Note: 1) All questions are **<u>compulsory.</u>**
2) Figures to the right indicate **<u>full marks.</u>**
3) Working is a part of your **<u>answer.</u>**

1. A) Select the most appropriate answer from the alternatives given below and rewrite the
Sentences: (**<u>Any ten</u>**)   **(10)**

1. Capital at the beginning of the year is ascertained by preparing
   a) Cash book
   b) Debtors A/c
   c) Receipts and payments A/c
   d) Opening statements of affairs

2. Following business/Organisation can maintain books under single entry system
   a) Co-operative society
   b) Sole proprietor
   c) Limited company
   d) Bank

3. Bills payable dishonored
   a) Debited to debtors A/c
   b) Credited to debtors A/c
   c) Debited to creditors A/c
   d) Debited to creditors A/c

4. Gross profit 25% means
   a) 25% on Sales
   b) 25% on Cost
   c) 25% on Capital
   d) 25% on Purchases

5. Branch account under debtor system is
   a) Real A/c
   b) Nominal A/c
   c) Personal A/c
   d) Impersonal A/c

6. Depreciation on branch fixed assets under debtor system is
   a) Not shown separately in branch A/c
   b) Shown in branch A/c
   c) Not accounted
   d) Shown in branch P&L A/c in head office

7. Closing stock in consignee is shown in the balance sheet of
   a) Consignor
   b) Consignee
   c) In the books of consignee as well as consignor
   d) Neither in the books of consignee nor consignor
8. If books are kept under single entry system, then credit sales are ascertained by preparing
   a) Creditors A/c
   b) Debtors A/c
   c) Sales A/c
   d) Trading A/c
9. Branch stock Account under Stock and Debtor system method
   a) Real A/c
   b) Nominal A/c
   c) Personal A/c
   d) Impersonal A/c
10. Stock for the purpose of claim should be
    a) At Marginal cost
    b) At Market value
    c) At Realizable value
    d) At Cost
11. Insurance policy average clause applicable when
    a) Life insurance
    b) Over insurance
    c) Under insurance
    d) General insurance
12. If total stock is Rs. 50,000; the policy amount Rs. 70,000 and entire stock is lost them claim amount will be
    a) Rs. 70,000
    b) Rs. 35,714
    c) Rs. 50,000
    d) Rs. 60,000

B) State whether the following statements are **True** or **False** (**Any Ten**)   **(10)**
   1. Single Entry System is suitable to small organization.
   2. Credit sales can be ascertained from Debtors Account.
   3. In Single Entry System, closing capital is ascertained by preparing statement of affairs.
   4. The relationship between consignor and consignee is that of Principal & Agent.
   5. In case of del-credere commission, bad debt loss is borne by the consignee.
   6. Consignment is same as sales.
   7. Discount allowed to customers is not recorded in Branch Account.
   8. Dependent branch depends on customers for supply of goods and expenses.
   9. Under Stock and Debtors system, Branch Stock account is a real account.
   10. Rate of gross profit need not be consistent for deciding the stock on the date offire.
   11. Average clause has no effect on calculation of claim.
   12. In case of overvaluation of stock, it should be brought down to cost.

2. Milind steel supplier does not maintain double entry books of accounts. They have furnished you with the following information

(1) Balance Sheet as at 1.1.2021

Liabilities	Rs.	Assets	Rs.
Sundry Creditors	3,600	Cash at Bank	3,900
Bills Payable	1,600	Bills Receivable	1,500
Capital	20,200	Sundry Debtors	4,000
		Stock	6,000
		Plant and Machinery	4,000
		Land & Building	6,000
	25,400		**25,400**

(2) Cash Book of the year 2021

Receipts	Rs.	Payments	Rs.
To Balance 1-1-2021	3,900	By Salaries	1200
To Debtors	27,000	By Wages	1,480
To Bills Receivable	9,000	By Bills Payable	7,320
		By Creditors	14,700
		By Office Expenses	800
		By A's Drawings	3,000
		By Balance c/d	11,400
	39,900		**39,900**

(3) Summary of other transactions during the year 2021

Purchases Rs. 30,000, Sales Rs. 38,000, Discount allowed to debtors Rs. 200, B/R received during the year Rs. 9,100, B/P given during the year Rs. 15,500, stock on 31-12-2021 Rs. 7,000, Depreciate Plant & Machinery by Rs. 400 and land and building by Rs. 300.

Prepare Trading and Profit & Loss Account for the year ended 31/12/2021 and Balance Sheet as on that date. **(20)**

<div align="center">OR</div>

2. Following information is given to you by Mr. Arun

(a)   Opening Statement of Affairs as on 1st April 2021

Liabilities	Rs.	Assets	Rs.
Capital	100,000	Laptop	50,000
Creditors	50,000	Closing Stock	30,000
Loan from friends	15,000	Debtors	40,000
		Bills Receivable Account	8,000
		Cash and Bank Balance	37,000
	165,000		**165,000**

(b) Following Information was available with respect to Cash and Bank Transactions :

	Particulars	Rs.
1	Received from Debtors	1,10,000
2	Paid to Creditors	60,000
3	Cash Purchases	15,000
4	Cash Sales	20,000

5	Salaries		18,000
6	Office Expenses		20,000
7	Commission Received		4,000
8	New Laptop Purchased		50,000
9	Bills Receivable Matured and Received		15,000
10	Bills Payable Paid		5,000

(c) Following additional Information was also made available to you :
1) Credit Purchase   Rs. 70,000
2) Credit Sales   Rs. 150,000
3) Depreciation to be charged on Laptop   25% p.a.
4) Laptop purchased during the year was purchased on 1st October, 2021
5) Bills Receivable Drawn   Rs. 18,000
6) Bills payable accepted   Rs.7,000
7) Closing Stock   Rs.12,000
8) Discount allowed to customers   Rs.1,000

You are required to prepare:
a) Trading and Profit & Loss Account for the year ended 31st March, 2022.
b) Balance Sheet as on 31st March, 2022.   **(20)**

3. Power Motors consigned on 01/07/2022, 100 bicycles to Riva Motors of Kolhapur to be sold on behalf of Power Motors. The Cost of each bicycle was Rs. 1,500. Power Motors incurred Rs. 1,000 on freights and insurance. Riva Motors received the consignment on 14/07/2022 and accepted a three months bill drawn upon by Power Motors for Rs. 50,000.

Riva Motors paid Rs. 4,000 as rent and Rs. 2,500 as insurance and by 31/12/2022 had sold 80 bicycles at Rs. 2,500 each. Riva Motors is entitled to total commission of 5 per cent on sales including a del-credere commission of 1%. Power Motors sold 20 bicycles on credit and was not able to recover sales proceeds of 5 bicycles because of insolvency of the debtor.
Prepare Consignment Account and Consignee's Account in the books of Power Motors   **(20)**

OR

3. M/s Raja Ltd. of Mumbai consigned to M/s Rani & Co. of Pune 5000 cement bags costing Rs. 80 per bag. M/s Raja Ltd paid Rs. 4,500 for railway freight, Rs. 2,500 for insurance and Rs. 2,200 for sundry expenses.

On receipts of consignment M/s Rani & Co. accepted a bill for Rs. 2,00,000 which was discounted by the consignor at the bank for Rs. 1,99,500 and discount was charged to consignment accounts.
 M/s Rani & Co sent an account sales which shows as:-
(1) Cash Sales of 4000 bags @ Rs. 95 each
(2) Expenses Paid by Rani & Co. a) Go down rent Rs. 2000 b) Selling expenses Rs. 6,000.
(3) Rani & Co. remitted the balance due by draft after deducting their expenses and commission at 2% on gross sales.
Show the necessary Ledger A/c in the books of consignor.   **(20)**

4. On 17th June, 2022, a fire occurred in the premises of **Mr. Saraswat**, a bookseller. Most of the stock was destroyed, the cost of the salvaged stock being Rs.11,200. In addition, some stock was salvaged in damaged condition and its value was estimated at Rs.10,400. The following particulars were available from the books of accounts:

a) Stock as on 31st December, 2021 was Rs.83,500.

b) Purchases from 1.1.2022 to 17.6.2022 amounted to Rs.1,12,000 and sales during that period amounted to Rs.1,54,000.

c) Based on the past three years, it appears that on average the gross profit of 25% is earned on sales.

d) Stock was insured for Rs.75,000.

You are required to prepare a statement of claim. **(20)**

OR

4. From the following information, prepare Madras Branch Account in the books of head office for the year ending 31st March, 2022. Depreciate the furniture @ 10% p.a. **(20)**

Particulars	`	Particulars	`
Opening stock at cost	3,56,000	Closing Stock at cost	3,76,800
Opening Debtors	28,000	Closing Debtors	1,92,000
Opening Petty Cash	500	Closing Petty Cash	240
Furniture (in the beginning)	12,000	Furniture at the end	?
Opening Creditors	12,000	Closing Creditors	12,000
Goods sent to branch at cost	10,44,000	Cheques sent to Branch for	
Goods return by branch to		Expenses	99,740
H.O. at cost	17,200	Cash received from Debtors	12,78,000
Goods returned by customers		Cash Sales	64,000
to Branch	13,800		

5 A) Distinguish between single entry and double entry . **(10)**

B) What is a Branch? Describe various accounting methods of Branch Accounting. **(10)**

OR

5 Write short notes (**any Four**) **(20)**
   1. Consignment Account
   2. Average Clause
   3. Memorandum Trading Account
   4. Del Credere Commission
   5. Dependent Branch
   6. Total Debtors Accounts

DAC – 31. F. Y. B.Com.   **SEM- II Regular Exam. April-2023**   **Time: 3 Hrs.**

Date: 12-04-2023   **Subject: Business Communication**   **Marks: 100**

N.B. (1) All questions are compulsory.
    (2) Figures to the right indicate full Marks.

1. A) Answer in one or two sentences. (Any Five)   **(10)**
    1. Group Discussion
    2. Grievance Interview
    3. Notice
    4. Agenda
    5. Secretary
    6. Chairman
    7. Agenda

 B) Match the following   **(5)**
        Group 'A'   Group 'B'
    1. Agenda   a) formula of sales letter
    2. Resolution   b) written intimation regarding day, date, time and place.
    3. Attending to complaints   c) Listed items (points) to be discussed in the meeting.
    4. AIDA   d) Adjustment
    5. Notice   e) Decision supported by majority

2. Write short notes. (Any Three)   **(20)**
    1. AIDA formula in Sales letter
    2. Discuss the role of chairperson of meeting?
    3. Explain the WASP technique of Interview?
    4. Explain the various External measures of Public Relations Department.
    5. Describe the functions of Public Relation.

3. Answer the following questions in details/ Essay type (Any Two)   **(20)**
    1. Explain the various internal measures of Public Relations Department.
    2. Define what is conference? Explain the different types of Conference?
    3. Define Committee. Describe different types of committees.

4. Attempt any four letters of the following.   **(20)**
    1. Rohan Lighting Co. Ltd. Wants to buy LED lights and store them as it expects a huge
       demand in the market. The company makes an inquiry about different varieties of LED
       lights available from Bright wholesalers. Draft an inquiry letter.
    2. Draft a sales letter to promote the sales of any one of the following products:
       a) Lenovo Computers.
       b) Bicycle

3. You had placed an order for 500 trousers to be delivered to your shop by the first week of April. You received the consignment in the first week of July. Draft a letter of Complaint asking for compensation.
4. Your application for Aadhar Card has not been processed in spite of having submitted all required documents. Draft a RTI letter for their negligence.
5. You purchased a microwave oven from Ajay Sales. The microwave oven however did not function properly from the time it was delivered. You complained to the store authorities to which they responded by sending a technician who repaired it. The problem recurred. You requested Ajay Sales for a replacement which they refuse to entertain. Write a letter to the Consumer Forum requesting them to help to get the microwave oven replaced.

5. Draft a following Report. (Any One)   (10)
A) The workers of Godrej Co. have gone on a strike. As the Chairperson of the committee appointed to investigate the causes of strike. Draft your report and suggest measures to improve the situation.

OR

B) Draft business Proposal to be made by ASS Institute to RG College to start a certificate course on English Speaking and Personality Development in your premises on a revenue sharing basis.

6. Draft a Notice and agenda of an Annual General Meeting of the Royal Cooperative Housing Society and also draft the following resolutions: (10)
1. To appoint new secretary
2. To appoint new treasurer
.

7. Summarize the following passage: (05)
This century is the age of science. We cannot imagine our lives sans Science. Science has become a part and parcel of our lives. Science has become a symbol of progress. The progress is in the field of medicine, education, industry, etc., and we enjoy the comforts of science in all fields. Science has developed effective transport and communication system. Buses, cars, trains, planes have made transportation easy and comfortable, safe and fast. Man has even landed on moon with the help of technology.

In the field of medicine, science has worked wonders. Almost all kinds of diseases are entirely cured by modern drugs and medicines. Medicine has reduced pain and suffering. Electricity is another important scientific invention. The comforts of our life like electric lamps, refrigerators, fans, grinders, washing machines, etc. are all run by electricity. Scientific method of cultivation has solved the flood problem. The pests destroying the crops are killed immediately by pesticides. Poultry and sericulture are also improved. Thus, science is helpful in all walks of life and makes our life comfortable and happy.

----

1. A) multiple choice question (Answer any 10 out of 12)   (10)
    1. _____ are highly intangible in nature.
       a) Services   b) Goods
       c) Foods   d) Vehicle
    2. Warehouse Create _____ utility.
       a) Time   b) Price
       c) Form   d) Shape
    3. Retail Industry contribute ____ of India's GDP.
       a) 10%   b) 0%
       c) 100%   d) 200%
    4. _____ research is a systematic approach to solve marketing problem.
       a) T.V.   b) Marketing
       c) Talking   d) Listening
    5. Marketing research is _____ in nature.
       a) Void   b) Continuous
       c) Stable   d) Irregular
    6. Marketing research is _____ research
       a) Scientific   b) Applied
       c) Fundamental   d) Spirituality
    7. Organised retailing comprises mainly of _____ retail stores.
       a) Traditional   b) Outdated
       c) Modern   d) Villagers
    8. Under _____ Strategy retailer must maintain proper stock.
       a) Buyer   b) Seller
       c) Stock   d) Service
    9. Under_____ Strategy retailers in particular area may form a group & for group purchases in order to obtain bulk discount.
       a) Stock   b) Price
       c) Purchase   d) Zero
    10. _____ also called as Category Killer, Offer several brands a single brand category. Eg. Vijay sales.
       a) ERP   b) DB
       c) CRP   d) MBO
    11. _____ Stands For Enterprise Resource Planning.
       a) TRP   b) SRP
       c) PPP   d) ERP
    12. Debit card is made up of_____.
       a) Gold   b) Silver
       c) Bronze   d) Plastic

B) State whether the statement is True OR False (Answer any 10 out of 12)   (10)
    1. Credit Card do not allow to purchase goods on credit.
    2. Debit Card do not allow to withdraw money from bank.
    3. In B2B Goods are purchased by customer to customer.
    4. Local Kirana store do not considered as "Mom & Pops" Store
    5. The organised retailer has to bear lowest operating cost.

6. The organised retail outlets are mostly located in mural area
7. Place research relates to location, channels etc.
8. In Marketing research, primary & Secondary data is required.
9. The research design is the grand plan for conducting the research
10. Physical environment provide Visible clues of quality of services.
11. Customers pay high prices for the goods of companies having good corporate image.
12. The Core benefit is the primary level of a service product.

2. Answer the following question (Answer any 2 out of 3)   (15)
    1. what is Service? Explain features of Services, b). Explain Various Levels of Service &
    2. Explain process of Service delivery in brief. Q.3) Answer any two questions
    3. What is Marketing Research & and explain Few Features of marketing.

3. Answer the following question (Answer any 2 out of 3)   (15)
    1. What is Service development cycle?
    2. Explain Steps in Service development Cycle.
    3. What are strategies to increase demand during lean timing.

4. Answer the following question (Answer any 2 out of 3)   (15)
    1. What is organised Retailing? Explain features of Organised retailing.
    2. Explain the various strategics used for survival of unorganised retailing.
    3. Explain various store format operates in India.

5. Answer the following question (Answer any 2 out of 3)   (15)
    1. What are the disadvantage of BPO?
    2. Explain the advantage of ERP system.
    3. Explain the disadvantages of Credit Card

6. Write short notes (Answer any 4)   (20)
    1. Franchising,
    2. FDI in Retailing
    3. Non Store format in Retailing
    4. Mall management
    5. Types of Service Expectation
    6. Service Delivery Process

Note: i) All questions are compulsory.
     ii) Draw suitable diagram wherever necessary.
     iii) Figures to the right indicate full marks.

1 A) Select the best answer from the given option and rewrite statement. (Any Ten) (10)

1. The slope of demand curve under monopoly market is _____
    A) vertical
    B) downward and steep
    C) downward & gradual
    D) horizontal

2. In the monopoly a firm is known as _____
    A) price maker
    B) price taker
    C) both price maker & taker
    D) industry

3. _____ is the feature of perfect competition.
    A) many sellers
    B) single seller
    C) few sellers
    D) two sellers

4. In the monopolistic competition slope of demand curve is _____
    A) downward but more elastic
    B) vertical
    C) horizontal
    D) downward but less elastic

5. Product sold in monopolistic market is _____
    A) differentiated
    B) homogeneous
    C) inferior
    D) heterogeneous

6. There are _____sellers in the oligopoly market
    A) few sellers
    B) one seller
    C) many sellers
    D) two sellers

7. Selling cost is a feature of _____ market. Monopolistic competition.
    A) Oligopoly.
    B) Monopoly.
    C) Monopolistic competition.
    D) Perfect Competition.

8. Price discrimination is not possible when_____
    A) commodity is non-transferable
    B) when customers do not meet each other
    C) Consumer has the perfect knowledge about the market
    D) when customers are ignorant about price differentials

9. Dumping takes place when a monopolist _____

A) has a monopoly in the world as well as home market
B) has a monopoly in the world market
C) has a monopoly in the home market and competitive world market.
D) has monopoly only in home market.

10. Marginal cost pricing is generally followed by _____ enterprises.
   A) private
   B) large private MNCs
   C) public sector
   D) small and medium

11. A project is profitable if NPV is_____.
   A) zero
   B) one
   C) positive
   D) negative

12. Which pricing strategy uses various class distinctions?
   A) Marginal cost pricing
   B) price discrimination.
   C) product line pricing.
   D) Mark-up rule.

B). State whether the following statements are True or False. (Any Ten) **(10)**
   1. In the monopoly market seller is price taker.
   2. Cartel formation takes place in monopoly.
   3. A firm under perfect competition produces differentiated commodity.
   4. In a monopolistic market a product has close substitute.
   5. Some economists consider advertisements as being wasteful.
   6. An Oligopolist faces horizontal demand curve.
   7. If each customer is charged different price for same commodity is called as first Degree price discrimination.
   8. In dumping, a monopolist is a price maker in the world market.
   9. Full cost pricing method has certain limitations.
   10. Capital budgeting pertains to profit decisions.
   11. Capital expenditure decisions are often reversible.
   12. If NPV is negative, the project is accepted.

2. Attempt A and B or C and D.
   A) What are the features of perfect competition? **(7)**
   B) If price (P) = 30 , Calculate TR, AR, MR and MC under perfect competition by using following data. **(8)**

Output (Q)	0	1	2	3	4	5	6	7	8
TC	15	30	40	60	85	115	150	190	235

OR

   C) What are the sources of monopoly power? **(7)**

D) Calculate TR, AR and MR under monopoly market by using following data. **(8)**

Quantity Sold (Q)	1	2	3	4	5	6	7	8
Price (P)	10	9	6	7	6	5	4	3

3. Attempt A and B or C and D.
    A) What are the features of monopolistic competition? **(7)**
    B) Explain long-run equilibrium of the firm under monopolistic competition. (8)

OR

    C) What are the features of oligopoly market? **(7)**
    D) Explain different types of price leadership under oligopoly. **(8)**

4. Attempt A and B or C and D.
    A) What are the different degrees of price discrimination? **(7)**
    B) What are the conditions for price discrimination? **(8**)

OR

    C) Explain the multiple product pricing method. **(7)**
    D) Write a note on marginal cost pricing. **(8)**

Q. 5. Attempt A and B or C and D.
    A) What is the importance of capital budgeting? (7)
    B) Discuss the different steps of capital budgeting. (8)

OR

    C) Explain Net Present Value method. (7)
    D) Explain Internal Rate of returns method. (8)

6. Attempt A and B. or Write short notes on any FOUR
    A) Discuss the advantages and disadvantages of Advertisements. **(10)**
    B) Explain short run equilibrium of the firm under perfect competition. With the
       help of suitable diagram. **(10)**

6. Write Short notes. (Any Four) **(20)**
    1) Shut-down point.
    2) Features of monopoly.
    3) Selling cost.
    4) Dumping.
    5) Net Present Value Method
    6) Excess capacity.

Note – All questions are compulsory carrying 20 marks each.

1. A) On the given outline Map of Mumbai supplied to you name & mark the following. (10)

1. Jijamata Uddyan
2. Mankhurd Dumping Yard
3. Essel World
4. Haji Ali
5. Vihar Lake
6. Garments Market
7. Dadar Choupaty
8. Kaneri Caves
9. Gate Way of India
10. Major Slum Area

B) **On the given outline Map of Konkan supplied to you name & mark the following. (10)**

1. Harihareswar Temple
2. Marine Sanctury (Malvan)
3. Amboli Hill Station
4. Raigad District
5. Thal ghat
6. Atomic Power Station
7. Sindhudurg Fort
8. Vengurla Beach
9. Aravali Hot Spring
10. Agricultural University (Dapoli)

2. Attempt any two questions from the following.   (20)

    A. **Classify the various Types of Waste and identify their sources.**
    B. **E-Waste & plastic Waste is non-biodegradable. Explain it.**
    C. **Describe the different methods of Solid Waste Disposal.**
    D. **What are the effects of Solid Waste on Human Health, Animals and Aquatic Life.**

3. Attempt any two questions from the following.   (20)

    A. **Explain the effects and control measures of Water Pollution.**
    B. **Bring out the various causes and effects of Global Warming.**
    C. **Ozone Layer is a protective Umbrella on the earth's Surface. Explain it.**
    D. **Describe the factors responsible for Malnutrition and Hunger.**

4. Attempt any two questions from the following. **(20)**

    A. Elaborate on the meaning, Nature, Scope and Importance of tourism.
    B. Describe the types of tourism with the help of suitable chart.
    C. Discuss on the tourism potentials of India and what are the challenges?
    D. What are the positive impacts of tourism? Discuss with special reference to Maharashtra.

Q. 5. Attempt any two questions from the following. **(20)**

    A. Environmental Management is a global requirement. Discuss.
    B. Identify some of the major environmental movements in India and bring out the role of public participation in environment protection.
    C. Write short notes on Air Act 1981 & Water Act 1974
    D. Discuss the role of GIS in everyday life.

Note:- 1. All questions are compulsory.
      2. Figure to the right indicate full marks.

1. A)	Multiple Choice Question (Any 8)	08M

1   _____ means integrating the national economy with the world economy.
(Privatisation, Liberalisation, Globalisation, Disinvestment)

2   Human rights are derived from the principle of ------------ law.
(Government, natural, judicial, human)

3   The ------------- is the solid , rocky crust covering entire planet.
(lithosphere, hydrosphere, biosphere, atmosphere)

4   The -------------- stressors are also called as job-related stressors.
(organisational , group , individual, environmental)

5   --------- help to develop the power of concentration.
(physica exercise, meditation, time management, social support)

6   In the method of ------------, the stress victim is under the medical guidance.
(networking, biofeedback , social support, relaxation)

7   -------------- means pre-judgement.
(stereotypes, aggression, prejudice, violence)

8   In an ecosystem the ------------ are primary producers.
(animals, birds, plants, consumer)

9   Abolition of --------------- is provided under Article 17 of the Indian Constitution.
(Caste, Child labour, Untouchability)

10   Economic liberalisation was a bold decision by the Prime Minister ------------------.
(Narsimha Rao, Rajiv Gandhi, Atal Bihar Bajpai, Pandit Nehru)

Q.1 B)	State whether the following statements are True or false(Any 7)	07M

1   Forced migration may also be called as forced displacement.

2   Upnishads & Gita talk of man as a unit of existence.

3	Natural environment provides renewable sources of energy.	
4	Eustress is the term used to describe positive stress.	
5	All individuals need not have same set of needs.	
6	The human environment is also called as anthrosphere.	
7	Crop failure may force farmers to commit suicide.	
8	Human rights have universal application.	

Q.2	Explain the concept of Liberalisation, Privatisation & Globalisation.	15M
	or	
Q.2	Explain in detail the Universal Declaration of Human Rights.	15M
Q.3	Explain the causes & effects of environmental degradation.	15M
	or	
Q.3	Explain the meaning & causes of stress.	15M
Q.4	Elaborate on Maslow's Theory of Self-actualisation.	15M
	or	
Q.4	Explain the concept of Environment & ecology & their interconnectedness.	15M
Q.5	What is sustainable development ,give its importance, what are the components of sustainable development.	15M
	or	
Q.5	Short Notes (Any 3) a. Causes of aggression. b. Right to Equality & Right to freedoms. c. Increase in farmer's suicides. d. Levels of conflicts e. Growth of IT & communication	15M

Note: 1. All questions are compulsory
2. Figures of the right indicate full marks
3. Graph papers will be provided on request
4. Use of simple calculator is allowed.

SECTION – I

Q.1 Attempt any four of the following.

a. The cost manufacturing x items of a product is given by $C = x^2 + 5x + 2$. Find Total Cost, Average Cost and Marginal Cost if $x = 4$ items are manufactured.   [5]

b. Demand function is given by $P = 20 - 4 D$ where P & D are Price and Demand respectively. Find the total Revenue and Average Revenue when D is 3 units   [5]

c. Find Average Revenue if Elasticity of Demand is 2 and Marginal Revenue is 30.   [5]

d. The demand function is given by $D = 20 – 2p - 3p^2$ where D= demand and p = price. Find the Elasticity of Demand w.r.t. price when price is 2.   [5]

e. Differentiate the following functions with respect to x.   [5]
   i) $y = 5x^3 - \log x$
   ii) $y = a^x + 9x$
   iii) $y = 3x – x^2$
   iv) $y = \log x +1$
   v) $y = 6e^x$

Q. 2 Attempt any four of the following.

a. Find Simple Interest on Rs. 5,000 at 10% p.a. for 2 years. Also find the maturity amount.   [5]

b. If Rs. 5,000 amounts to Rs.7625 after 7 years. Find the rate of simple interest.   [5]

c. What sum of money will amount to Rs.19,965 in 3 years at 10% p.a. compound interest ?   [5]

d. Harish borrowed Rs. 50,000 at 10 % p. a. He wishes to return the amount within two year. Find EMI using Flat interest rate method.   [5]

e. Find the Accumulated value after 5 years of an ordinary annuity of Rs. 10,000 p.a. at 20% p.a. compounded annually.   [5]

Q.3 Attempt any four of the following.

a. Calculate Spearman's Rank Correlation Coefficient.   [5]

X	105	112	107	115	160	152	148	132
Y	120	127	135	123	140	142	138	110

b. Explain the term Correlation and describe types of Correlation using scatter diagram.   [5]

c. Given the regression equation y on x is 2x - 3y +14 = 0 and x on y is 3x - y - 42 = 0   [5]
    Find
    i)   Mean values of x & y
    ii)   Coefficient of Correlation r .

d. Given the following data, find the regression equation x on y and estimate x when y = 5.   [5]
    Mean value of x = 4 and Mean value of y = 9. Standard deviation of x and y are 2 & 1
    Coefficient of correlation r = - 1

e. Calculate Karl Pearson's Coefficient of Correlation and hence State the type of Correlation.   [5]

Marks in English	17	8	12	13	10	12
Marks in Economics.	13	7	10	11	8	9

Q.4. Attempt any four of the following.

a.   What is Time series? Describe the various components of time series with suitable   [5]
      example.

b. Find 5 yearly moving averages for the following data.   [5]

X	1997	1998	1999	2000	2001	2002	2003	2004	2005
Y	87	90	92	98	105	93	100	110	125

c. Fit the straight line trend by the method of least square for the data given below.   [5]
    Estimate trend for the year 2007.

Year (X)	2000	2001	2002	2003	2004	2005	2006
No. of workers(Y)	45	49	51	50	52	53	50

d. For the following data calculate i) Laspeyre's ii) Paasches iii) Fishers Index number.   [5]

Commodity	Base Year		Current Year	
	Price (p_0)	Quantity(q_0)	Price(p_1)	Quantity(q_1)
A	5	6	20	25
B	3	6	25	18
C	4	5	12	15

e. Calculate the cost of Living Index Number for the following data.   [5]

Group	Index Number (I)	Weights (W)
Food	160	48
Clothing	120	07
Rent	140	10
Fuel	100	10
Education	80	15

Q. 5. Attempt any four of the following.

a. State Probability mass function of the Binomial Distribution and State any three Properties [5]
   of Binomial Distribution.

b. Given Mean and Variance of a Binomial Distribution are 4 and 2.4 respectively. Find   [5]
   Probability of all 5 Successes.

c..Given n=10, q = 3/4. Find Mean and Variance of Binomial Distribution.   [5]

d. A variate X follows Poisson Distribution with parameter 7. Find P[x=0] ,P[x=1].   [5]
   Given $e^{-7}= 0.00092$

e. Given the area to the right of Z =1 is 0.1587, where Z is Standard Normal variate, Find   [5]
   i) Area between ($Z = 0$ to $Z = 1$)

   ii) Area between ($Z = -1$ to $Z = 1$)

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