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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)

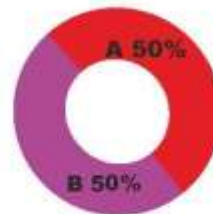


PAPER: 1, PART: I

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

Hi friends! Hope you all are doing fine. As predicted by me the fourth wave of Corona virus is knocking at the door. This time it will not be a joke. As people in general are not taking any precaution, it will be very easy for Corona virus to spread its tentacles very rapidly like wild fire. So friends, be very careful in using all sorts of protection. Wear mask whenever you go out. Wash your hands frequently with soap. Avoid crowd and do not hang on out of your house unnecessarily. But whenever you go out, do not forget to carry sanitizer spray. Do not touch an unclean surface and Covid 19 won't touch you. All the best!

Let us start our usual mock test.

I. Choose the correct answer:**1. Which statement is false?**

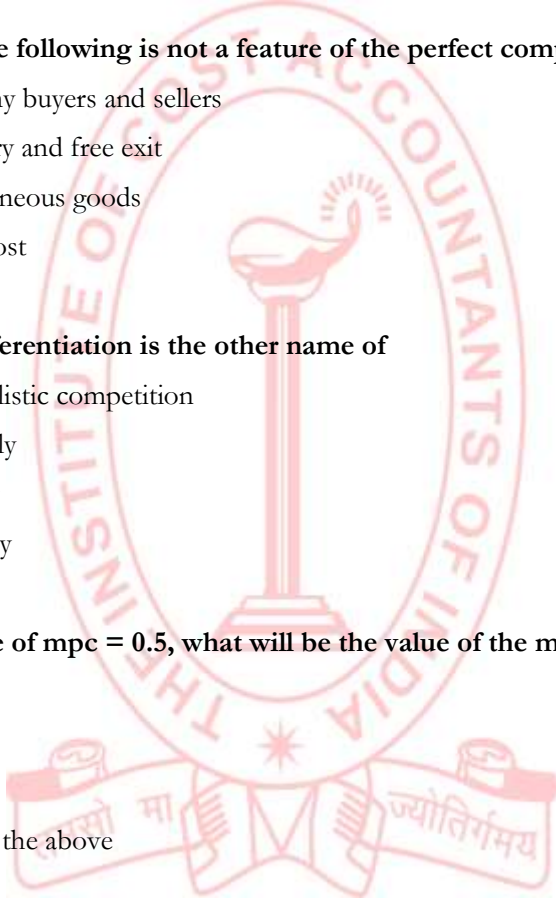
- A. Giffen good is a subset of the inferior goods
- B. Demand curve for giffen good is upward rising while that for conspicuous goods is not
- C. As price of giffen good falls, the demand for it falls also
- D. Giffen good does not follow the law of demand

2. LAC curve is U-shaped because of

- A. Internal economies and diseconomies of scale
- B. External economies and diseconomies of scale
- C. Law of diminishing marginal productivity
- D. Constant returns to scale

3. Demand curve for the firm under perfect competition is

- A. Upward rising

- B. Downward falling
C. Parallel to the quantity axis
D. Parallel to the price axis
4. **Credit creating capacity of the commercial banking system may be higher if**
A. The cash reserve ratio (CRR) falls
B. There is no leakage from the banking system
C. The Bank Rate rises
D. None of the above
5. **Which of the following is not a feature of the perfect competition?**
A. Too many buyers and sellers
B. Free entry and free exit
C. Homogeneous goods
D. Selling cost
6. **Product differentiation is the other name of**
A. Monopolistic competition
B. Monopoly
C. Duopoly
D. Oligopoly
7. **If the value of $mpc = 0.5$, what will be the value of the multiplier?**
A. 200
B. 20
C. 2
D. None of the above
8. **If the price of x falls from Rs.60 to Rs.50, its demand rises from 500 to 800 units. Find the price elasticity of demand.**
A. 5.32
B. 3.52
C. 2.53
D. None of the above
9. **Consider the demand curve $X = 10 - 3P$. what will be the price elasticity of demand when $P = 5/3$**
- 

- A. 5
- B. 1/5
- C. 1
- D. None of the above

10. If the $MR=0$, what will be the price elasticity?

- A. 0
- B. 1
- C. Infinity
- D. None of the above

KEY:

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

1. In Cournot's duopoly model, equilibrium output is Of competitive output
2. A monopoly demand curve is its Curve
3. Economic cost means explicit cost + implicit cost +
4. Is related to growth definition of economics
5. IMF member countries are required to subscribe quota partly (25%) in & partly in

KEY:

1. 2/3	2. AR	3. Normal profit	4. Samuelson	5. Gold domestic currency
--------	-------	------------------	--------------	---------------------------

III. True or False:

1. Gresham's law states that good money drives bad money out of circulation
2. If prices are decreasing continuously, it is said to be deflation
3. Through deficit finance, Govt. borrows from RBI or issues new currency to fill up the gap of budget deficit
4. Along the production possibility frontier if we move from left to right, the marginal rate of transformation will be rising
5. Income is a stock and wealth is a flow

KEY:

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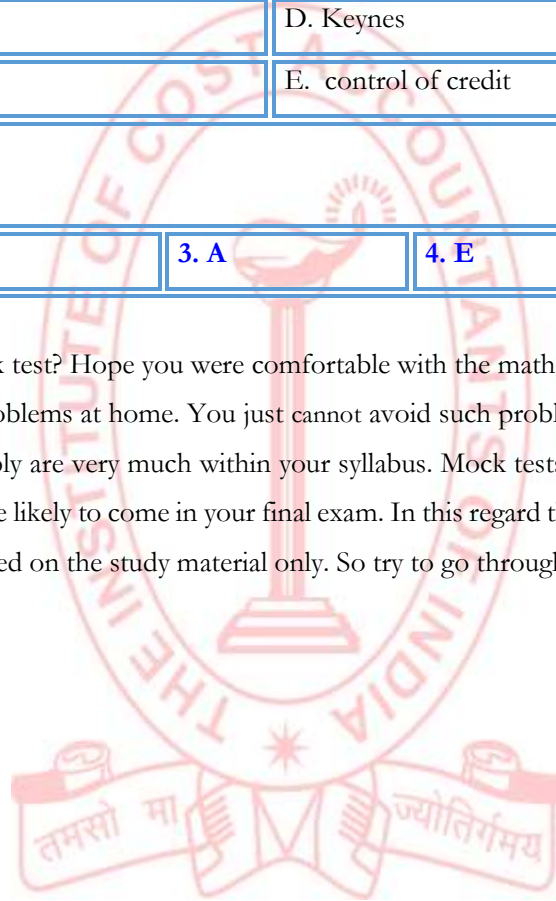
IV. Matching:

1. Monopoly	A. price taker
2. IMF	B. price maker
3. Perfect competition	C. SDR
4. RBI	D. Keynes
5. Multiplier	E. control of credit

KEY:

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

So friends, how was the mock test? Hope you were comfortable with the mathematical problems! Please try to practice such problems at home. You just cannot avoid such problems. Particularly problems on elasticity of demand and supply are very much within your syllabus. Mock tests are very helpful in practicing the typical questions which are likely to come in your final exam. In this regard the study material is your Bible. All your questions will be based on the study material only. So try to go through it thoroughly. Best of luck in 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

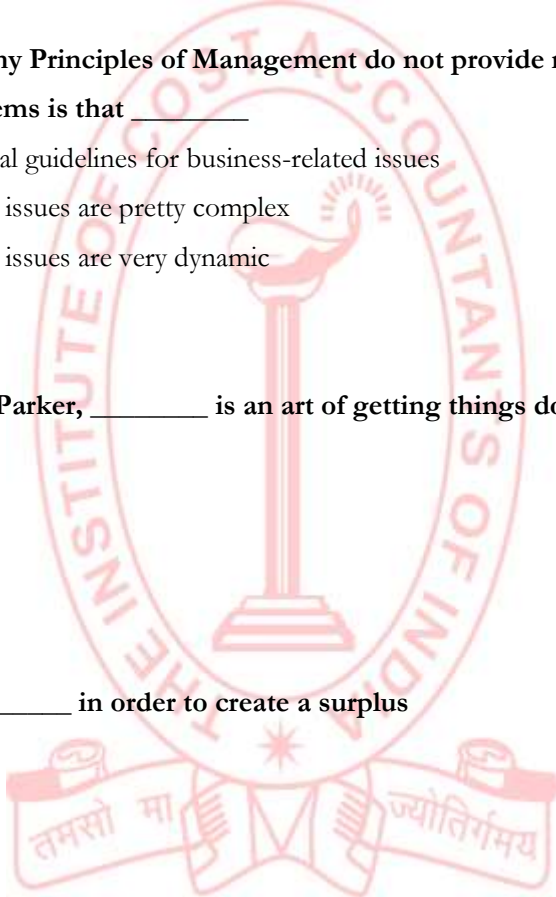
A Fundamentals of Economics 50%
B Fundamentals of Management 50%

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. Which of the following is true about managers within an organization?**
 - A. Management skills apply to managers at top levels in an organization
 - B. Management skills apply to managers at all levels in an organization
 - C. Management skills apply to managers at middle levels in an organization
 - D. Management skills apply to managers at executive levels in an organization
- 2. Which of the following is the main motive behind carrying out a fatigue study?**
 - A. It helps to calculate the standard output for employees within a task
 - B. It helps to calculate the expected time taken for employees to complete their tasks
 - C. It helps to calculate the duration of rest intervals given to employees
 - D. None of the above
- 3. The principles of management serve as a general guideline for _____**
 - A. Decision making
 - B. Managerial actions
 - C. Both a and b are correct
 - D. Both a and b are incorrect
- 4. Which of the following is the main objective of the Unity in Direction principle?**
 - A. Coordination
 - B. Unity in action
 - C. Both a and b are correct
 - D. Both a and b are incorrect
- 5. Which of the following is the correct meaning of concentration of decision-making authority?**
 - A. Span of management

- B. Centralization
C. Decentralization
D. None of the above
6. Which of the following is the main objective of the Unity in Direction principle?
- A. Coordination
B. Unity in action
C. Both a and b are correct
D. Both a and b are incorrect
7. The main reason why Principles of Management do not provide readymade solutions for all management problems is that _____
- A. They act as general guidelines for business-related issues
B. The real business issues are pretty complex
C. The real business issues are very dynamic
D. All of the above
8. According to Mary Parker, _____ is an art of getting things done through others
- A. Job
B. Behaviour
C. Management
D. Both A & B
9. Management is _____ in order to create a surplus
- A. an art
B. a science
C. both A & B
D. None of these
10. _____ is about grouping of jobs
- A. Organizing
B. Directing
C. Planning
D. Controlling
11. Management satisfies _____ characteristics of a profession
- 

- A. Few
- B. Many
- C. All
- D. Zero

12. _____ is the important interpersonal role of manager

- A. Leader role
- B. Liaison role
- C. Figurehead role
- D. All of the above

13. Which is NOT an informational role of manager?

- A. Monitor's role
- B. Disturbance's handler role
- C. Disseminator's role
- D. spokesman's role

14. MOST stands for _____

- A. Machinery, Office, Staff and Technology
- B. Mission, Objectives, Strategies and Tactics
- C. Maximum Output Strategy Tools
- D. Manager, Operator, Seller and Trader

15. Functional managers are responsible _____

- A. for a single area of activity
- B. to the upper level of management and staff
- C. for complex organizational sub-units
- D. for obtaining copyrights and patents for newly developed processes and equipment

Answer:

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

Fundamentals of Accounting (FOA)



PAPER: 2

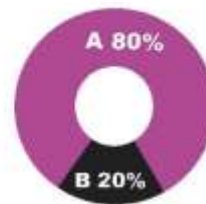
FUNDAMENTALS OF ACCOUNTING (FOA)

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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

Wish you all a **very happy new year**. Hope you all are keeping well. You must have celebrated the 31st night with bursting crackers, illuminating lights, and enjoyed with music. Many of you must have noted down the new year resolution also. In whatever way you have spent try to remember the resolution every day. It should not be confined in pages. Try to be a better person every day. Try to learn at least one new thing per day. Gathering knowledge can only improve a person, can purify a person. So, delete evil thoughts and purify your soul. Do not wait for the rewards to come for acquiring knowledge because “knowledge” is the best trophy in your heart’s showcase.

Here is some practice material for you on consignment:

Write whether the following items are true or false

1. Goods sent on consignment account is of the nature of real account
2. Goods valued at invoice price refers to value at lower price than its original cost
3. Balance in consignment account shows profit and loss on consignment
4. Profit and loss on consignment is retained / borne by consignor
5. Commission will be shared between only consignee
6. The details contained in account sales are unsold stock left with the consignee
7. All proportionate consignee's expenses will be added up for valuation of consignment stock
8. In consignment, the goods are dispatched on the basis that the goods will be sold on behalf of and at th expenses of and at the risk of the consignee
9. Cost of the goods include all non-recurring expenses incurred till the goods reach the premises of the consignee's godown
10. Accounts sales is a statement furnished by consignor to consignee

Answer:

1	T
---	---

2	F
3	T
4	T
5	T
6	F
7	F
8	F
9	T
10	F

Read the following illustration and answer the following questions

X consigned 1000 kg of rice @ Rs. 20 per kg to Y. He paid freight Rs.2500, dock charges Rs. 1500, and insurance Rs. 1000. 200 kg of rice was destroyed in transit due to an accident. An insurance claim of Rs. 3500 was admitted by the insurance company. Now Y sold 720 kg of rice @Rs. 30 per kg. and incurred clearing Charges Rs. 1800, carrying charges Rs. 1200, Godown Rent Rs. 1500. Selling expenses Rs. 1000. Y is to receive an ordinary commission @8% on sales. He could not realise Rs. 2000 from a debtor and it proved bad. Y remits Rs. 10000 by bank draft to X. Show the consignment account in the books of the consignor.

1. Profit on consignment

- Profit 9899
- Loss 5328
- Profit 5328
- Loss 5000

2. Abnormal loss

- 5000
- 4500
- 3700
- 4000

3. Unsold stock

- 3200

- b. 3000
- c. 2300
- d. 2000

4. Commission

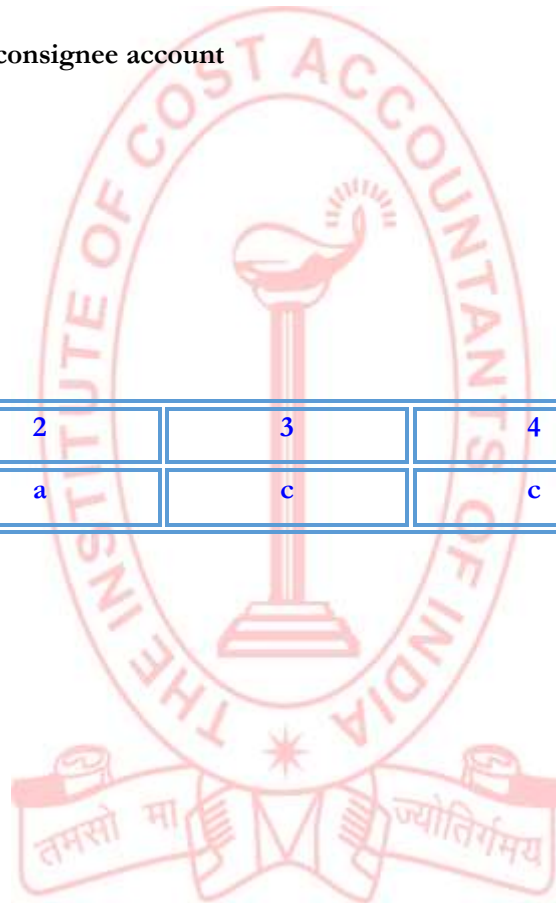
- a. 1827
- b. 1800
- c. 1728
- d. 1278

5. Balance of consignee account

- a. 4372
- b. 4723
- c. 7342
- d. 3472

Answer:

1	2	3	4	5
b	a	c	c	a



Fundamentals of Laws and Ethics (FLE)



PAPER: 3

FUNDAMENTALS OF LAWS AND ETHICS (FLE)

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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 not just that this subject - Ethics, carries a weightage of 30% and scoring 25 marks from this subject is not as difficult as it is to score from Section A subjects, the fact is that you can start with an initial lead by completing Section B first before concentrating on the Acts and their interpretations in Section A. So, keeping that in mind, let us discuss a little more about the Fundamentals of Ethics in this issue of the E-Bulletin, with a totally new approach.

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.

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

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 intentions 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 Rs.5000 to Jerry, he (Tom) can either personally pay Rs.5000 to Jerry or arrange payment of Rs.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 contracts 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. Let's take an example. Tom promises to deliver some goods to Jerry before 15th May, 2018 against payment of Rs.10,000. Tom dies on 1st May, 2015 but his representative delivers the goods before 15th May, 2018. Jerry is bound to pay Rs.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 stands 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 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 Rs. 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:

1. 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 Rs. 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.

Let us revise something more about Ethics -

Business Ethics is applicable within the periphery of a business circle and environment. It encompasses the behavior of individuals within business organizations, giving top priority to Business Interests. In this context, one must remember **the 3 C's of Business Ethics, which are –**

- a) **Compensation,**
- b) **Competency and**
- c) **Character.**

One must accept and appreciate that- **Ethical Business Profit**, is a *reward to the businessman for – investing in business, for generating employment, for contributing to the growth of business at large, by abiding by the Laws of the Land and the ethical practices followed in the trade and business.*

Ethics applies to all accepted activities of the people, including those engaged in business. However, one must ethically refrain from too much greed and profiteering and from corruption at any stage. **Ethics must promote healthy practices and standards in the political, social and economic arena** for bring Value-addition among individuals in the society at all walks of life while maintaining good Work-Life Balance.

Business Ethics must proceed with – Skill, efficiency and diligence.

Good Business Ethical practices must –

- a) Avoid Indulgence in malpractices,
- b) Help workers to work with Self-Confidence,
- c) Encourage customer satisfaction and confidence,
- d) Promote business,
- e) Protect consumer rights,
- f) Look into the interests of the Employees as well as the Owner/Stakeholders and also
- g) Enable steady growth of the organization amid of healthy completion.

Please remember that Ethics is truly the pillar on which you, – the would-be professionals will be expected by the society and the world-at-large, to stand, during your professional career.

Right from the day an individual is born, the world accepts him/her as a member of a Society, a Clan, a Culture and a Tradition and each of those categories are governed by respective Standards and Ethics. We may therefore, explain that ***Ethics are such standards that are consistently followed over the years depending on the philosophy that, that system has been following based on the terms of right, obligations and the benefits derived by the society depending on their geographical location and demographic characteristics.***

It is known that, right after his/her birth, from the day a person, begins to see, hear, understand and realize the customs, beliefs, traditions and culture into which he/she is born, he/she is told to do or not to do something, to speak or not to speak something, to wear or not to wear certain dresses, to eat or not to eat certain foods and vegetables or to behave in a certain manner, etc. However, ***we must never be confused but should be able to distinguish between Morals and Ethics.***

It must be appreciated that all *ethical traditions and customs are generally followed based on systematic and scientific reasons depending on how much the individual has bonded and established his relationship within that category where he/she belongs or interacts with*, but such reasons may not be always known to every individual existing within that system. Let us take an example. When you enter or pass through a place where the environment is good, peaceful and congenial, you tend to prolong your stay over there, but in a reverse situation, you will definitely either avoid such place or quickly leave that place. In the former case, the individuals gathered there have not breached their ethics but in the latter case, the ethics have been definitely breached and violated.

That prompts us to raise a question – should ethics be rigid or does it need changes? The answer is that we must remember that ***ethics is something which is generally prompted by your conscience. Ethics, helps us to realize what is right and wrong and what we should refrain from doing.*** Moreover, since the time machines keeps ticking and changes are bound to take place depending on situations and circumstances, ethics actually guides us to study and analyze an existing system first before showing the path towards development and fine-tuning of an existing system that needs a change.

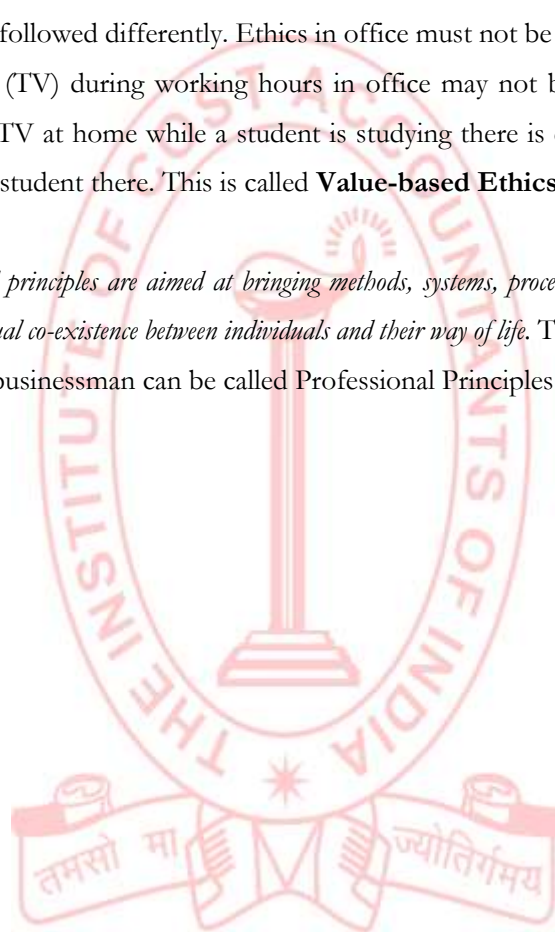
Moral and Ethics , depends on how we interpret the meaning. **Morals**, deal with customs and practiced principles followed by certain groups, depending on religion, culture and traditions. **Ethics**, on the other hand, lays emphasis on character , conduct and individual behavior . What is ethically moral, may not be morally wrong. For example, eating fish on Saturdays may not be ethically wrong but it may be morally wrong for certain community members.

Ethics and Morals are certain laid practices which reminds the members of the society about their duties and restrictions, so that those community members stay within set acceptable limits. Breaching the restrictions cause conflicts and disturbs human peace and harmony between different social relationships such as – father and son, husband and wife, between friends and relatives and even between communities.

Ethics , demands that we follow certain disciplines , standard practices and conventions more than what is prescribed by law. It all depends on how we apply and practice ethics in our daily life and general practices.

Ethics in general life must be followed differently. Ethics in office must not be mixed with ethics at home. For example, watching television (TV) during working hours in office may not be permitted but, at home it is allowed. However, playing a TV at home while a student is studying there is ethically wrong if it disturbs or distracts the attention of that student there. This is called **Value-based Ethics and discipline.**

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



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 discuss MCQs on Correlation. Among the four options given to each question choose the appropriate option.

Q1. A marketing firm use price reductions through coupons and discount pricing to increase sales. In this example which one of the following correlation is most appropriate?

- Correlation between price reduction and sales
- Correlation between sales and demand
- Correlation between sales and discount amount
- Correlation between demand and discount amount

Q2. Which one of the following statement is true?

- Scatter diagram provides quantitative measures whereas correlation coefficient provides visual representation
- Scatter diagram and correlation coefficient bot provide quantitative measures
- Scatter diagram provides visual representation whereas correlation coefficient provides quantitative measures
- Scatter diagram and correlation coefficient bot provide visual representation

Q3. Correlation analysis is

- A group of techniques to measure the relationship between two dependent variables
- A group of techniques to measure the relationship between two variables
- A group of techniques to measure the relationship between two independent variables
- A group of techniques to measure the relationship between two exotic variables

Q4. Refer the following table:

Sales Person	A	B	C	D	E	F
Sales Call made	96	40	104	128	164	76
Product sold	41	41	51	60	81	29

In a correlation analysis w.r.t above table

- (a) Sales call made will act as independent variable and product sold will act as dependent variable
- (b) Sales call made will act as dependent variable and product sold will act as independent variable
- (c) Sales call made will act as independent variable and sales person will act as dependent variable
- (d) Sales call made will act as independent variable and sale proceeds will act as dependent variable

Q5. In a correlation analysis

- (a) The dependent variable provide the basis to predict the independent variable
- (b) The dependent variable provide the basis to predict the trend in scatter diagram
- (c) The independent variable provide the basis to predict the trend in scatter diagram
- (d) The independent variable provide the basis to predict the dependent variable

Q6. The Y coordinate of a point on a scatter diagram w.r.t the table in Q4 relates to

- (a) Sales Call made
- (b) Product sold
- (c) Correlation coefficient
- (d) Regression coefficient

Q7. Correlation coefficient between two variables X & Y is + 0.95 and correlation coefficient between other two variables A & B is – 0.95. Which of the following statement is correct?

- (a) Correlation coefficient between X & Y is stronger than that between A & B as r_{XY} is +ve
- (b) Correlation coefficient between A & B is stronger than that between X & Y as r_{AB} is –ve
- (c) Strength of r_{XY} & r_{AB} is never dependent on direction
- (d) None of the above

Q8. If the correlation between two variables is weak then

- (a) There will be very little scatter about a line drawn through the center of the data
- (b) There will be nil scatter about a line drawn through the center of the data
- (c) There will be considerable scatter about a line drawn parallel to X axis
- (d) There will be considerable scatter about a line drawn through the center of the data

Q9. In a set of data for two variables X (Sales call made) and Y (product sold) Karl Pearson's Coefficient of Correlation is +0.865. This indicate

- (a) Sales call made cause more no of products sold
- (b) Sales call made is positively related to products sold
- (c) Sales call made is perfectly related to products sold

(d) Sales call made cause positive no of products sold

Q10. There is a strong – ve correlation between two variables (i) X: Population of donkeys & (ii) Y: Number of doctoral degrees granted. This correlation is called

- (a) Partial correlation
- (b) Perfect correlation
- (c) Spurious correlation
- (d) Multifaceted correlation

Q11. Year wise X: plant capacity (in lakhs of tonnes) and Y: plant utilisation (in lakhs of tonnes) are as follows:

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
X	2.6	2.8	3.00	3.00	3.00	3.20	3.80	4.90	5.40	6.00	6.00	6.00
Y	2.00	2.00	2.60	2.50	2.40	2.80	3.00	3.90	4.80	5.00	5.60	4.80

The scatter diagram with the above data shows

- (a) Considerable scatter about a line drawn through the center of the data
- (b) Nil scatter about a line drawn through the center of the data
- (c) Very little scatter about a line drawn through the center of the data
- (d) Cannot be commented on scattering with the available information

Q12. The following are the results of some examination:

Age of candidates	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23
Candidates applied	200	300	100	50	150	400	250	150	25	75
Successful candidates	124	180	65	34	99	252	145	81	12	33

The Pearson's Coefficient of correlation between age and %age of successful candidates is

- (a) 0.7815
- (b) 0.6721
- (c) -0.5843
- (d) -0.7744

Q13. The following table gives the distribution of the total population and those who are totally and partially blind among them:

Age	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No of persons (in thousands)	100	60	40	36	24	11	6	3
Blind	55	40	40	40	36	22	18	15

The Pearson's Coefficient of correlation between age and %age of blind is

- (a) 0.8983
- (b) -1
- (c) 1
- (d) -0.7654

Q14. A computer while calculating the correlation coefficient between two variables X and Y from 25 pairs of observations obtained the following results:

$$N = 25, \Sigma X = 125, \Sigma Y = 100, \Sigma X^2 = 650, \Sigma Y^2 = 460 \text{ \& } \Sigma XY = 508$$

It was later discovered that the two pairs of observations were not correctly copied. They were taken as (6, 14) and (8, 6) while the correct values were (6, 24) and (18, 6). Correct coefficient of correlation between X and Y is

- (a) 0.3456
- (b) 0.1339
- (c) 0.2345
- (d) 0.1402

Q15. Let $x = X - \bar{X}$ & $y = Y - \bar{Y}$. If $\Sigma xy = 122$, $r = 0.28$ & $\sigma_x = 3$, $n = 20$, Compute σ_y

- (a) 2.97
- (b) 5
- (c) 1.34
- (d) 7.26

Q16. If

$$\sum_{i=1}^{12} (X_i - \bar{X})^2 = 360, \sum_{i=1}^{12} (Y_i - \bar{Y})^2 = 250, \sum_{i=1}^{12} (X_i - \bar{X})(Y_i - \bar{Y}) = 225$$

Then correlation coefficient is

- (a) -1
- (b) 0.75
- (c) 0
- (d) -0.5

Q17. Consider the following table:

X	2	4	5	6	8	11
Y	18	12	10	8	7	5

The correlation coefficient between X & Y is -0.92 . Multiply each X value in the table by 2 and add 6. Multiply each value of Y in the table by 3 and subtract 15. The new correlation coefficient is

- (a) -0.92
- (b) 1
- (c) - 1
- (d) 0.75

Q18. "If r is the correlation coefficient between two series X & Y then covariance between X & Y is

- (a) $r * \text{variance of series X} * \text{variance of series Y}$
- (b) $r / (\text{variance of series X} * \text{variance of series Y})$
- (c) $(r * \text{variance of series X}) / \text{variance of series Y}$
- (d) $(r * S.D \text{ of series X} * S.D \text{ of series Y}) * N$

Q19. Karl Pearson's coefficient of correlation between two variables X and Y is 0.52, their covariance is +7.8. If the variance of X is 16, find the standard deviation of Y series.

- (a) 1.97
- (b) 4.15
- (c) 3.75
- (d) 2.18

Q20. If high values of one tend to low values of the other, they are said to be

- (a) Negatively correlated
- (b) Inversely correlated
- (c) Both (a) & (b)
- (d) None of the above

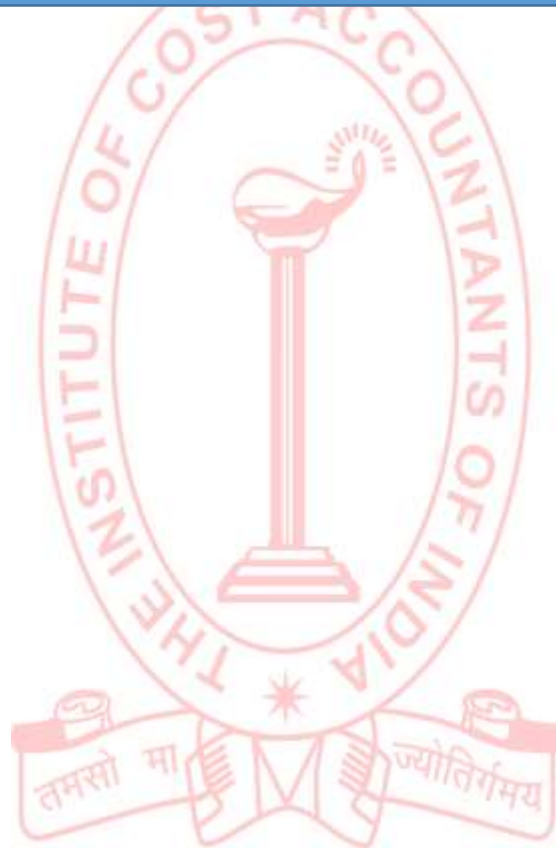
Answers:

Q1	a	
Q2	c	
Q3	b	
Q4	a	

Q5	d	
Q6	b	
Q7	c	
Q8	d	
Q9	b	<i>Correlation analysis never determines cause</i>
Q10	c	
Q11	c	$r = \frac{\Sigma dx dy - \frac{\Sigma dx \Sigma dy}{N}}{\sqrt{\Sigma dx^2 - \frac{(\Sigma dx)^2}{N}} * \sqrt{\Sigma dy^2 - \frac{(\Sigma dy)^2}{N}}}$, where $dx = X - 4, dy = Y - 4, N = 12$. $r = 0.98, a \text{ strong correlation}$
Q12	d	$r = \frac{\Sigma dx dy - \frac{\Sigma dx \Sigma dy}{N}}{\sqrt{\Sigma dx^2 - \frac{(\Sigma dx)^2}{N}} * \sqrt{\Sigma dy^2 - \frac{(\Sigma dy)^2}{N}}}$, variable X = age, variable Y = (Candidate successful/Candidates applied)*100. Accordingly dx and dy. N = 10
Q13	a	As in Q12. Variable Y = (No of Blinds/No of persons)*100
Q14	b	$\Sigma X = 125 - 8 + 18, \Sigma Y = 100 - 14 + 24, \Sigma X^2 = 650 - 8 * 8 + 18 * 18, \Sigma Y^2 = 460 - 14 * 14 + 24 * 24, \Sigma XY = 508 - 6 * 14 - 8 * 6 + 6 * 24 + 18 * 6$. Hence the result
Q15	d	$r = \frac{\Sigma xy}{n \sigma_x \sigma_y}$. So $\sigma_y = \frac{\Sigma xy}{n r \sigma_x} = \frac{122}{20 * 0.28 * 3} = 7.26$
Q16	b	that $r = \frac{\Sigma xy}{\sqrt{x^2} \sqrt{y^2}}$ where $x = X - \bar{X}$ & $y = Y - \bar{Y}$ So $r = \frac{225}{\sqrt{360} \sqrt{250}} = 0.75$
Q17	a	Because by multiplying with and adding/subtracting a constant from each value of X and Y in the table we are basically changing the scale and origin by which there will be no change in the correlation coefficient.
Q18	d	
Q19	c	We know that $r = \frac{cov(X,Y)}{\sigma_x \sigma_y}$ In this problem $r = 0.52, cov(X, Y) = 7.8$ Variance of X is 16. So $\sigma_x = \sqrt{16} = 4$ So $\sigma_y = \frac{7.8}{0.52 * 4} = 3.75$
Q20	c	

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 correlation, without going detailing of formulae. Formulae are available in guide book. These sort of problems could facilitate in attempting MCQs. This could be used as supplement to the study guide. In next few issues on statistics discussions will be held on further MCQs on correlation/regression. Students should go thoroughly for clear concept on formula- direct & indirect both form, from Guide book on the paper 4- Fundamental of Business mathematics and Statistics written and issued by Institute on Syllabus -16.



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PRACTICAL Advice

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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.

You must be aware that India is celebrating Azadi Ka Amrit Mahotsav, which is an initiative of the Government of India to celebrate and commemorate 75 years of independence and the glorious history of its people, culture and achievements. Along with pan India, your Institute has also observed and took part in various meaningful activities throughout the year. We also expect that our students should also take part in the development of the nation and make the country proud.

“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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Few Snapshots

Few Snapshots



CMA Vijender Sharma elected as President and CMA Rakesh Bhalla as Vice President of the Institute for the year 2022-23.



CMA Vijender Sharma elected as President and CMA Rakesh Bhalla as Vice President of the Institute for the year 2022-23.



CMA Vijender Sharma, President of the Institute along with CMA B.B. Goyal, Former Addl Chief Advisor (Cost), MoF, GoI extending greetings to Shri Gyanesh Kumar, IAS, Secretary to the Government of India, Ministry of Cooperation on 6th December, 2022.



CMA Vijender Sharma, President along with CMA Rakesh Bhalla, Vice President, CMA Biswarup Basu, Past President and CMA Kaushik Banerjee, Secretary of the Institute extending greetings to Shri Manoj Govil, IAS, Secretary to the Government of India, Ministry of Corporate Affairs on 29th November 2022.



CMA Vijender Sharma, President along with CMA Rakesh Bhalla, Vice President, CMA Biswarup Basu, Past President and CMA Kaushik Banerjee, Secretary of the Institute extending greetings to Shri Manoj Govil, IAS, Secretary to the Government of India, Ministry of Corporate Affairs on 29th November 2022.



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