the first term and $d$ is the common difference.
By (i) $\times(q-r),(i i) \times(r-p) \&(i i i) \times(p-q)$ we get $a(q-r)+b(r-p)+c(p-q)$
$=A(q-r+r-p+p-q)+d[(p-1)(q-r)+(q-1)(r-1)(p-q)]$
$=0+d[p q-q-p r+r+q r-r-p q+p+p r-p-q r+q]$
$=0+0=0$
Q21. Suppose A.M of and $b$ is $\frac{a^{n+1}+b^{n+1}}{a^{n}+b^{n}}$ Then $n$ is
(a) 1
(b) 0
(d) Indeterminable

Q22. A man secures an interest free loan of R14500 from a friend and agrees to repay it in 10 instalments. He pays R1000 as first instalment and then increases each instalment by equal amount over the preceding instalment. What will be his last instalment?
Ans:
Let the first instalment is $A$ and equal increased amount is $d$
So payment of instalments will form a series like $A+(A+d)+(A+2 d)+$
Now by question $A=1000$
$s_{10}=14500=\frac{10}{2}[2 \times 1000+(10-1) d]$
Or, $2900=[2000+9 d]$
Or, 2900-2000 = 9d
So, $d=100$
We have to find out the last instalment. That is we have to find the last term of the series. So we can write $t_{10}=A+9 d=1000+9 \times 100=1900$
Q23. If $x=1+a+a^{2}+$ $\qquad$ $\infty(0<a<1) \& y=1+b+b^{2}+$ $\qquad$ $\infty(0<b 1)$
Then $1+a b+a^{2} b^{2}+$ $\qquad$ $. \infty=\frac{x y}{x+y-1}$
Ans: From question we can write $x=1+a+a^{2}+$ $\qquad$ $\infty=\frac{1}{1-a}$
So, $1-a=\frac{1}{x}$
Or, $a=1-\frac{1}{x}$

Similarly $y=1+b+b^{2}+$ $\qquad$ $\infty=\frac{1}{1-b}$
So $1-b=\frac{1}{y}$
Or, $b=1-\frac{1}{y}$
Now we can write $1+a b+a^{2} b^{2}+\ldots . . . . . . \infty=\frac{1}{1-a b}$ [From sum of infinite GP series when
common ratio<1)
So $\frac{1}{1-a b}=\frac{1}{1-\left(1-\frac{1}{x}\right)\left(1-\frac{1}{y}\right)}=\frac{x y}{x y-x y+x+y-1}=\frac{x y}{x+y-1}$
Q24. To verify cash balances, the auditor of a certain bank, employs his assistant to count cash in hand of R4500. At first he counts quietly at the rate of R150 per minute for 10 minutes only but at the end of that time he begins to count at the rate of R2 less every minute that he could count in the previous minute. Ascertain how much time he will take to count his sum of R4500.
Ans:
For the first 10 minutes the assistant can count @ R150/minute. So total amount counted is R1500. Therefore the balance amount will be R (4500-1500) = R3000.
Now by question we can write $148+146+144+\ldots . . . . . . . . . n$ terms $=3000$
So we can write nS $=n 2\left[2 \times 148+(n-1)^{*}(-2)\right]=3000$
Or, 6000 $=n[296-2 n+2]$
Or, $6000=298 n-2 n^{2}$
Or, $3000=149 n-n^{2}$
Or, $n^{2}-149 n+3000=0$
Or, $n=24$ or 125 (in feasible because before this total counting will be finished Therefore the assistant will take $(10+24)=34$ minutes to count the sum of R4500.

Q25. If $a^{\prime}=1+c^{a}+c^{2 a}+$ $\qquad$ $\infty(0<c<1)$
And $\mathrm{b}^{`}=1+\mathrm{c}^{\mathrm{b}}+\mathrm{c}^{2 \mathrm{~b}}+\mathrm{c}^{3 \mathrm{~b}}+$ $\qquad$ $\infty(0<c<1)$
Then prove that $c=\frac{\left(a^{\prime}-1\right)^{\frac{1}{a}}}{a^{\prime}}=\frac{\left(b^{\prime}-1\right) \frac{1}{b}}{b^{\prime}}$
Ans:
By question we can write $a^{\wedge}=1+c^{a}+c^{2 a}+c^{3 a}+\ldots \ldots \ldots . . . \infty=\frac{1}{1-c^{a}}$ [from sum of infinite GP series]
Similarly $b^{`}=1+c^{b}+c^{2 b}+c^{3 b}+\ldots \ldots \ldots \ldots \infty=\frac{1}{1-c^{b}}$
Now $\frac{\left(a^{\prime}-1\right)^{\frac{1}{a}}}{a^{\prime}}=\frac{\left(\frac{1}{1-c^{a}}-1\right)^{\frac{1}{a}}}{\frac{1}{1-c^{a}}}=\frac{\left(\frac{1-1+c^{a}}{1-c^{a}}\right)^{\frac{1}{a}}}{\frac{1}{1-c^{a}}}=\frac{\left(c^{a}\right)^{\frac{1}{a}}}{1}=c$
Similarly $\frac{\left(b^{\prime}-1\right)^{\frac{1}{b}}}{b^{`}}=c$


Answers:

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 | Q17 | Q18 | Q19 | Q21 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $b$ | $d$ | $a$ | $b$ | $a$ | $c$ | $b$ | $c$ | $a$ | T | $c$ | $b$ | $c$ | $d$ | $a$ | $a$ | $c$ | $d$ | $b$ |

Answer Explanations:
Q17. By question we can write $\frac{2 a+(n-1) \grave{x} d}{2 a^{+}+(n-1) \times d^{\prime}}=\frac{3 n+8}{7 n+15}$
We have to find $\frac{a+14 d}{a^{\prime}+14 d}=$ ?

$$
\frac{a+14 d}{a^{\prime}+14 d^{\prime}}=\frac{2 a+28 d}{2 a^{\prime}+28 d^{\prime}}
$$

Now in $\frac{2 a+(n-1) \times d}{2 a^{`}+(n-1) \times d^{\prime}}$ we put $n=29$ we get $\frac{2 a+28 d}{2 a^{`}+28 d^{`}}$
But $\frac{2 a+28 d}{2 a^{`}+28 d^{\prime}}=\frac{3 n+8}{7 n+15}=\frac{3 \times 29+8}{7 \times 29+15}=\frac{95}{218}$ So the answer

Q18.
$\frac{b-a}{c+b}=\frac{c-b}{b+a}$
Or, $b^{2}-a^{2}=c^{2}-b^{2}$
Or, $2 b^{2}=a^{2}+c^{2}$
Hence the result
Q19.
Let $2^{\text {nd }}$ term is $A$. Then by question we can write
A $-\frac{3}{4}=\frac{7}{12}-A$
Or, $2 A=\frac{7+9}{12}=\frac{16}{12}=\frac{4}{3}$
So, $A=\frac{2}{3}$
So, Common Difference : $\frac{2}{3}-\frac{3}{4}=-\frac{1}{12}$
So, $\frac{19}{2}\left\{2 \times \frac{3}{4}+18 \times\left(-\frac{1}{12}\right)\right\}=0$
Q21. By question we can write
$\frac{a+b}{2}=\frac{a^{n+1}+b^{n+1}}{a^{n}+b^{n}}$
Or, $\frac{(a+b)\left(a^{n}+b^{n}\right)}{2}=a^{n+1}+b^{n+1}$
Or, $a^{n+1}+a^{n} b+b^{n} a+b^{n+1}=2\left(a^{n+1}+b^{n+1}\right)$
Or, $a^{n} b+b^{n} a-b^{n+1}$
Or, $a^{n}(a-b)=b^{n}(a-b)$
Or, $\left(\frac{a}{b}\right) n=1^{0}$
Or, $n=0$
Suggestions:
This study note need to be read thoroughly. Supplementary readings could be made from other resources. This issue is based totally on study guide issued by the institute. Standard books on business mathematics could be referred for additional expertise to attend the short questions. This lesson is an extension of discussion on the topic in guide book. Students should try to understand the illustrations considered. This is purely an aid to study guide on paper 4-Fundamental of Business mathematics and Statistics written and issued by Institute on Syllabus -16.


# Examinination TINT: TARILE 



## (D) $\stackrel{D}{\square} \sqrt{\Delta} \rightarrow \square \rightarrow \Delta \Delta \square$



## 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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## Updation of E-Mail Address/Mobile:

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## Send your Feedback to:

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## Message from

 Directorate of StudiesDear 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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## THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

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## Few Snupshots



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 (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 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 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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