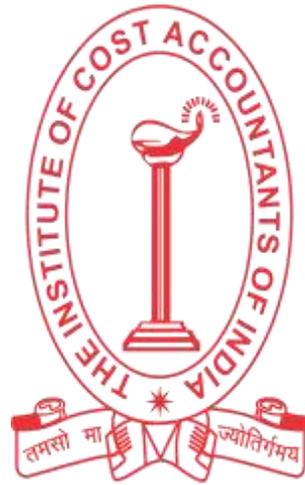


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Knowledge Update

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.

Fundamentals of Economics & Management (FEM)

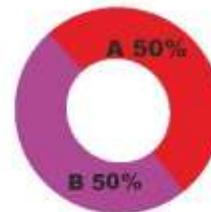


PAPER: 1, PART: I

FUNDAMENTALS **OF ECONOMICS & MANAGEMENT** **- (FEM) - ECONOMICS**

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Your Preparation Quick



Syllabus Structure

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

Learning Objectives:

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

Economics

Hallow friends !! Hope you have enjoyed Holy, the festival of colours with your friends. I wish your academic career to be extremely colourful. Corona virus has come to stay, I predicted. See what is happening with Adeno virus which is a variant of the mutating Corona virus. Child-death is reaching alarming proportion. So there is no scope for complacency. You have to be extremely careful about your health. Avoid crowded area. If you are in a crowd, make sure that you are wearing a mask. Also carry a small bottle of sanitizer and use it frequently till you reach home. Take vaccine at least twice whenever your turn comes. Negligence will be suicidal for you. So be careful. Now we start our usual exercise of mock test.

I. Choose the correct answer:

- 1. The market demand curve for a commodity can be derived from the**
 - A. Horizontal summation of individual demand curves
 - B. Vertical summation of individual demand curves
 - C. Cumulative summation of individual demand curves
 - D. None of the above
- 2. The mid point of a linear demand shows a price elasticity of demand which is**
 - A. Relatively elastic
 - B. Relatively inelastic
 - C. Unit elastic
 - D. Perfectly inelastic
- 3. For an inferior good, the value of income elasticity of demand is**
 - A. Positive

- B. Negative
C. Unity
D. Zero
4. **When both AR and MR are downward sloping straight lines, then the absolute slope of the AR curve will be**
A. Twice that of the MR curve
B. Half of that of the MR curve
C. Equal to that of the MR curve
D. None of the above
5. **When $e > 1$, then with the fall in price, TR will**
A. Rise
B. Fall
C. Remains unchanged
D. None of the above
6. **Demand curve for durable goods will have**
A. $E=1$
B. $E>1$
C. $E<1$
D. $E= \text{infinity}$
7. **The law of variable proportions explains the shape of**
A. AFC curve
B. LAC curve
C. SAC curve
D. None of the above
8. **SMC is equal to**
A. Change in LMC
B. Change in TFC
C. Change in TVC
D. None of the above
9. **If the firm is operating under constant returns to scale, what will be the shape of the LAC curve?**

- A. V-shaped
- B. Upward rising
- C. Downward falling
- D. Horizontal

10. If inflation occurs due to increase in wages, such inflation is called

- A. Demand pull inflation
- B. Cost push inflation
- C. Mark-up inflation
- D. None of the above

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

II. Fill in the blanks:

1. Kinked demand curve is related to the Market
2. In market, firm is identical to industry
3. Credit money is created by banks
4. The regulator of the Indian money market is
5. In order to control inflation, bank rate is

KEY:	1. oligopoly	2. Monopoly	3. Commercial	4. RBI	5. Raised
-------------	---------------------	--------------------	----------------------	---------------	------------------

III. True or False:

1. $GDP - NDP = \text{Depreciation}$
2. Long run average cost curve is the envelop of all the short run average cost curves
3. $MC = P [1 - 1/e]$
4. $E < 1$ means elastic demand & $E > 1$ means inelastic demand
5. If the two goods x and y are substitutes, their cross price elasticity of demand will be negative

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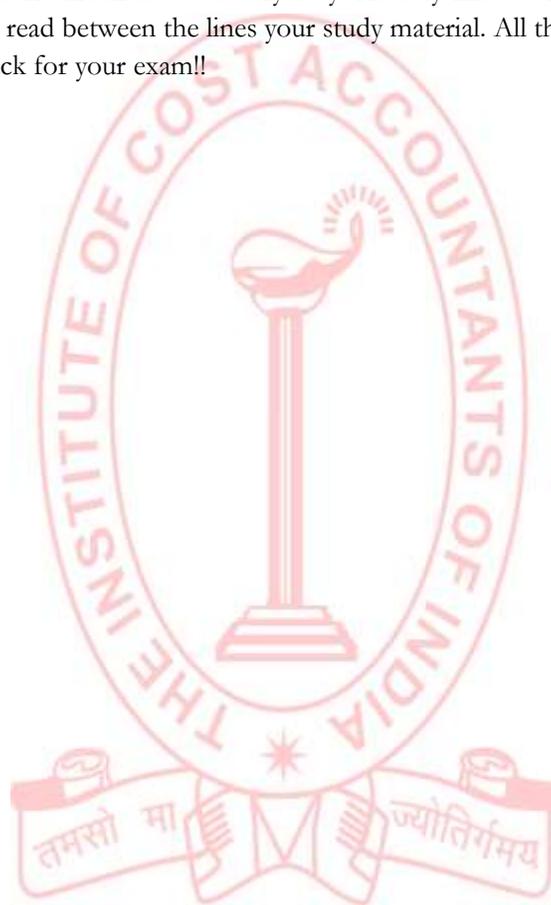
IV. Matching:

1. Product differentiation	A. IMF
-----------------------------------	---------------

2. Multiplier theory	B. Monopolistic competition
3. SDR	C. Innovation
4. Fixed cost	D. Keynes
5. schumpeter	E. short run

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

So, how was the mock test? A bit difficult ... no? If you find it really difficult, then it indicates that the alarm bell is ringing for you. In fact the mock test was very easy. As easy like a cake walk. Of course if you have prepared for the exam. Please read between the lines your study material. All the above questions are from the study material only. Best of luck for your exam!!



Fundamentals of Economics & Management (FEM)

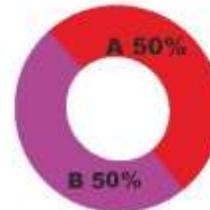


PAPER: 1, PART: II

FUNDAMENTALS OF ECONOMICS & MANAGEMENT - (FEM) - MANAGEMENT

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Your Preparation Quick



Syllabus Structure

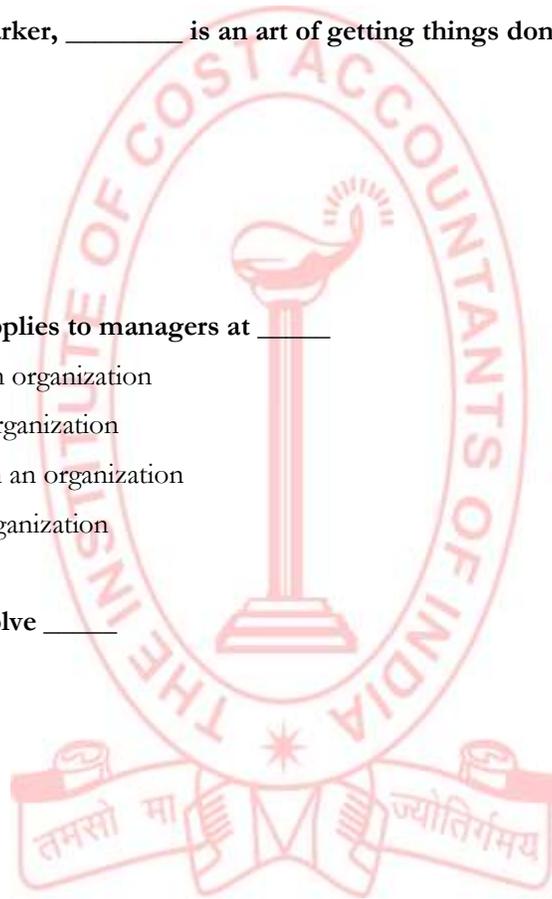
A Fundamentals of Economics 50%
B Fundamentals of Management 50%

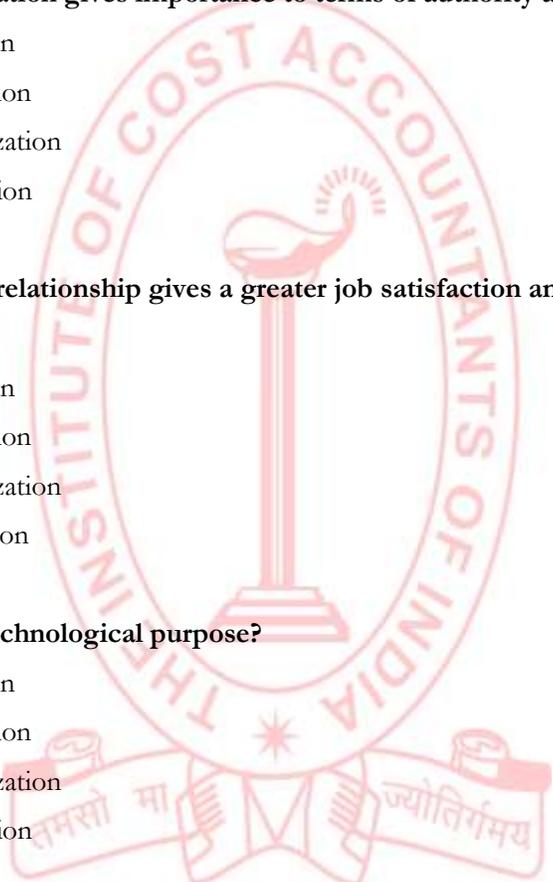
Learning Objectives:

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

Management

1. According to Mary Parker, _____ is an art of getting things done through others:
 - A. Job
 - B. Behaviour
 - C. Management
 - D. Both A & B
2. Management skills applies to managers at _____
 - A. Middle levels in an organization
 - B. Top levels in an organization
 - C. Executive levels in an organization
 - D. All levels in an organization
3. Managerial skills involve _____
 - A. technical skills
 - B. human skills
 - C. conceptual skills
 - D. all of the above
4. 8. Father of Administrative management _____
 - A. Mary Parkett
 - B. Lillian Gilbert
 - C. Henry Fayol.
 - D. Elton Mayo
5. The first and foremost function of management is _____
 - A. Planning
 - B. Organizing



- C. Controlling
D. Coordination
6. A system of co-operative activities of two or more persons is called _____
- A. Department
B. Co-ordination
C. Organization
D. Control
7. Which type of organization gives importance to terms of authority and functions?
- A. Formal organization
B. Informal organization
C. Business or organization
D. Strategic organization
8. Which organizational relationship gives a greater job satisfaction and results in maximum production?
- A. Formal organization
B. Informal organization
C. Business or organization
D. strategic organization
9. Which is created for technological purpose?
- A. Formal organization
B. Informal organization
C. Business or organization
D. Strategic organization
10. Supply of human and material resources and helps to achieve the objective of business is _____
- A. Planning
B. Organization
C. Management
D. Control
11. Plan that establishes a required method of handling future activities is called _____
- A. Rules
- 

- B. Procedures
- C. Policy
- D. Methods

12. Set of clear instruction in a clear and logical sequence to perform a particular task _____

- A. Rules
- B. Programme
- C. Policy
- D. Methods

13. Contingent plan to meet environmental pressures is _____

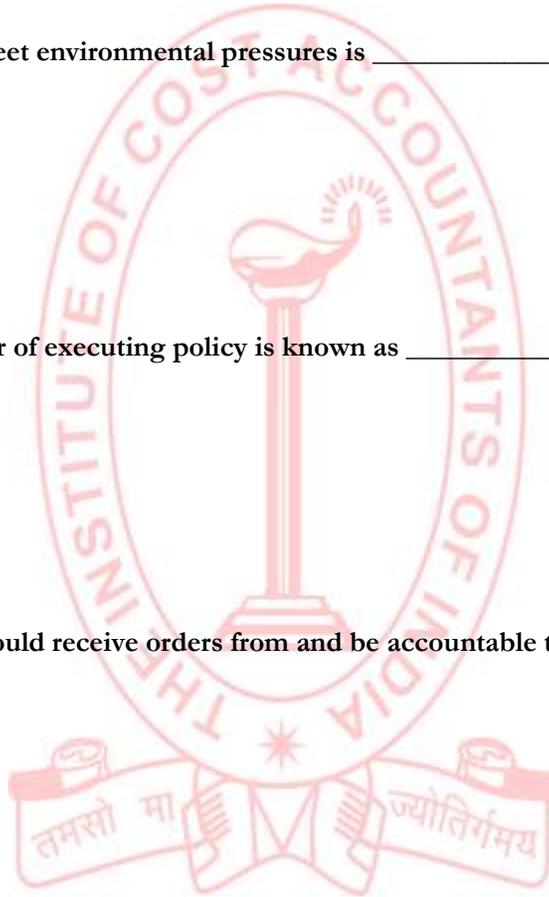
- A. Objective
- B. Strategies
- C. Policies
- D. Rules

14. Specifying the manner of executing policy is known as _____

- A. Objective
- B. Schedules
- C. Procedures
- D. Budgets

15. Every subordinate should receive orders from and be accountable to only one superior is _____

- A. Unity of direction
- B. Unity of command
- C. Centralization
- D. Scalar chain



ANSWER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	D	D	C	A	C	A	B	A	B	B	B	B	C	B

Fundamentals of Accounting (FOA)

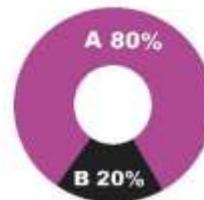


PAPER: 2

FUNDAMENTALS OF ACCOUNTING (FOA)

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Your Preparation Quick



Syllabus Structure

- A Fundamentals of Financial Accounting 80%
- B Fundamental of Cost Accounting 20%

Learning Objectives:

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

Financial of Accounting

Happy Holi to all of you. Hope you all enjoyed the festival of colour. However, to remain colourful you need to add colour of your knowledge. Explore new thing everyday to add values and colour of your knowledge. Keeping this in mind try your knowledge.

Objective Type Questions

I. State whether the following statements are 'true' or 'false':

1. Bank reconciliation statement is a statement only
2. BRS is a part and parcel of the main accounts.
3. It can be prepared at any point of time during the accounting year.
4. It is prepared by the bank on behalf of the business firm.
5. No BRS is required if there is overdraft balance in the cash book.
6. Digital transactions will not attract BRS

Answers

1. True	2. False	3. True	4. False	5. False	6. False.
---------	----------	---------	----------	----------	-----------

II. Fill in the blanks:

1. The bank statement is sent byto.....
2. A BRS is prepared to
3. The pass book is a
4. Credit balance in the Cash Book means
5. Debit Balance in the Pass Book means
6. The Bank balance as shown in the trial balance is taken from.....

Answers

1. Bank its accountholder 2. Reconcile the Balance as per cash book with the balance as per pass book 3. Statement of accounts provided by bank against the account maintained by business with the bank 4. Bank Overdraft 5. Bank Overdraft 6. Cash book.

III. Indicate the correct answer:

Select the best choice to complete each statement or answer each question below.

(i) A Bank Reconciliation is prepared by

- (a) a Bank;
- (b) the Firm;
- (c) Creditors

(ii) A Bank Reconciliation Statement is a

- (a) part of Cash Book;
- (b) part of Bank Account;
- (c) None of these

(iii) A Bank Reconciliation Statement is prepared with the help of

- (a) Bank statement and bank column of the Cash Book;
- (b) Bank statement and cash column of the Cash Book;
- (c) None of these.

(iv) A Bank Statement is a copy of

- (a) a customer's account in the Bank's book;
- (b) Cash Book relating to bank column;
- (c) Cash Book relating to cash column;
- (d) None of these.

(v) A Bank Reconciliation Statement is prepared to know the causes for the difference between

- (a) the balances as per cash column of Cash Book and the Pass Book;
- (b) the balance as per bank column of Cash Book and the Pass Book;
- (c) Neither of the two.

Answer

(1) b,	(2) c	(3) a	(4) a.	(5) b.
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Fundamentals of Laws and Ethics (FLE)



PAPER: 3

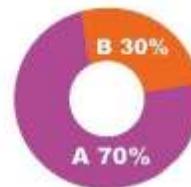
FUNDAMENTALS OF LAWS AND ETHICS (FLE)

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prapray@rediffmail.com

Your Preparation Quick



Syllabus Structure

A Fundamentals of Commercial Laws 70%

B Fundamentals of Ethics 30%

Learning Objectives:

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

Law and Ethics

It is hoped that you keep on reading and recapitulation 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 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.

Sale of Goods Act,1930

Ask a question - There is a contract of sale between a buyer and a seller , **when does the property, pass on from the seller to the buyer in a contract for the sale of such goods ?** You will find the answer in Sec.18 to 25 of the Sale of Goods Act. You have to reply keeping in mind each type of goods.

1. **In case of Specific Goods**, where there is an unconditional contract for sale of specific goods in a deliverable state, the property passes as soon as the contract is made. The time of payment or the time of delivery is not material.

2. **In case of Unspecified/Unascertained Goods**, the property is not transferred until the goods are ascertained. For example, there are bags of cement in a godown. The property gets transferred to the buyer only when the requisite number of bags are separated, taken out and kept aside for delivery to that buyer.
3. **The Intention of the Parties** is very important in case of sale of Specific goods. The property passes when the parties to the contract intend it to pass as stated in the terms of the contract.
4. In case of sale of Specific Goods, **if there is something which the seller has to do**, before making the goods ready in a deliverable condition, the property passes only after the seller has done that thing. For example, M agrees to sell 1000 tins of milk powder to N and promises to pack them in Card Board Boxes before delivery, the property passes only after those tins are properly packed and made ready for delivery.
5. In case of Specific goods, **where the seller has to measure, weigh or test the goods**, for the purpose of ascertaining the price, the property does not pass to the buyer as long as that thing has been done and the buyer is intimated.
6. Property in the goods is transferred to the buyer when the **goods is delivered to the carrier**. However, in case of conditional delivery, the property is transferred only if that condition is fulfilled. For example if M –the seller, sends goods by courier to N –the buyer, the property is transferred as soon as the goods are handed over to the courier, but if there is a condition of Cash on Delivery (COD), the property passes only after N –the buyer pays the requisite Cash before collecting delivery of the goods.
7. Where **goods are sent on Approval or on Sale or Return Basis**, the property in the goods is transferred only – I) when the buyer informs his approval or acceptance of the goods ; II) In another case, if the buyer does not intimate his approval or acceptance of the goods, or his rejection of the same, but still retains those goods, the property passes after expiry of a reasonable time.

As long as the property in the goods is not transferred to the buyer, the goods remain at the risk of the seller. After the ownership passes to the buyer, the goods are at the Buyer's Risk, since Risk follows ownership.

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 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.

Now, let us revise ,partly the Negotiable Instruments Act,1881

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 order to be duly honoured for payment.

Now let us know the **difference between a Promissory Note and a Bill of Exchange**.

1. In a Promissory Note, there are 2 parties – the **Maker** and the **Payee**
2. In a Bill of Exchange, there are 3 parties – The **Drawer**, the **Drawee** and the **Payee**.
3. In a Promissory Note, there is a **Promise to pay**
4. In a Bill of Exchange, there is an **Order to pay**
5. In a Promissory Note, no acceptance is required but **it has to be signed by the person liable to pay**.
6. A Bill of Exchange (barring exceptions) has to be accepted by the Drawee before it becomes binding on him.
7. **The maker** of a Promissory Note is **Primarily liable** on the instrument ;
8. **The Drawer** of the Bill of Exchange is **liable only when** the Drawee does not accept the instrument or pay the money amount due.
9. In case of a Promissory Note, the **Notice of Dishonour to the Maker is not required** but a **Notice of dishonor is required in case of a Bill of Exchange**, when there is a non-payment or non-acceptance.

*So, the next question is **What is a Notice of Dishonour ?***

Please note that when there is a non-payment or non-acceptance of a Bill of Exchange, a notice has to be given to all the persons liable to pay, except the Drawee. Such a notice is called Notice of Dishonour.

At this stage, let us understand the **difference between Bill of Exchange and Cheque** :

1. A *Cheque* is a bill of exchange but it can be *drawn only upon a bank*.

2. A *Bill of Exchange* can be *drawn upon any person including a bank*. Every Bill of Exchange is not a cheque.
3. A Bill of Exchange required acceptance, except under certain circumstances. (The exceptions are – 1. The Bill of Exchange have already been protested because of non-acceptance ; and 2. The presentation of the bill is barred by obstacles caused by superior force without human intervention such as earthquake, tornadoes, hurricane and acts of God.
4. A cheque is always payable on demand
5. A Bill of Exchange may be either payable on demand or after a period of time.
6. The acceptor of a bill of exchange is allowed 3 days of grace to make the payment, after the maturity of the bill
7. The Banker is not allowed any days of grace after being presented for payment
8. The Drawer of the bill is discharged from liability if the bill is not presented to the acceptor for payment at the due time.
9. The drawer of a cheque is discharged from liability only if he suffers damage due to delay in presenting the cheque for payment
10. A banker does not have to give a Notice of Dishonour to the drawer to make him liable to compensate the Payee, if the banker fails to pay a cheque.
11. In case of Bills of Exchange, it is necessary to give Notice of Dishonour to the drawer, ***except is special cases***.
12. A cheque may be crossed but there is no provision to cross a Bill.
13. The payment of cheque may be countermanded by the Drawer. (***Countermand means – to reverse, revoke, repeal, retract, rescind, withdraw, quash, scrap, over-rule, cancel, negate an order.***)
14. The payment of a bill of Exchange cannot be countermanded.
15. A Cheque does not require any stamp
16. A Bill of Exchange must be stamped .

As said above, In case of Bills of Exchange, it is necessary to give Notice of Dishonour to the drawer, ***except is special cases given below*** .:

Now, let us revise partly, what we read about the Law of Contracts – Indian Contract Act,1872

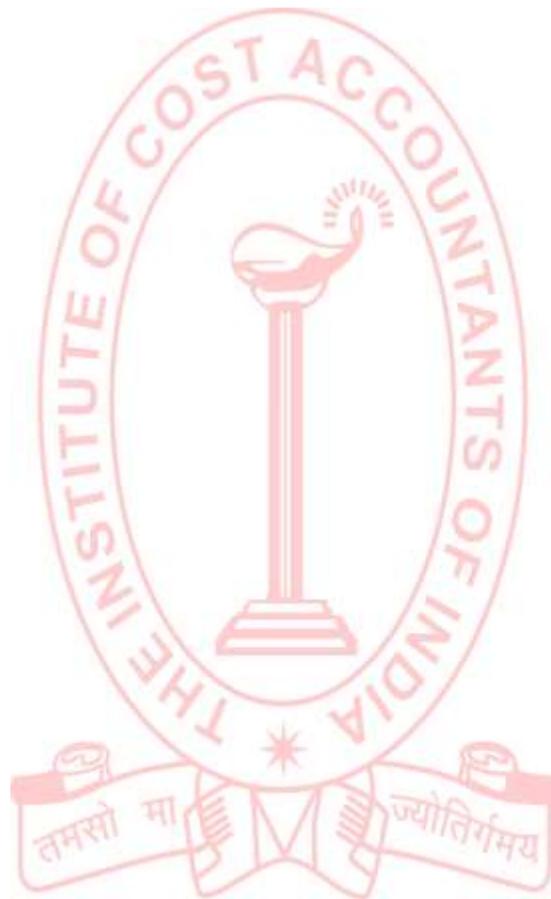
To start with, let us **cover Offer and Acceptance**.

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.



Fundamentals of Business Mathematics and Statistics (FBMS)

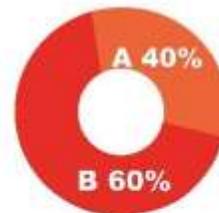


PAPER: 4

FUNDAMENTALS OF BUSINESS MATHEMATICS AND STATISTICS (FBMS)

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Your Preparation Quick



Syllabus Structure

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

Learning Objectives:

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

Business Mathematics and Statistics

In this issue we will discuss MCQs on moving average method from Time Series chapter as per new Syllabus. Among the four options given to each question choose the appropriate option.

Q1. Consider the following data:

Year	2009	2010	2011	2012	2013	2014	2015
Population (million)	412	438	446	454	470	483	490

Trend value against year 2012 is

- (a) 469
- (b) 457
- (c) 481
- (d) 432

Q2. Tonnage of goods carried by a transport company for last 12 years are as follows:

Year	2010	2011	2012	2013	2014	2015
Tonnage	2204	2500	2360	2680	2424	2634
Year	2016	2017	2018	2019	2020	2021
Tonnage	2904	3098	3172	2952	3248	3172

4 yearly centered moving average against year 2018 is

- (a) 2508
- (b) 2713
- (c) 2992
- (d) 3075

Q3. Consider the following data:

Year	2010	2011	2012	2013	2014
Production	50	36.5	43	44.5	38.9
Year	2015	2016	2017	2018	2019
Tonnage	38.1	32.6	41.7	41.1	33.8

4 yearly centered moving average against year 2017 is

- (a) 37.8
- (b) 38.1
- (c) 39.8
- (d) 42.1

Q4. Consider the following table representing yearly sales data for a 10 years period:

Year	2009	2010	2011	2012	2013
Sales (R.0000)	22	26	21	25	23
Year	2014	2015	2016	2017	2018
Sales (R.0000)	27	22	26	24	28

5 years weighted moving average with weights 1, 2, 2, 2, 1 against 2014 is

- (a) 23.6
- (b) 24.9
- (c) 24.4
- (d) 24.1

Q5. Four year moving total for a production data spreading from 2010 to 2016 are 457, 423, 376, 363.

Trend value against the year 2013 is

- (a) 105
- (b) 110
- (c) 92.4
- (d) 99.9

Q6. Annual sales of a trading organisation are as follows:

Year	2000	2001	2002	2003	2004
Sales (R.0000)	40	42	40	44	49
Year	2005	2006	2007	2008	2009
Sales (R.0000)	46	42	44	44	50

Year	2010	2011	2012	2013	2014
Sales (R.0000)	42	48	46	52	58
Year	2015	2016	2017	2018	2019
Sales (R.0000)	56	51	57	54	63

The appropriate moving average for the above data is

- (a) 6 years
- (b) 3 years
- (c) 4 years
- (d) 5 years

Q7. Refer Q6. Trend value against year 2012 is

- (a) 48.67
- (b) 52
- (c) 45.67
- (d) 58

Q8. Trend of a time series data refers to a long term tendency to

- (a) Decrease only
- (b) Either increase or decrease
- (c) Increase only
- (d) None of this

Q9. The trend is linear if

- (a) The growth rate is constant
- (b) Rate of growth is positive
- (c) Growth is not constant
- (d) Growth is geometrical

Q10. The moving average method smoothen the fluctuations in time series data by

- (a) Moving the arithmetic mean values through the time series
- (b) Moving the geometric mean values through the time series
- (c) Moving the trend values through the time series
- (d) Establishing the linear trend through the time series

Answers:

Q1.	Q2.	Q3.	Q4.	Q5.	Q6.	Q7.	Q8.	Q9.	Q10.
(b);	(d);	(a);	(c);	(d);	(b);	(a);	(b);	(a);	(a)

Computations:**Q1.**

Year	Population (in millions)	Three Year Moving total		Three year Moving Average	
2009	412				
2010	438	1296	(412+438+446)	432	1296/3
2011	446	1338	(438+446+454)	446	1338/3
2012	454	1370	(446+454+470)	457	1370/3
2013	470	1407	(454+470+483)	469	1407/3
2014	483	1443	(470+483+490)	481	1443/3
2015	490				

Q2.

Year	Tonnage	4 yearly moving total	2 period moving total	Trend Values (column 4/8)
2010	2204			
2011	2500			
2012	2360	9744	19708	2464
2013	2680	9964	20062	2508
2014	2424	10098	20740	2593
2015	2634	10642	21702	2713
2016	2904	11060	22868	2859
2017	3098	11808	23934	2992
2018	3172	12126	24596	3075
2019	2952	12470	25014	3127
2020	3248	12544		
2021	3172			

Q3.

Year	Production	4 yearly moving total	2 period moving total	Trend Values (column 4/8)
2010	50			
2011	36.5	174		
2012	43	162.9	336.9	42.1
2013	44.5	164.5	327.4	40.9
2014	38.9	154.1	318.6	39.8
2015	38.1	151.3	305.4	38.2
2016	32.6	153.5	304.8	38.1
2017	41.7	149.2	302.7	37.8
2018	41.1			
2019	33.8			

Q4.

Year	Sales	5 yearly wtd moving total	Trend Values (column 3/sum of wts)
2009	22		
2010	26		
2011	21	189	23.6
2012	25	191	23.9
2013	23	193	24.1
2014	27	195	24.4
2015	22	197	24.6
2016	26	199	24.9
2017	24		
2020	28		

Q5.

Year	4 yearly moving total	2 period moving total	Trend values (Column 3/8)
2010			
2011			
2012	457	880	110
2013	423	799	99.9
2014	376	739	92.4
2015	363		
2016			

Q6.

We know that appropriate period for the moving average is the period of the cyclical variations. The given data does not reveal a regular cycle of any fixed period. If we examine the data carefully we have the peaks at the following points:

Year	2000	2001	2002	2003	2004	2005	2006	2007
Sales	40	42	40	44	49	46	42	44
Year	2008	2009	2010	2011	2012	2013	2014	2015
Sales	44	50	42	48	46	52	58	56
Year	2016	2017	2018	2019				
Sales	51	57	54	63				

So year between peaks show 6 cycle variations as are follows

42 to 49: 3 years

49 to 50: 5 years

50 to 48: 2 years

48 to 58: 3 years

58 to 57: 3 years

57 to 63: 2 years

Hence the appropriate moving average period is $\frac{3+5+2+3+3+2}{6} = 3 \text{ years}$

Q7.

Year	Sales	Three Year Moving total	Three year Moving Average
2000	40		
2001	42	122	40.67
2002	40	126	42.00
2003	44	133	44.33
2004	49	139	46.33
2005	46	137	45.67
2006	42	132	44.00
2007	44	130	43.33
2008	44	138	46.00
2009	50	136	45.33
2010	42	140	46.67
2011	48	136	45.33
2012	46	146	48.67
2013	52	156	52.00
2014	58	166	55.33
2015	56	165	55.00
2016	51	164	54.67
2017	57	162	54.00
2018	54	174	58.00
2019	63		

Suggestions:

The study guide needs to be read thoroughly. Supplementary readings could be made from other resources. In this issue discussions are held with MCQs on time series part of the new syllabus without going detail discussions. Theoretical knowledge on time series could be gained from study guide. This could be used as supplement to the study guide. Students should go thoroughly for clear concept on development of moving average trend values - from Guide book on the paper 3- Fundamental of Business mathematics and Statistics written and issued by Institute on Syllabus -22.

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PRACTICAL Advice

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START

01

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

Solve Exercises given in Study Note

02

03

Assess Yourself

Appear For Examination

04

FINISHED

Submissions



SUBMISSIONS

Dear Students,

We are very much delighted to receive responses from all of you; for whom our effort is!

We have noted your queries and your requests will definitely be carried out. Further, requesting you to go through the current edition of the bulletin. All the areas will be covered gradually. Expecting your responses further to serve you better as we believe that there is no end of excellencel One of the mails received is acknowledged below.

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

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Message from Directorate of Studies



Message from Directorate of Studies

Dear Students,

We from the Directorate of Studies understand your expectations from us and accordingly we are trying to deliver some meaningful tips through various publications in soft versions like-E-bulletins, Mock Test Papers (MTPs), and we also have conducted Webinar Sessions for the benefit of the students. Supplementary and Amendments are also uploaded from time to time to keep the students updated about the recent changes made in the papers; wherever applicable.

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“Freedom has only one motto, may our country be happy and prosperous”

let you all observe the message cited above.

- Certain general guidelines are listed below and which will help you in preparing for the examinations:
- Conceptual understanding and overall understanding of the subjects should be clear,
- Students are advised to go through the study material provided by the Institute meticulously,
- Students should know and learn the basic understandings of the subjects with focus on core concepts,
- Students are expected to give to the point answer which is a pre-requisite for any professional examination,
- To strengthen the answers, students are advised to answer precisely and in the structured manner,
- Proper time management is also important while answering.

Please refer the link mentioned below:

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

GOOD LUCK

Be prepared and be successful

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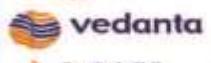












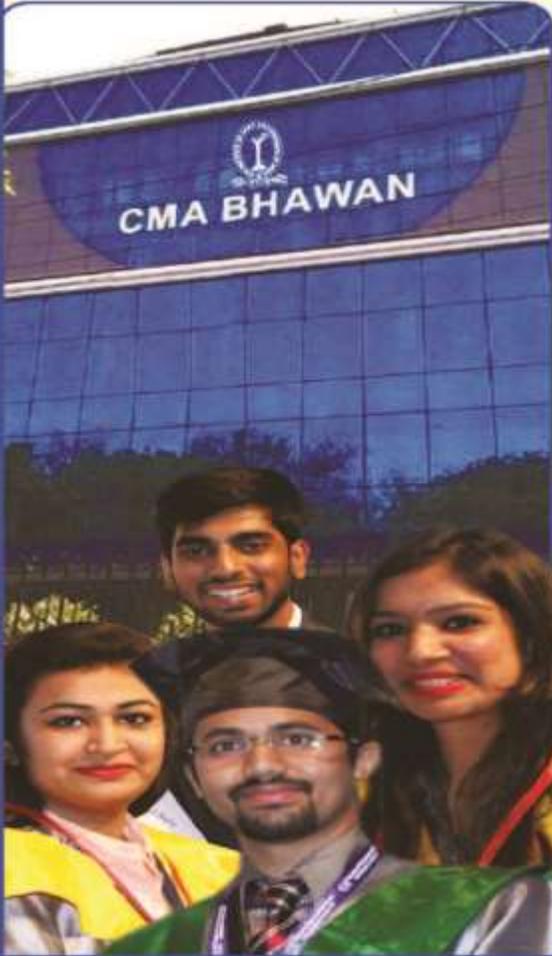












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