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CMAStudent E - Bulletin FOUNDATION





THE INSTITUTE OF COST ACCOUNTANTS OF INDIA

(Statutory Body under an Act of Parliament)

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Message from The Chairman CMA Biswarup Basu

Vice President & Chairman, Training & Education Facilities and Placement Committee



MESSAGE FROM THE CHAIRMAN

Dear Students,

Greetings!!

"You must not lose faith in humanity. Humanity is an ocean; if a few drops of the ocean are dirty, the ocean does not become dirty" - M.K. Gandhi

The unlock process has been started everywhere, although COVID-19 has almost gripped the whole world. There is a light of hope as the rate of cure in our country has increased. Now it is our duty to follow the safety measures and augment our immunity to inhibit COVID-19. Hope with the grace of the Almighty we would be able to shelter ourselves. Stay safe and ensure all persons around you are staying safe. Try to direct your time towards self-enrichment, utilize it for study, and armour yourselves for the forthcoming challenges.

The Directorate of Studies is working diligently to provide the students with all possible supports and guidance. Live Webinars are being conducted, recorded webinars are also there in the e-library. Answers to the Mock Test Papers (MTPs), updated Work Books, and monthly E-bulletins are uploaded on our website as per the pre-scheduled manner. Eminent academicians and professionals are contributing in their own way to the development of our students. Being the Chairman of the Training & Educational Facilities and Placement Committee, I am really thankful to all of them. So, don't give up hope, carry on with your exercises, and try to utilize the facilities and opportunities being offered by the Directorate of Studies.

Our 'Students' Connect' section is there for the convenience of all our students [https://icmai.in/studentswebsite/Students-E-Services.php]

Self-reliance and confidence is the need of the hour; keep faith for a bright and sparkling future to come. Always keep in mind that, "The best way to find yourself is to lose yourself in the service of others".

Best wishes as always,

CMA Biswarup Basu Chairman, Training & Education Facilities and Placement Committee

Be a CMA, be a Proud Indian

Stay filome Stay Safe





Message from the Chairman	
Knowledge Update –	1
Paper: 1, Part: I – Fundamentals of Economics	
and Management (FEM) - Economics -	2
Paper: 1, Part: II - Fundamentals of Economics	
and Management (FEM) - Management -	5
Paper: 2 - Fundamentals of Accounting (FOA) -	8
Paper: 3 - Fundamentals of Laws and Ethics (FLE)	- 13
Paper: 4 – Fundamentals of Business	
Mathematics and Statistics (FBMS) -	17
Practical Advice –	23
Submission -	24
Message from the Directorate of Studies -	25

Few Snapshots

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KNOWLEDGE Update

#stayhome #staysafe

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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.



Dr. Bibekananda Raychaudhuri

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PAPER: 1, PART: I FUNDAMENTALS OF ECONOMICS & MANAGEMENT

(FEM) - ECONOMICS

Your Preparation Quick Takes



Syllabus Structure

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

2



Learning Objectives:

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

Economics

Hi friends! At last we have been unlocked! Though the schools' colleges and institutes are closed for the students, we can go anywhere we like. At least the nightmare of the lockdown period is over. I hope you have utilised that period fruitfully by remaining glued to the study material throughout day and night. Even now you have all the time in the world to devote whole heartedly to study your study material. Let us start with our mock test once again.

Mock Test

I. Choose the correct answer:

- 1. Who defined man to be an economic man?
 - A. Adam Smith
 - B. Marshall
 - C. J. B. Say
 - D. Keynes

2. Who introduced a dynamic approach to the study of economics?

- A. Robbins
- B. Keynes
- C. Pigou
- D. Samuelson
- 3. Price theory is the other name of
 - A. Microeconomics
 - B. Macroeconomics
 - C. Growth economics
 - D. Welfare economics
- 4. Investment in raw materials, semi-finished goods and finished goods are called
 - A. Fixed investment
 - B. Gross investment
 - C. Net investment
 - D. Inventory investment
- 5. When total utility curve reaches the peak point, MU becomes
- - A. Infinity
 - B. Unity
 - C. Zero
 - D. None of the above
- 6. If the demand curve is perfectly elastic, this implies that the value of price elasticity is
 - A. Unity
 - B. Zero
 - C. Greater than one
 - D. None of the above
- 7. Unit elastic supply curve will
 - A. Cut the price axis
 - B. Cut the quantity axis





- C. Pass through the origin
- D. None of the above
- 8. Internal diseconomies of scale is indicated by
 - A. Upward shift of the LAC curve
 - B. Downward shift of the LAC curve
 - C. Upward movement along the LAC curve
 - D. Downward movement along the LAC curve
- 9. Demand curve of the firm under perfectly competitive market is
 - A. Elastic
 - B. Inelastic
 - C. Perfectly inelastic
 - D. Perfectly elastic

10. Product differentiation is the other name of

- A. Monopoly
- B. Perfect competition
- C. Monopolistic competition
- D. Discriminating monopoly

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

II. Fill in the blanks:

- 1. According to Fisher's theory, money is demanded for Purposes.
- 2. Govt. spending increases beyond what can be financed by taxation is called financing
- 3. Bad money drives good money out of circulation is Law
- 4. RBI lends money to the commercial banks and charges some remuneration for it. The remuneration is called
- 5. When prices are decreasing continuously, the period is called

KEY: 1. Transaction, 2. Deficit, 3. Gresham's, 4. Reporate, 5. Deflation

III. True or False:

- 1. Gross investment = Net investment + Depreciation
- 2. Parametric change will cause a movement along the demand curve
- 3. A discriminating monopolist charges higher price for the product in a market where price elasticity of demand is relatively inelastic
- In Classical theory, the money market equilibrium equation is M = kPY + L(r)
- 5. Public expenditure comes under the monetary policy
- KEY: 1. True, 2. False, 3.true, 4. False, 5. False

IV. Matching:

1.credit creation A. monetary policy

2. cartel	B. normal profit
3. RBI	C. Marshall
4. production cost	D. oligopolistic market
5.welfare definition	E. commercial bank

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

Friends, hope you have enjoyed solving this mock test paper. Please try to go through the study material thoroughly if you want to score high marks. If you are interested, you may consult some good books on economics like "Introduction to economics – by Samuelson", "Price theory – by Watson", "Introduction to economics – by Lipsey and Steiner". Wish you all the best !!





CMA (Dr.) Sumita Chakraborty

Additional Director, Research & Studies **She can be reached at:** research.hod@icmai.in studies.addldir1@icmai.in

PAPER: 1, PART: II FUNDAMENTALS

OF ECONOMICS & MANAGEMENT (FEM) - MANAGEMENT

Your Preparation Quick Takes





Syllabus Structure

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

6



6

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



In addition to planning, organising and staffing, every manager must also direct his subordinates. Directing is an important managerial function. Directing is an important managerial function which initiates organizer's action.

It is concerned with managing the members of the organisation. Directing is the managerial function that consists of those activities which are concerned directly with influencing, guiding or supervising the subordinates in their jobs.

Thus directing is performance oriented and the initiating function of management that actuates plans and the organisation. If subordinates are not properly directed, nothing can be accomplished. Direction is another important element of management.

It is the sum total of managerial efforts which takes the organisation towards the predetermined goals. It is in fact part of every managerial action. The organisation does not start working till the manager gives direction which means guiding and supervising the subordinates.

Features or Characteristics:

From the above discussions, following characteristics of direction can be derived:

- (i) It is concerned with issuing of orders and instructions to the subordinates.
- (ii) It is guiding and counselling the subordinates in their work with a view to improving their performance.
- (iii) It is supervision of the work of subordinates to ensure that it conforms to plans.
- (iv) Directing is pervasive because it is performed at all levels of management.
- (v) It is a continuous process because it deals with the continuous guidance to be provided by the superiors to their subordinates.
- (vi) It always follows a top down approach.
- (vii) It provides linkage between other managerial functions such as planning, organising and staffing.

Directing is a continuous function, because a manager never ceases to direct, guide and supervises his subordinates. It is concerned with managing the members of the organisation. It is essentially concerned with people and activities. It involves motivation, leadership, supervision, communication and coordination.

It does not cease merely with the giving of orders and instructions. The manager, in order to direct his subordinates, should communicate with them, devise suitable system for motivating them, and carry them with him through dynamic leadership. The directing function cannot be performed separately and it must be executed in conjunction with all other functions of management.

Elements of Directing:

The essential elements of directing are:

- 1. Issuing orders and instructions- Every instruction given by the manager in the process of directing his subordinates should be reasonable, complete and clear. It must be in writing, so that the possibility of misunderstanding can be avoided.
- 2. Guiding, counselling and teaching the subordinates- The manager should guide, counsel and teach the subordinates with regard to the proper way of doing the job in order to enable them to carry out their job-effectively and efficiently.
- 3. Supervising the work of subordinates-Every work of subordinates should be supervised by the manager to ensure that their performance conforms to the plan.
- 4. Motivating the subordinates- Motivating the subordinates to meet the expectations of the superiors is another element of directing.
- 5. Maintaining Discipline-Another element of directing is maintaining discipline and rewarding efficient performance.
- 6. Consultative Direction-Before the issue of any order, the people responsible for executing order will be consulted with regard to its feasibility, workability and the best way of accomplishing the results.

Importance of Directing:

Direction is a dynamic and continuing function. It is the essence of practice of management. The manager should continuously perform this function, no manager can think in terms of ceasing his job of communicating with, guiding and motivating his subordinates without giving up managerial activity. With changes in plans and organisational relationships, he will invariably wave to change the methods and techniques of direction. Thus, it is an ever-present continuing function of management.

Direction links the various management functions. Planning, organising and staffing, which are regarded as the preparatory functions, are effectively linked with the controlling function, which is the function of checking on the progress of work in the light of plans.

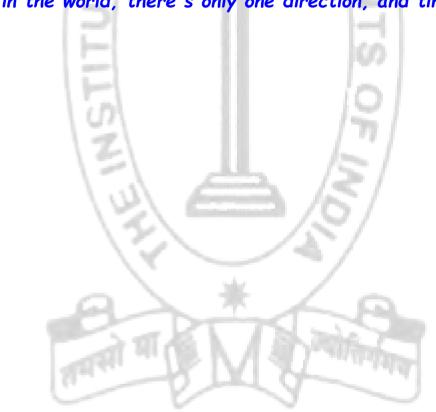
Directing lends meaning to all the preparatory functions of management and provides the material (through actual performance) for control. Without it, the function of controlling will never arise at all and the preparatory management functions will be meaningless. Directing is the process around which all other activities and performance revolve. Direction initiates action by creating goal-oriented activity. It plays such a crucial role that "Nothing happens unless and until the business automobile is put into gear and the accelerator depressed."

Thus, unless the management assumes an active role and sets the organisational machinery into motion, it cannot think in terms of activating people towards the accomplishment of enterprise goals. Thus, it is a creative function that makes things happen by converting plans into performance.

The function of direction is performed by the managers at all levels of the organisation and in all their work-relationships. In other words, the work of direction will have to be performed by the managers at all levels right from the top (i.e., Board of Directors) down to the lower level (i.e. foremen).

As an essential dynamic activity, it compels every manager to motivate, supervise, lead and communicate with his subordinates to get the work done for the accomplishment of the enterprise objectives, although the time spent on direction decreases at higher levels of authority. That is why; directing is regarded as the essence of management in action.

Direction is concerned with relationship between people working in the organisation. It seeks to create cooperation and harmony among the members of the group. The supervisor cannot remain contented by just giving orders or by just making commands. He must strike a balance between the personal interest of the employee and the rest of the organisation by acting as a useful co-ordination.



"For all the compasses in the world, there's only one direction, and time is its only measure".

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PAPER: 2 FUNDAMENTALS OF ACCOUNTING (FOA)

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Your Preparation Quick Takes



Syllabus Structure

A Fundamentals of Financial Accounting 80%

8

B Fundamental of Cost Accounting 20%

9

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.

FUNDAMENTALS OF COST AND MANAGEMENT ACCOUNTING

1. INTRODUCTION:

In this issue we will throw light on the the section B - Generally Accepted Cost Accounting Principles. (GACAP) and accounting for material cost (LIFO, FIFO AND WEIGHTED AVERAGE COST METHOD) GACAP is prepared by Cost Accounting Standard Board (CASB) of our institute under the instruction by Ministry of Corporate affairs, Government of India which will definitely supersede the concept of cost accounting record rules and basics of cost sheet.

In a nutshell GACAP contains a summary of the cost accounting principles followed by business entities in India in preparing and presenting cost information in the context of general purpose cost statements for statutory reporting and covered by cost audit. Mainly the costs that are focused under such principles are – material cost employee cost, direct expenses, overheads, depreciation, interest and finance charges etc.

2. ACCOUNTING FOR MATERIAL COST:

Studies show that one rupee as the total cost of product comprises of sixty four paisa as cost of material. Here lies the importance of material cost control. Material cost comprises of the invoice price, cash discount, excise duty, sales tax, octroi, trade discount, freight, carriage, insurance etc.

One of the major cost control tool is Economic Order Quantity (EOQ). It is such a quantity that should be ordered so that cost to company is minimum. Here cost means the cost of material, carrying cost and ordering cost. Students must remember that carrying cost does not mean the cost of transportation. It is not carriage. It is the cost of holding the materials – e.g. warehouse rent, insurance cost, leakage, pilferage etc. By nature the carrying cost and ordering cost are inversely related. The more will be carrying cost if more quantity is hold in stock purchased lump sum. However, in that case the ordering cost will be minimum since a big volume is purchased at a time and number of order is very less. Therefore EOQ will be settled at a level where carrying cost and ordering cost will be equal.

a. EOQ:

EOQ is calculated as : $\sqrt{}$

A= Annual usage O= Ordering cost per order C= Carrying cost % x cost per unit

Example : Annual consumption 4000 kg, cost of placing an order ₹ 5, Cost per unit ₹ 2 per kg and storage cost is 8% on average inventory.

Therefore EOQ =
$$\sqrt{\frac{(2 \times 4000 \times 5)}{0.08 \times 2}}$$
 = 500 units

Proof :

If 500 units are ordered at a time number of orders will be 4000/500 = 8 and ordering cost will be ₹5x8=₹40.

Carrying cost will be =
$$\frac{EOQ}{2} \times 0.08 \times ₹2 = \frac{500}{2} \times 0.16 = ₹40$$

This implies at 500 units both carrying and ordering cost are equal.

b. PRICING OF ISSUES :

While keeping records of materials receipts and issues various methods are followed out of which the syllabus contains FIFO, LIFO and weighted Average Cost methods.

FIFO:

Under this method materials received first are issued first. After the first lot of the materials purchased is over the next lot is taken up for issue. The closing stock is valued at the latest purchase price and thus represents the current conditions as far as possible.

LIFO:

Under this method the materials received last is issued first. In times of rising prices this method is considered best for application as the current cost of materials contributes to the cost of production.

WEIGHTED AVERAGE COST:

It is a price which is calculated by dividing the total cost of materials in the stock from which the materials to be priced could be drawn by the total quantity of materials in the stock. The average price does not change until a new receipt takes place at a different price.

EXAMPLE:

From the following transactions extracted from a manufacturing company work out consumption value of raw materials in the month and value of closing stock as on 31.01.2018 under FIFO, LIFO and weighted average cost method.

DATE	RECEIPT UNITS	RATE (RS)	ISSUE UNITS
2018			
JAN. 01	300	9.7	
JAN. 03	250	9.8	
JAN. 11			400
JAN.15	300	10.05	
JAN.20	12	200	210
JAN.25	150	10.30	
JAN.29	14	13/2 L	100

STORES LEDGER (UNDER FIFO METHOD)

DATE	RECEIPTS			RECEIPTS ISSUES			BALANCE		
2018	QTY	RATE	AMNT	QTY	RATE	AMNT	QTY	RATE	AMNT
JAN 01	300	9.7	2910		11	-	300	9.7	2910
JAN.03	250	9.8	2450		11	0	300	9.7	2910
			H			10	250	9.8	2450
JAN. 11			40	300	9.7	2910			
			1	100	9.8	9.8	150	9.8	1470
JAN.15	300	10.05	3015	400		6	150	9.8	1470
			1	2N		\mathbb{N}	300	10.05	3015
JAN.20				150	9.8	1470			
			9	60	10.05	603	240	10.05	2412
JAN.25	150	10.30	1545	210		and the second	240	10.05	2412
			10	-0-	TA.		150	10.30	1545
JAN.29				100	10.05	1005	140	10.05	1407
							150	10.30	1545
									2952

VALUE OF CLOSING STOCK = ₹ 2952/-VALUE OF CONSUMPTION OF MATERIALS = 2910+2450+3015+1545-2952 = ₹6968

STORES LEDGER (UNDER WEIGHTED AVERAGE COST METHOD)

DATE	RECEIPTS			ISSUES			BALANCE		
2018	QTY	RATE	AMNT	QTY	RATE	AMNT	QTY	RATE	AMNT
JAN 01	300	9.7	2910				300	9.7	2910
JAN.03	250	9.8	2450				550	9.74545	5360
JAN. 11				400	9.74545	3898	150	9.74545	1462
JAN.15	300	10.05	3015				450	9.94889	4477





JAN.20				210	9.94889	2089	240	9.94889	2388
JAN.25	150	10.30	1545				390	10.08	3933
JAN.29				100	10.08	1008	290	10.08	2925

VALUE OF CLOSING STOCK = ₹ 2925/-

VALUE OF CONSUMPTION OF MATERIALS = 3898+2089+1008 = ₹6995/-

STORES LEDGER (UNDER LIFO METHOD)

DATE	RECEIPTS				ISSUES		BALANCE		
2018	QTY	RATE	AMNT	QTY	RATE	AMNT	QTY	RATE	AMNT
JAN 01	300	9.70	2910				300	9.70	2910
JAN.03	250	9.80	2450	61	Ac		300	9.70	2910
				.0/	19	~	250	9.80	2450
JAN. 11				250	9.80	2450			
			10	150	9.70	1455	150	9.70	1455
JAN.15	300	10.05	3015			FI	150	9.70	1455
						A	300	10.05	3015
JAN.20			D.	210	10.05	2111	150	9.70	1455
			1			60	90	10.05	905
JAN.25	150	10.30	1545			6	150	9.70	1455
			0			INI	90	10.05	905
			Z			61	150	10.30	1545
JAN.29			1 m	100	10.30	10.30	150	9.70	1455
			1	2	1	2/	90	10.05	905
				~			50	10.30	515
			A		* 1	A			2875

VALUE OF CLOSING STOCK = ₹ 2875/-

VALUE OF CONSUMPTION OF MATERIALS = 2910+2450+3015+1545-2875 = ₹7045/-

NOTE : Value of consumption is calculated as opening stock + purchase- closing stock. Weighted average rates are calculated as (Total Amount/ Total Quantity)

3. COST SHEET

Cost sheet is actually a statement comprising the various elements of cost of production. Cost can be classified according to its function or behaviour or it may be classified element wise. To discuss cost sheet we will consider the element wise classification only. In that case cost is classified as material cost, labour cost, expenses or overhead. Material cost and labour cost comprise the the major part of the total cost of production and hence the sum total of material cost and labour cost is called the the prime cost or or the main cost.

With Prime cost if factory overheads are added we get the factory cost or the works cost. With works cost if we add the office overhead we will get the the cost of production. With cost of production if the changes in the finished goods inventory is adjusted we get the cost of goods sold. With cost of goods sold if selling and distribution overhead is added we get the cost of sales. If the profit margin is added with cost of sales we get the total sales.

The above idea is illustrated below with a table along with a very simple illustration:



ITEMS OF COST SHEET	DETAILS
 RW MATERIALS CONSUMED PRIME COST WORKS COST COST OF PRODUCTION COST OF GOODS SOLD COST OF SALES PROFIT SALES 	 OP ST+ PURCHASE -CL ST DIRECT EXPENSES FACTORY EXPENSES OFFICE EXPENSES DIFFERENCE OF FG ST SELLING EXPENSES
PROBLEM	
 RAW MATERIALS DIRECT WAGES MACHINE HOURS WORKED OFFICE OVERHEAD MHR SELLING OVERHEAD UNITS PRODUCED SALES @ Rs. 50 each 	 80000 40000 8000 10% on works cost 4 1.50 per unit 4000 3600
SOLUTION	
 RMC DIRECT WAGES PRIME COST FACTORY OH WORKS COST OFFICE OH COST OF PRODUCTION CLOSING STOCK OF FG COGS SELLING OH COST OF SALES PROFIT SALES 	 80000 48000 128000 32000 160000 16000 176000 17600 158400 5400 163800 16200 180000

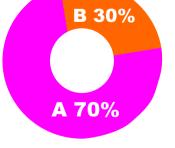




PAPER: 3 FUNDAMENTALS OF LAWS AND ETHICS (FLE)

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Your Preparation Quick Takes



Syllabus Structure

A Fundamentals of Commercial Laws 70%

13

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 & 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.

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 deal further with the Indian Contract Act, 1872 In respect of such papers, the students are reminded 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.

To start with, let us study about **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.

Sec.69.

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**.

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.

In another case, suppose you and your friend both went to a shop and bought a shirt for ₹ 500 on credit. The next day your friend went to the shop before you and paid-off ₹ 500 to the shopkeeper. In the evening you went to the same shop and again paid ₹ 500 to the shopkeeper. In this case, the shopkeeper is bound to repay ₹ 500 to you-Sec.72

All the above examples are of Quasi-contracts.

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 ₹ 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.

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.

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**

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.

1

- 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 ₹10,000 to B if B's son gets a 1st Class in the B.Com. examination. The results are declared and the son get a 2nd Class. B cannot enforce the contract as it is Impossible for the son to get a 1st 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, ₹ 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 ₹ 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.

Performance of Contracts

One obvious question that immediately come to mind is - By whom is a contract to be performed? Here many things are to be considered – 1. There may be cases where the promisor himself has to perform the contract. Such cases involve personal skill, individual taste and specialization etc. Of the promisor. The parties to the contract must expressly state about their intentions in the contract or otherwise convey their intensions as per the circumstances in the case. In all other cases, the promisor or his representative may perform as per the terms of the contract. Let us understand easily with the help of some examples: Tom promises to paint a picture for Jerry. In this case, Tom must paint the picture himself. On the other hand, if Tom promises to pay ₹ 5000 to Jerry, he (Tom) can either personally pay ₹ 5000 to Jerry or arrange payment of ₹ 5000 through another person. It must be kept in mind that if the promise accepts performance by a Third Party, he cannot later on insist on its performance by the promisor only. Another important point to be kept in mind is that, contracts involving personal skills, comes to an end if the promisor dies, since such contracyts cannot be performed by the heirs or the legal representatives of the deceased promisor. Therefore, all other contracts not involving personal skills of the promisor, are bound to be performed by the heirs or the legal representatives of the deceased promisor. The heirs or the legal representatives are not individually liable as their liability is restricted to the assets obtained from the deceased. Lets take an example. Tom promises to deliver some goods to Jerry before 15th May,2018 against payment of ₹ 10,000. Tom dies on 1st May,2015 but his representative delivers the goods before 15th May,2018. Jerry is bound to pay ₹ 10,000 to

Tom's representative. **Discharge of Contracts**

Let us now understand **Termination or discharge of contracts**. Simply remember that when the obligation stated under a contract comes to an end, that contract is said to be terminated or discharged. Therefore, the next question that comes to mind is - **In what ways can a contract be terminated or discharged**?

The following is the answer -

- 1. When the party to the contract, performs his promise that is called **Termination by Performance**.
- 2. If there is impossibility of performance, such contract can be terminated on grounds of impossibility. Suppose a singer enters into a contract to sing at a Concert against payment of a fixed amount in advance and if the singer's voice gets choked and singing is not possible, the contract can be terminated due to **Impossibility of Performance**.
- 3. If there is a **Breach of Contract**. Here one party to the contract fails to meet his obligations under the contract. Here breach can be immaterial but still material. For example, you placed an online order to buy a shirt and the delivery was supposed to be on 23rd January,2018 but it was delivered on 24th January,2014. The delay is immaterial, but suppose there was an online order for Print Cartridges by a Printing factory and the urgency was intimated to the supplier, yet the delivery was delayed and caused loss of business there is definitely a Material Breach of Contract.
- 4. Prior Agreement Contract can be terminated if the other party has a prior written agreement which calls for termination because of "Specific Reasons" and the grounds for termination must be specified. In such cases, one party must submit notice of termination in writing to the other party.
- 5. By **Rescission** of a contract, where the contract is terminated or cancelled because an individual – misrepresented, acted illegally or made a mistake. A contract Rescission may also take place if one party is not old enough to enter into a contract or if the party is an elderly person and too old and incapacitated to take legal decisions and enter into a contract.
- 6. Lapse of time -where the contract is not performed within

a fixed or reasonable time, the contract stands discharged. Supposing A enters into a contract in February,2018 to coach B for the CMA Intermediate Examination to be held in June,2018, and accepts an advance payment. The contract stand discharged after the June,2018 Examination is over.

- 7. Discharge of a contract by operation of law -can be due to Death, Insolvency, Unauthorized material alteration of the terms of contract or where merger of inferior rights takes place due to superior rights laid under a new contract.
- 8. On **Completion of a contract**, once all the obligations stated in the contract are fulfilled and completed and the

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contract is terminated and/or discharged. However, there must be enough evidence to place before the Court of Law to prove satisfactory completion of all obligations, in the event of any dispute by the other party.

Breach of Contract

Let us recapitulate - all agreements between two or more parties, to do or not to do something, that are enforceable by law are contracts. All agreements are promises to do or provide something. If the promise is broken, there is a Breach of Contract. It may include -

- I. Failure to deliver goods and or services;
- II. Failure to complete a job;
- III. Failure to pay on time;
- IV. Supply of goods and/or services, that do not confirm to the agreement.
- V. The promisor repudiates his liability under the contract before the time of performance of the contract becomes due or if the promisor, by his own deeds disables himself from performing. This is called Anticipatory Breach of Contract. Actual Breach of Contract occurs when the promisor actually fails to perform or refuses to perform during the performance of the contract. Example: Tom agrees to deliver 100 Bags of Cement on 15th May,2018 to Jerry for ₹ 15,000. He fails to supply on 15th May,2018. This is breach of contract.

Remedies for Breach of Contract

After a Breach of Contract takes place, the aggrieved party also called the Injured party, becomes entitled to the following reliefs:

- The injured party is freed from all obligations under the contract. Example: Tom agrees to deliver 100 Bags of Cement on 15th May,2018 to Jerry for ₹ 15,000. He fails to supply on 15th May,2018. This is breach of contract, therefore there is Rescission of the contract and Jerry need not pay the price.
- 2. The aggrieved party or the Injured party can file a suit for damages and receive compensation for any loss or damage caused due to the breach of contract.
- 3. If a contract is partly completed, the aggrieved party can file a suit for the price of the services performed before the breach of contract.
- 4. In special circumstances, the court can direct a party to perform the contract as per the agreed terms.
- 5. The Court can even pass an order upon a party, prohibiting him from doing anything that amounts to Breach of Contract.



16

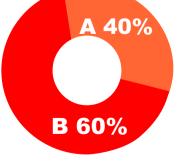


PAPER: 4 FUNDAMENTALS OF BUSINESS MATHEMATICS

AND STATISTICS (FBMS)

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Your Preparation Quick Takes



Syllabus Structure

A Fundamentals of Business Mathematics 40%

B Fundamentals of Business Statistic 60%



Learning Objectives:

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

BUSINESS STATISTICS

In this issue we will discuss some conventional problems on Probability with the help of different formulas

CASE 1: Probability of occurring event A OR event B:

P (A or B) = P (A) + P (B)...... (1), where A & B are mutually exclusive events P (A or B) = = P (A) + P (B) - P (AB)...... (2), where A & B are not mutually exclusive events

CASE 2: Probability of occurring event A AND event B:

Joint probability Under Statistical Independence $P(AB) = P(A) \times P(B)$(3) Joint probability Under Statistical Dependence $P(AB) = P(A/B) \times P(B)$(4)

CASE 3: Probability of occurring event B PROVIDED event A already occurred:

Conditional probability Under Statistical Independence P(B/A) = P(B)......(5) Conditional probability Under Statistical Dependence P(B/A) = P(BA)/P(A).....(6)

Q1

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

Market Segment	Cost of Special Campaign aimed at group
A) Minorities	₹ 500000
B) Businesspeople	₹ 750000
C) Women	₹ 250000
D) Professionals	₹ 250000
E) Working Class	₹ 500000

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

a) Are the market segments listed in the table collectively exhaustive? Are they mutually exclusive?

b) Make a collectively exhaustive and mutually exhaustive list of the possible events of the spending decision.

c) Suppose the company has decided to spend the entire Rs1 million on special campaigns. Does this change your answer to part (b)? If so what is your new answer?

Ans:

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

Q2.

A marketing manager for a calculator manufacturer is trying to predict the demand for the new calculator the company has introduced. He has limited his possible predictions to 200000 or 250000 or 300000 or 350000 or 400000. From history of the company the marketing manager however feels that

i) 300000 or 350000 are more likely; ii) 350000 units are twice as likely as 400000 iii) 300000 units are four times as likely as 200000 units iv) 250000 units are only $\frac{1}{2}$ as likely as 350000 units

a) What are the probabilities of the five quantities being demanded, according to the marketing manager?b) What has the marketing manager implicitly said concerning the probability of demand being greater than 400000 or less than



200000?

Ans:

Let A, B, C, D, E are events of getting demand at 200000, 250000, 300000, 350000 and 400000 respectively. So we could write P (A) + P(B) + P(C) + P(D) + P(E) = 1 Now by question P (D) = 2P (E), P(C) = 4 P (A), P (B) = $\frac{1}{2}$ P (D), P(C) = P (D) P(B) = $\frac{1}{2}$ P (D) = P(C) = $\frac{1}{2}$ * 4 P (A) = 2 P (A) P(C) = 4 P (A) P(D) = P(C) = 4 P (A) P(E) = $\frac{1}{2}$ P (D) = $\frac{1}{2}$ P(C) = $\frac{1}{2}$ * 4 P (A) = 2 P (A) So in equation P(A) + P(B) + P (C) + P(D) + P(E) = 1 we could write P (A) + 2P(A) + 4P(A) + 4P(A) + 2P(A) = 1, So P(A) = 1/13 & hence P (B) = 2/13, P(C) = 4/13, P (D) = 4/13, P (E) = 2/13. b) 0

Q3.

A company has announced that it will hire only one of the 5 candidates A, B, C, D and E a) What is the probability that C will be selected? b) What is the probability that A or B will be selected?

Ans:

a) P(C) = 1/5, because we have to select one candidate out of 5 candidates; b) Selecting of one candidate out of 5 is mutually exclusive events. So we can apply addition rule i.e. P (A or B) = P (A) + P (B) or = 1/5 + 1/5 = 2/5

Q4.

Employees of a company have elected five of their number to represent them on the employee- management productivity council. Profiles of the five are as follows:

- 1. Male: Age 30;
- 2. Male: Age 32;
- 3. Female: Age 45;
- 4. Female: Age 20;
- 5. Female: Age 40;

This group decides to elect a spokesperson by drawing a name.

What is the probability that the spokesperson will be either female or over 35?

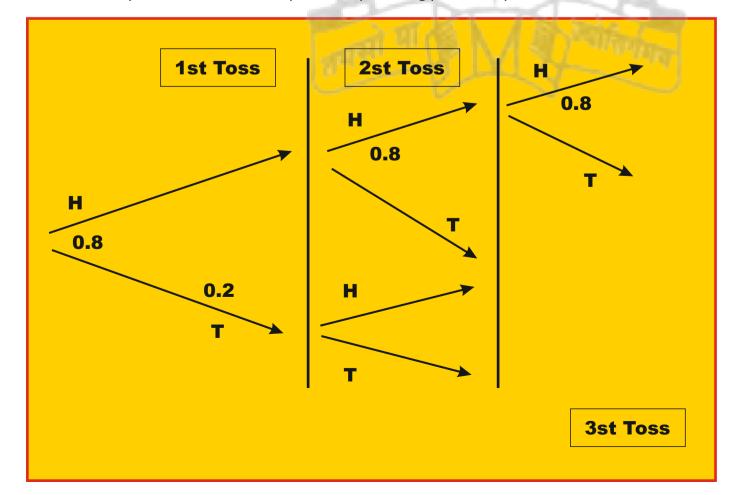
Ans: In the group there are 3 females and 2 of them are over 35. When we are electing female candidates any one of 3 female candidates could have a chance of getting elected. On the other any one of 2 female candidate over 35 could have another chance of getting elected when election is for female candidate over 35. So Event (A=female candidate) Event (B= more than35) are not mutually exclusive.

So P(A or B) = P(A) + P(B) - P(AB) = 3/5 + 3/5 - 2/5 = 4/5

Q5.

We are tossing an unfair coin that has P(H) = 0.8 and P(T) = 0.2 thrice. What is the probability of getting three heads on three successive tosses?

Ans: This sort of problem we could easily solved by drawing probability tree as follows:



Behind every successful business decision, there is always a CMA

19

If we observe the tree we could conclude that 2^{nd} toss is independent of 1^{st} toss and 3^{rd} toss is independent of 2^{nd} toss. So Events of 2^{nd} toss are independent than those of 1^{st} toss. So we are basically finding out joint probability of getting three heads under statistical independence for which formula is P (AB) = P (A) X P (B) So P (H₁H₂H₃) = P (H₁) X P (H₂) X P (H₃) = 0.8 X 0.8 X 0.8 = 0.512 Subscripts 1, 2, 3 indicate No of the toss.

Q6.

What is the probability that a couple's second child will be a) A boy, given that their first child was a girl?

b) A girl, given that their first child was a girl?

Ans:

Gender of the second child is not dependent on the gender of the 1st child. Let A is the event of birth of male child and B is the event of birth of female child.

a) P(A/B) ---- a conditional probability under statistical independence = P(A) = 1/2

b) P(B/A) ---- a conditional probability under statistical independence = P(B) = 1/2

Q7.

What is the probability that in selecting two cards one at a time from a deck with replacement, the second card is

a) A spade, given that the first card was a heart?

b) Black, given that the first card was red?

c) A queen, given that the first card was a queen?

Ans. In this case since after each drawing we are replacing the drawn card in the pack of cards so individual events are statistically independent. Therefore it is a problem of conditional probability under statistical independence.

a) P (Spade/Heart) = P (Spade) = $13/52 = \frac{1}{4}$ (Following Equation 5)

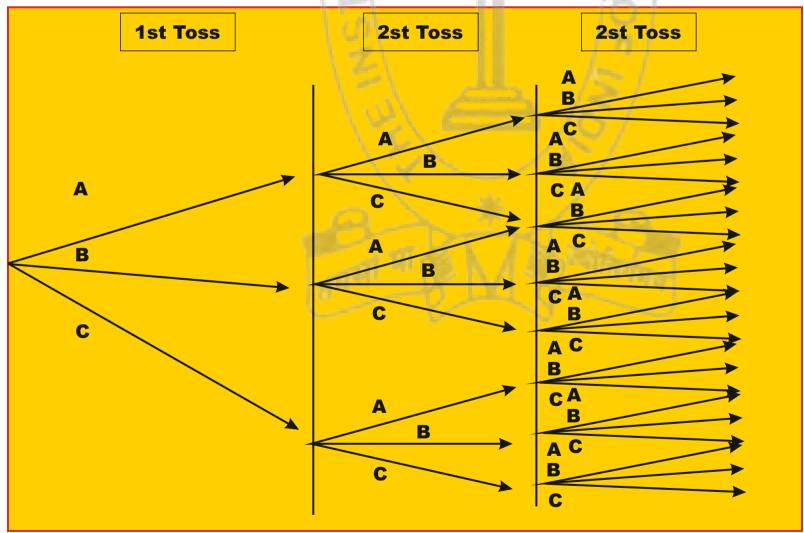
b) P (Black/Red) = P (Black) = $26/52 = \frac{1}{2}$ (Following Equation 5)

c) P (Queen/Queen) = P (Queen) = 4/52 = 1/13 (Following Equation 5)

Q8.

Use a probability tree to answer the following questions. Assuming A, B and C are independent events with marginal probabilities P(A) = 0.2, P(B) = 0.5 and P(C) = 0.3 and that subscripts represent trial numbers. Find i) P(A1B2C3), ii) P(C1C2C3), iii) P(A1C2B3C4), iv) P(A1B2), v) P(B1B2)

Ans:



	1st Toss	2nd Toss	3rd Toss	Probability	Formula	Result
Event	A	В	С	P(A1B2C3)	A1 × B2 × C3 = 0.2 × 0.5 × 0.3	0.03
Event	С	С	С	P(C1C2C3)	<i>C</i> 1 × <i>C</i> 2 × <i>C</i> 3 = 0.3 × 0.3 × 0.3	0.027
Event	A	С	В	P(A1C2B3)	A1 × C2 × B3 = 0.2 × 0.3 × 0.5	0.03

Q9. Mr S quality control manager of a manufacturing unit questions the reliability of the two quality control checks in the food processor



2

manufacturing process. One check is performed by a worker who manually checks the processors and a second check is performed by a computer monitor. S knows that 5 percent time the worker is apt to miss a defective processor and that 2 percent of time the computer will malfunction and fail to detect defective processors.

a) If S finds that the computer was malfunctioning what is the probability that the worker will have missed a defective processor?
b) If S knows that the worker missed a defective processor what is the probability that it will be found that the computer had malfunctioned?

c) What is the probability that the worker will miss a defective processor and the computer will malfunction at the same time?

Ans.

Let A = Event that the worker will have missed a defective processor;

B = Event that the computer has malfunctioned.

a) P(A/B) = Conditional probability under statistical independence = <math>P(A) = 0.05

b) P(B/A) = Conditional probability under statistical independence = <math>P(B) = 0.02

c) P(AB) = Joint probability under statistical Independence = <math>P(A) * P(B) = 0.05 * 0.02 = 0.001

Q10.

We have one box containing 10 balls distributed as follows:

3 are colored and dotted;

1 is colored and striped;

2 are gray and dotted;

4 are gray and striped;

a) What is the probability of drawing a dotted ball given that it is colored?

b) What is the probability of drawing a dotted ball given that it is gray?

c) What is the probability of drawing a gray ball given that it is dotted?

d) What is the probability of getting colored and striped ball?

e) What is the probability of getting gray and striped ball?

Ans:

a) P (D/C) = probability of drawing a dotted ball given it is colored = Conditional probability under statistical dependence = $\frac{P(DC)}{P(C)} = \frac{3}{4}$

b) P(D/G) = probability of drawing a dotted ball given it is gray = Conditional probability under statistical dependence = $\frac{P(DG)}{P(G)} = \frac{2}{6}$

c) P (G/D) = probability of drawing a gray ball given it is dotted = Conditional probability under statistical dependence = $\frac{P(DG)}{P(D)} = \frac{2}{5}$

d) P (CS) = probability of drawing a colored and striped ball = Joint probability under statistical dependence = $P(C/S) \times P(S) = 1/5 \times 5/10$ e) P (GS) = probability of drawing a Gray and striped ball = Joint probability under statistical dependence = $P(G/S) \times P(S) = 4/5 \times 5/10$

Q11.

A bag contains 3 white and 4 black balls. One ball is drawn from the bag and then replaced. Another ball is drawn after the replacement. Find the probability that both drawings are of white balls.

Ans:

The happenings on the first draw certainly has nothing to do with the second draw, since the second ball is drawn after the first ball is replaced. Thus the two draws are independent. If A and B represents the event of drawing white balls in successive draws respectively P(AB) = P(A)*P(B) = 3/7*3/7 = 9/21

Q12.

In the previous problem if after 1st drawing the ball is not replaced then what will be your answer?

Ans:

In this case the happening in the second draw is dependent on the happening on the first draw. In case of first draw there were 3 white & 4 black. So probability of drawing white ball = P(A) = 3/7. If it is not replaced then at the time of 2nd drawing there are 2 white and 4 black balls in the bag. So probability of drawing a white ball = P(B) = 2/6 = 1/3. So P(AB) = P(A) = 3/7 * 1/3 = 1/7

Q13.

The odds against students X solving a Business Statistics problem are 8:6 and odds in favour of Y solving the same problem are 14:16. i) What is the chance that the problem will be solved if both try? ii) What is the probability that they both working independently of each other solve the problem? iii) What is the probability that neither solves the problem?

Ans:

Let A denote the event that student X solves the problem, & B denote the event that student Y solves the problem. Then we are given P(A)A = 8/14. So P(A) = 1-8/14 = 6/14

P(B) = 14/30. So P(B) B= 1-14/30 = 16/30 (i) Probability that the problem will be solved = P (at least one of X and Y solves the problem) = P (A or B) = P (A) + P (B)-P (AB) = 6/14+14/30-6/14*14/30 = 73/105

(ii) Probability that both of them solves the problem = P(AB) = P(A) * P(B) = 6/14 * 14/30 = 1/5

(iii) Probability that neither of X and Y solves the problem is $P(\overline{A}) * P(\overline{B}) = 8/14 * 16/30 = 32/105$

Q14.

The probability that machine A will be performing a usual function in 5 years' time is $\frac{1}{4}$ while the probability that machine B will be operating usefully at the end of same period is 1/3. Find the probability that in five years' time:

a) Both machine will be performing a usual function;

b) Neither will be operating;

c) Only machine B will be operating and

d) At least one of the machines will be operating;

Ans:

Let A and B denotes the events that machine A and B will be performing usual functions respectively.

(a) Probability that both machine will be performing a usual function is $P(AB) = P(A) * P(B) = \frac{1}{4} * \frac{1}{3} = \frac{1}{12}$

(b) Probability that neither operates is $P(\overline{AB}) = P(\overline{A}) \times P(\overline{B}) = \frac{3}{4} \times \frac{2}{3} = \frac{1}{2}$

© Probability that only machine B operates is $P(\overline{A}) \times P(B) = \frac{3}{4} \times \frac{1}{3} = \frac{1}{4}$

(d) Probability that at least one of the machine operates is = $P(A) + P(B) - P(AB) = \frac{1}{4} + \frac{1}{3} - \frac{1}{4} \times \frac{1}{3} = \frac{1}{2}$

Q15

An article manufactured by a company consists of two parts A and B. In the process of manufacture of part A, 9 out of 100 are likely to be defective. Similarly 5 out of 100 are likely to be defective in the manufacture of part B. Calculate the probability that the assembled part will not be defective.

Ans:

Let M and N denote the events that part A and part B of the article are defective. So P(M) = 9/100 and P(N) = 5/100

Then the probability that part A will not be defective is $P(\overline{M}) = 1-9/100 = 0.91$

Then the probability that part B will not be defective is $P(\overline{N}) = 1-5/100 = 0.95$

So required probability is = 0.91*0.95 = 0.8645

Suggestions:

The study guide needs 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 could be referred for additional expertise to attend the conventional questions. This lesson is an extension of discussion on the topic in guide book. Detailed discussions on different formulas are not done here to avoid repetition. This lesson is purely an aid to study guide on paper 4-Fundamental of Business mathematics and Statistics written and issued by Institute on Syllabus -16.

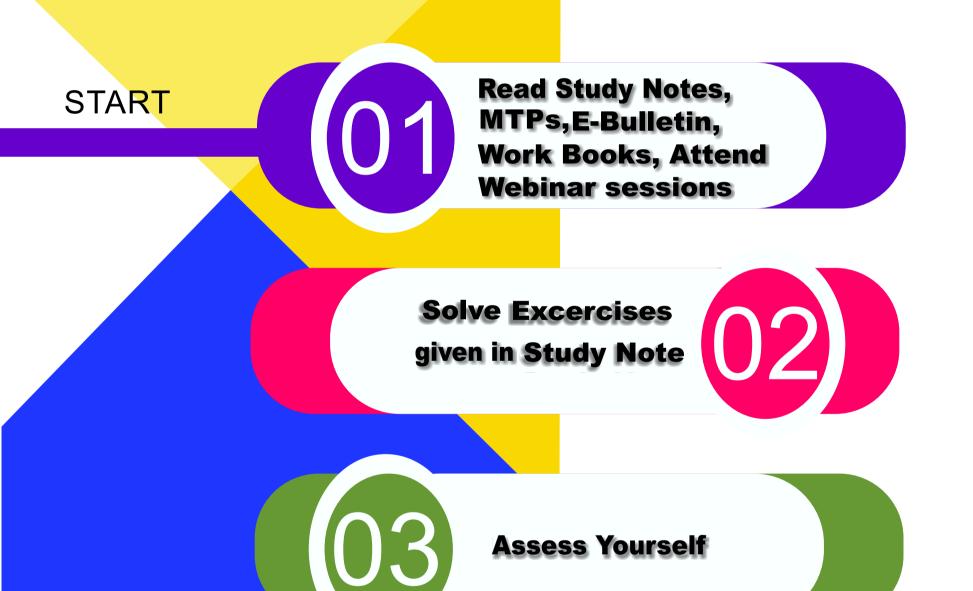


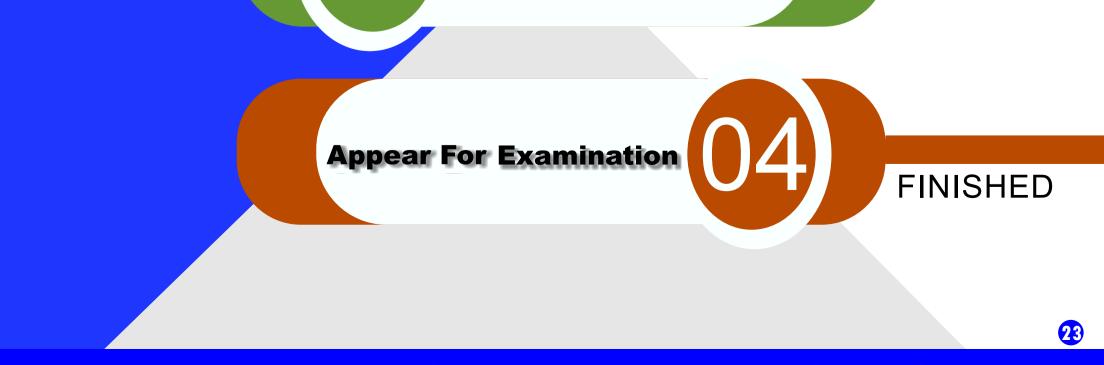




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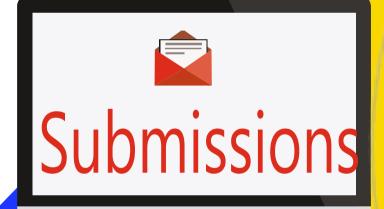








Dear Students,



Updation of E-Mail Address/Mobile:

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

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Message from Directorate of Studies

Dear Students,

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/

CELEBRATING THE MAHATMA Don't give up Don't give in

Don't give out

You can win!

GOOD LUCK

Be Prepared and Get Success;



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Message on COVID-19 from Students of ROCC Streamline Academy Thrissur





Message on COVID-19 from Eastern India Region Student Fraternity.



Message on COVID-19 from Patiala Chapter of the Institute

Message on COVID-19 from Students, Staff, Members of Nellore Chapter.







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