(3 Hours) (Marks: 100)

N.B.: 1. Strictly avoid resorting to any unfair means during the examination & abide by all the rules and relating thereto.
2. Figures in bracket to the right indicate full marks allotted to the question.
3. Working notes should form part of your answers.
4. All six questions are compulsory, although, there are internal options in case of Questions 2 to 6.
5. Use of simple calculator is allowed.

Q.1A Fill in the blanks with the appropriate given options and rewrite complete sentences. (Any10) (10)

1. Accounting Standard 2 deals with_____.
(Disclosure of Accounting Policies/Revenue Recognition/Inventory Valuation)

2. The initial amount payable at the time of signing the agreement in Hire Purchase transaction is _____.(Hire Purchase Price/Down Payment/Cash Price)

3. The Manufacturing Account is prepared to find out _____.
(Gross Profit/Cost of Production/Net Profit)

4. In Departmental Accounts, Office Rent is allocated on the basis _____ of each department. (Sales Turnover/Area Occupied/Purchases)

5. In _____Method of Stock Valuation, items received first are issued first, so that the latest purchased items are left in stock. (Weighted Average / FIFO /Simple Average)

6. Wages paid for installation of new machinery is a _____.
(Capital Expenditure/ Capital Receipt/ Revenue Expenditure)

7. As per the rules, Stock is to be valued at Cost or Net Realizable Value whichever is _____. (Higher/Lower/Available)

8. For a Book Manufacturing Company, Book is a_____.
(Raw Material/Work-in-Progress/Finished Goods)

9. The person who sells goods on Hire Purchase Basis, is called a _____. (Hire Purchaser/Hire Vendor/Consignor)

10. _____ shows the financial position of the company at the end of the year. (Trading Account/Profit & Loss Account/Balance Sheet)

11. In case of a manufacturer, Sale of Scrap appears on the credit side of _____Account. (Trading /Profit & Loss / Manufacturing)

12. Under Credit Purchase Method of Hire Purchase System, Depreciation on Asset purchased is charged for the first year on _____.(Full Cash Price/Hire Purchase Price/Down Payment)

[TURN OVER]

Q.1B State whether the following statements are TRUE or FALSE after rewriting the same. (Attempt any 10) **(10)**

1. Inventories which are held for sale in the ordinary course of business are current assets.
2. AS-9 does not cover revenue arising from government grants and subsidies.
3. It is not necessary to disclose the change in accounting policy.
4. Revenue expenses are non-recurring expenses.
5. The Manufacturing Account always shows a debit balance.
6. Departmental Accounts are necessary for evaluating departmental efficiency.
7. Disclosures under AS-1 need not form a part of final accounts.
8. Income received in advance is shown on the asset side of the balance sheet.
9. Hire Purchase Price is the total of cash price and interest
10. Full Cash Price Method is also known as Credit Purchase Method.
11. Amount paid as carriage inward is included in cost of inventory.
12. Under Hire Purchase System the seller is the owner of goods until the payment of last installment.

Q.2 From the following Trial Balance of Mr. Aditya, prepare Manufacturing Account, Trading Account, Profit and Loss Account for the year ended 31st March, 2016 and Balance Sheet as on that date. **(15)**

Trial Balance of Mr. Aditya as on 31st March 2016 :-

Particulars	Dr. (Rs.)	Cr.(Rs.)
Opening Stock - Raw Materials	12,000	
Opening stock - Work in Progress	7,000	
Opening Stock - Finished Goods	20,000	
Purchase of Raw Materials	1,05,000	
Carriage Inward on Raw Materials	4,000	
Direct Wages	56,000	
Factory Rent	8,000	
Factory Power and Fuel	11,000	
Machinery	80,000	
Sales		3,25,000
Office Expenses	50,000	
Cash at Bank	11,000	
Creditors		21,000
Bad Debts	1,000	
Provisions for Bad Debts		2,000
Sundry Debtors	53,000	
Capital		82,000
Drawings	12,000	
Total	4,30,000	4,30,000

Following further information is provided to you :

1. Closing stock as on 31st March, 2016 is:

   Raw Material Rs 15,000, Work-in-progress Rs 8,000, Finished goods Rs 25,000.

[TURN OVER]

2. Depreciate Machinery @10% p.a.

3. During the year, finished goods worth Rs. 5,000 were distributed as free samples but were not recorded.

4. Provide Reserve for Doubtful Debts @ 5% on debtors.

OR

Q.2   From the following Trial Balance of Mr. Gangadhar,   prepare Manufacturing   (15) Account, Trading Account, Profit and Loss Account for the year ended 31ˢᵗ March, 2016 and Balance Sheet as on that date :-

Trial Balance of Mr. Gangadhar as on 31st March 2016 :-

Particulars	Dr. (Rs.)	Cr.(Rs.)
Capital Account		1,00,000
Opening Stock - Raw Materials	24,000	
Opening stock - Work in Progress	4,000	
Opening Stock - Finished Goods	31,000	
Purchase of Raw Materials	2,50,000	
Direct Wages	36,000	
Factory Rent	8,000	
Machinery	1,00,000	
Sales		4,35,000
Cash at Bank	6,000	
Travelling & conveyance	20,000	
Salaries	24,000	
Discount Allowed	7,000	
Sundry Creditors		90,000
Sundry Debtors	40,000	
Vehicles	75,000	
Total	**6,25,000**	**6,25,000**

Following further information is provided to you :

1. Closing Stock as on 31ˢᵗ March, 2016:

   Raw Material Rs.25,000, Work-in-Progress Rs.8,000, Finished Goods Rs.35,000.

2. Depreciate Machinery @10%p.a. and Vehicles @10% p.a.

3. Provide Reserve for Doubtful Debts @ 5% on Debtors.

4. During the year, Raw Materials worth Rs. 5,000 purchased on credit basis were not recorded in the books.

[TURN OVER]

Q.3 From the following information relating to M/s Akbarallys Departmental Stores, (15) prepare Departmental Trading and Profit and Loss Account and General Profit and Loss Account, for the year ended 31st March, 2016

Particulars	Dept. X Rs.	Dept. Y Rs.	Dept. Z Rs.
Opening Stock	34,000	45,000	63,000
Purchases	4,75,000	2,95,000	2,75,000
Sales	7,50,000	5,70,000	5,25,000
Salaries	75,800	87,900	65,300
Closing stock	40,500	31,500	50,400

Common Income & Expenses:

Rent Rs. 15,000, Electricity Rs. 25,000, Printing and Stationery Rs.5,800, Discount Allowed Rs.15,000, Discount Received Rs.18,000, General Expenses Rs.10,000

Additional Information:

Area occupied by the three departments are 900, 600 and 300 Sq. Ft; respectively.

Allocate Electricity and Printing & Stationery in the Ratio of Gross Sales of the respective departments.

Allocate the other expenses on appropriate basis, to the extent possible.

OR

Q.3 From the following information relating to M/s. Apna Bazaar Departmental (15) Stores, prepare Departmental Trading and Profit and Loss Account and General Profit and Loss Account for the year ending 31st December 2015

Particulars	Dept. A Rs.	Dept B Rs.	Total (Rs.)
Opening Stock	12,000	15,000	
Purchases	1,05,000	1,20,000	
Sales	1,35,000	1,80,000	
Wages	6,000	8,850	
Following are the other Common Expenses/Incomes:			
Salaries			18,300
Rent & Rates			9,000
Carriage Inward			2,250
Carriage Outward			4,200
Discount allowed			2,100
Discount Received			1,500
Advertisement Expenses			6,300
Audit Fees			600
Legal Expenses			1,200

Additional Information:

(1) Salaries are to be allocated equally.

(2) The area occupied is in the ratio of 1:2 between the two departments respectively.

(3) Closing Stock: Department A Rs. 30,000, Department B Rs. 37,500.

(4) The remaining common expenses /income to be allocated on appropriate basis to the extent possible.

[TURN OVER]

Q.4   The following particulars have been extracted in respect of Raw materials of Ultra   (15)
Chemicals. Find the value of closing stock as on 30th June, 2016 on the basis of
(I) First In First Out Method and (II) Weighted Average Method.

Receipts:-

01-1-2016	Opening Stock	100 units at Rs. 35 per unit
03-2-2016	Purchased	400 units at Rs. 40 per unit
13-4-2016	Purchased	900 units at Rs. 45 per unit
23-6-2016	Purchased	600 units at Rs. 50 per unit

Issues :-

05-3-2016	Issued	400 units
15-5-2016	Issued	600 units
30-6-2016	Issued	600 units

OR

Q.4   Find out the value of Closing Stock of M/s Mayur Ltd. using (A) FIFO Method   (15)
(B) Weighted Average Method from the following details of Material 'X' as on 31st
January, 2016.

Date	Particulars	Unit	@ Rs.
2016			
Jan., 05	Opening Stock	700	25
Jan., 06	Issues	400	-
Jan., 09	Purchases	900	35
Jan., 11	Issues	600	-
Jan., 16	Purchases	200	40
Jan., 21	Purchases	900	45
Jan., 31	Issues	500	-

Q.5   Mr. Lal Prasad purchased a Car on Hire-Purchase Basis from Maruti Ltd on   (15)
1st January, 2013. He paid Rs. 1,50,000 on signing the contract and agreed to pay 3
installments of Cash Price excluding interest as follows:-

On 31.12 2013	Rs. 1,50,000
On 31.12 2014	Rs. 1,65,000
On 31.12 2015	Rs. 1,85,000

The Cash Price of the car was Rs. 6,50,000. Interest is charged at 10% p.a. by Maruti
Ltd. on outstanding amount. Depreciation @ 20% p.a. on W.D.V. is charged on the Car.
Prepare Car Account and Maruti Ltd. Account in the books of Mr. Lal Prasad for the
years 2013, 2014 and 2015.

OR

Q.5 State whether the following expenditure or receipts are capital or revenue. Give **(15)** reasons for your answers.

1. Purchased a plot of land for Rs. 25,00,000 and paid Rs. 1,00,000 fees for registration and allotment.

2. Received Rs. 3,00,000 on Issue of 15% Debentures.

3. Interest of Rs. 8,000 paid on Bank Overdraft.

4. Paid Rs. 6,000 as Excise duty on goods manufactured.

5. A petrol engine of a passenger bus was replaced by a diesel engine, Rs. 70,000.

6. Paid Rs. 1,00,000 as fees for renewal of license for factory.

7. Received Rs. 2,000 as dividend on shares.

Q.6 **Answer the following:**   **(20)**

   a) What are the provisions of Revenue Recognition as per AS-9?

   b) Explain the Provisions of Disclosure of Accounting Policies as per AS-1?

OR

Q.6 **Write short notes on Any Four of the following:**   **(20)**

1. Manufacturing Account.

2. FIFO Method of Inventory Valuation.

3. Main Features of AS-2.

4. Stock Reserve.

5. Fundamental Accounting Assumptions.

6. Importance of Departmental Accounts.

Q.P. Code : 760001

(3 Hours) [Total Marks : 100

N.B. : (1) **All** questions are **compulsory**.

(2) **Figures** to the **right** indicate **full marks**.

1. (a) Fill in the blanks with the appropriate option given in the bracket (**Any Ten**): 10

    1. _____ concept of business is concerned with customer satisfaction.
       (a) Modern   (b) Traditional   (c) Product

    2. _____ refers to reduction of Government control over business sector.
       (a) Liberalization   (b) Privatization   (c) Globalization

    3. _____ is the most important economic objective of business unit.
       (a) Service   (b) Profit   (c) Charging the right price

    4. _____ environment includes policies of the Government.
       (a) sociographic   (b) demographic   (c) economic

    5. Environmental factors are _____.
       (a) stable   (b) dynamic   (c) isolated

    6. Decision on location is an important element of _____.
       (a) setting up a business unit   (b) market research
       (c) manufacturing process

    7. Analysis of competitors strategies is an element of _____ environment analysis.
       (a) internal   (b) external   (c) international

    8. _____ act as a reference guide during the execution of the project.
       (a) feasibility report (b) legal report   (c) project report

    9. _____ implements the plans and ideas of an entrepreneur.
       (a) manager   (b) internal entrepreneur   (c) promoter

    10. _____ agreement is concerned with liberalisation of International investment.
        (a) TRIMs   (b) TRIPs   (c) Agreement of Agriculture

    11. _____ is an entrepreneur within an existing organisation.
        (a) intrapreneur   (b) manager   (c) leader

    12. _____ scheme is specially meant for women entrepreneurs.
        (a) DBK   (b) MDA   (c) TREAD

TURN OVER

OR

4. (a) Discuss the concept and importance of project planning. 8
   (b) What are the factors influencing location of business unit? 7

5. (a) Discuss the importance of entrepreneurship in economic and social development. 8
   (b) Discuss the competencies or qualities of an effective entrepreneur. 7

OR

5. (a) Distinguish between manager and entrepreneur. 8
   (b) What are the problems faced by women entrepreneur in India? 7

6. (a) Explain the importance of business. 8
   (b) Explain entrepreneurship training and development centers in India. 7

OR

6. Write short notes on (**Any Four**) : 20
   (a) Modern concept of business
   (b) Feasibility report
   (c) Educational environment
   (d) NAFTA
   (e) Social objectives of business
   (f) Restructuring strategies

_____

TURN OVER

QP Code : 760101

(3 Hours)   [Total Marks : 100

N. B. :   (1) **All** questions are **compulsory**.
      (2) All questions have internal choice.
      (3) Draw neat diagrams wherever necessary.
      (4) Use of simple calculators is permitted.
      (5) **Figures** to the **right** indicate **full** marks.

1.   (A) Define the following concepts. **Any Ten** :–   10
      (i)   Equation
      (ii)   Average revenue
      (iii)   Equilibrium price
      (iv)   Cross elasticity of demand
      (v)   Income elasticity of demand
      (vi)   Demand forecasting
      (vii)   Isoquant
      (viii)   Constant returns to scale
      (ix)   Diseconomies of scale
      (x)   Total cost
      (xi)   Implicit cost
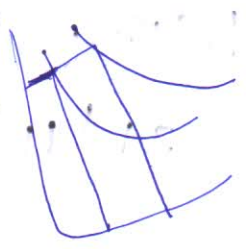   (xii)   Break-even point

   (B) Select the best answer from the given options and rewrite the
      statement. **Any Ten** :–   10
      (i)   Which of the following shows the relationship between the
        price of a good and the amount of the good that consumers
        want at that price?
        (a)   Supply curve
        (b)   Demand curve
        (c)   Supply schedule
        (d)   Production possibilities frontier

      (ii)   The market clearing price is also called the
        (a)   current price
        (b)   prevailing price
        (c)   equilibrium price
        (d)   none of the above

[TURN OVER

(iii) What is the cause of the rightward shift of the demand curve for cars?
   (a) An increase in income
   (b) An increase in population size
   (c) Lower prices of petrol
   (d) All of the above

(iv) A percentage change in quantity demanded divided by a percentage change in price is called
   (a) income elasticity of demand
   (b) price elasticity of demand
   (c) price elasticity of supply
   (d) elasticity of substitution

(v) On the lower segment of a downward sloping straight line demand curve price elasticity of demand is
   (a) > 1
   (b) < 1
   (c) = 1
   (d) none of the above

(vi) Expert opinion is a
   (a) survey method
   (b) statistical method
   (c) both a and b
   (d) none of the above

(vii) If there is zero substitutability between capital and labour the isoquant is
   (a) a straight line
   (b) 'L' shaped
   (c) concave to the origin
   (d) none of the above

(viii) The total amount of output produced is called
   (a) total supply
   (b) total product
   (c) both a and b
   (d) none of the above

[TURN OVER

(ix) Using five units of labour a firm can produce 2500 units of a good. Using six units of labour the firm can produce 3000 units of the good. The marginal product of the sixth unit of labour is
(a) 100 units
(b) 1500 units
(c) 2000 units
(d) 500 units

(x) The rent of a factory is an example of
(a) variable cost
(b) fixed cost
(c) both a and b
(d) neither a nor b

(xi) Which of the following curves is used for planning
(a) SAC
(b) SMC
(c) LAC
(d) LMC

(xii) The break-even point is influenced by
(a) price
(b) average variable cost
(c) fixed cost
(d) all of the above

2. Attempt **A** and **B** OR **C** and **D**
(A) What is business economics? Discuss its scope.   8
(B) Given the following data   7

Q.	1	2	3	4	5
P	10	9	8	7	6

(i) Calculate TR, AR and MR.
(ii) Explain the relationship between TR and MR, MR and AR.

OR

[TURN OVER
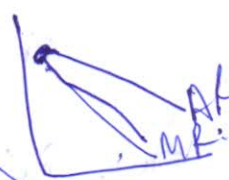
(C) Using diagrams explain changes in equilibrium due to :   8
- (i) increase in demand
- (ii) increase in supply

(D) (i) Given the following data for supply and demand for pizzas   7

Price (₹) per pizza	Quantity Demanded (Pizzas per week)	Quantity Supplied (Pizzas per week)
8	0	40
6	10	30
4	20	20
2	30	10
0	40	0

Identify the :
- (a) equilibrium price
- (b) equilibrium quantity demanded and supplied

(ii) If $Q_{DX} = 65{,}000 - 10{,}000\ P_x$ describes demand for sports shoes. Complete the following table for P_x = 6,5,4,3. Show your working.

(iii) What are the determinants of demand other than the price of the good itself?

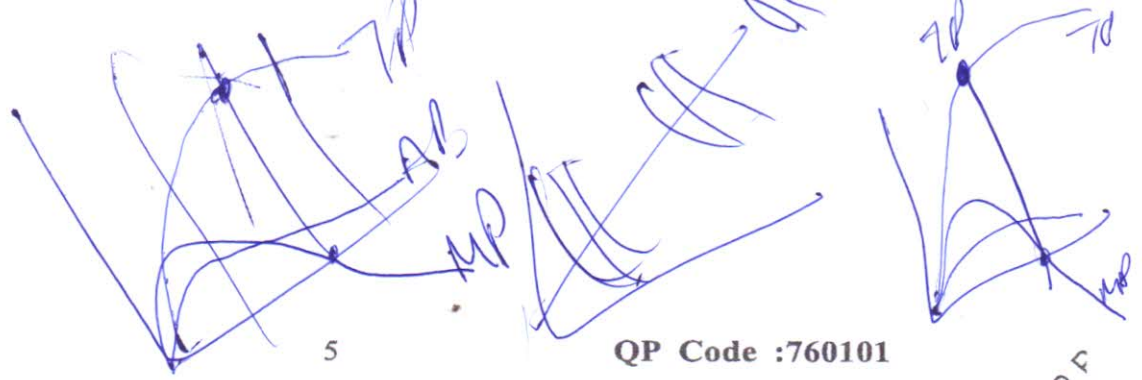3. Attempt **A** and **B** OR **C** and **D**.

(A) Explain the nature of demand curves of firms in perfect competition and oligopoly markets.   8

(B) When the price of season cricket passes is ₹ 400 per pass, the quantity demanded is 10,000 passes. When the price is reduced to ₹ 380 per pass the quantity demanded is 12,000 passes.   7
- (i) Calculate price elasticity of demand
- (ii) According to your answer in (i) what is the degree of price elasticity?
- (iii) Explain the significance of price elasticity of demand.

OR

(C) What are the various types of demand forecasts?   8

(D) (i) What are the steps in demand forecasting?   7

(ii) Given the following demand function $Q_{DX} = 60 - 0.7P_x$. If future price is ₹ 20, what would be your forecast of quantity demanded?

[TURN OVER

4. Attempt **A** and **B** OR **C** and **D**

  (A) (i) Distinguish between fixed proportions and variable proportions   8
            production functions.
       (ii) Explain why :
            (a) isoquants are convex to the origin
            (b) isoquants cannot interest.

  (B) Using isoquants and the expansion path explain the law of returns   7
       to scale.

  OR

  (C) Discuss external economies and diseconomies of scale.   8
  (D) Using a diagram explain the law of variable proportions.   7

5. Attempt **A** and **B** OR **C** and **D**

  (A) Draw diagrams to illustrate :   8
       (i) TFC, TVC and TC
       (ii) AFC
       (iii) AVC, AC, MC
       (iv) The relationship between AC and MC.

  (B) Given the following data :   7

Q	0	1	2	3	4	5	6	7
TC	40	52	59	64	70	78	89	103

       Calculate TFC, TVC, MC, AFC, AVC and AC.

  OR

  (C) Construct the LAC curve using SAC curves.   8
  (D) If price = ₹ 7, AVC = ₹ 5 and TFC = ₹ 40,000   7
       (i) What is the break-even quantity?
       (ii) What happens to the break-even quantity when price increases
            to ₹ 9, AVC and TFC remaining the same?
       (iii) What happens to the break-even quantity when AVC increases
            to ₹ 6, price and TFC remaining the same?

6. Attempt **A** and **B** OR Write short notes on **any four**

  (A) Discuss internal economies and diseconomies of scale.   10
  (B) Explain break-even analysis with the help of diagrams.   10

  OR

[TURN OVER

Write short notes on **any four** of the following :   20
   (i) Functions and variables
   (ii) Relationship between price elasticity and total revenue
   (iii) Consumer survey method of demand forecasting
   (iv) Economies of scope
   (v) Learning curve
   (vi) Limitations of break-even analysis.

_____

Q.P. Code : 760200

(3 Hours) [Total Marks :100

N.B. : (1) **All** questions are **compulsory**

1. (a) Explain the following terms in 2-3 sentences (**any five**) 10
   (1) Body language
   (2) Grapevine
   (3) Marginal listening
   (4) E-mail Etiquette
   (5) Silence as a means of communication
   (6) Dress and grooming
   (7) Whats App
   (8) Encoding

   (b) Match the following : 5
   (1) E-Commerce   (a) Communication tool
   (2) Social Media   (b) Immediate feedback
   (3) Physical barriers   (c) Technical language
   (4) Oral communication   (d) Trading
   (5) Jargon   (e) Time and distance

   (c) Fill in the blanks choosing the best alternative from the ones given below: 5
   (1) ------------- is the response given by the receiver to the sender's
        message.
          (a) Encoding   (b) Decoding
          (c) Feedback   (d) Medium

   (2) ------------- gives legal validity to a letter.
          (a) Subject line   (b) Signature
          (c) Confidential notation (d) Enclosure block

   (3) ------------- is a form of non-verbal communication.
          (a) Letter   (b) Circular
          (c) Report   (d) Facial expressions

TURN OVER

(4) Notices and circulars are examples of -------------- communication.

    (a) Upward   (b) Downward

    (c) Grapevine   (d) Horizontal

(5) Moodle is a tool for -------------

    (a) Twitter   (b) E-learning

    (c) Whats App   (d) Facebook

2. Write short notes on : (any four)   20

    (a) Advantages and disadvantages of written communication.

    (b) Need and importance of Business communication.

    (c) Diagonal communication

    (d) Blogs as a means of communication.

    (e) Relevance of feedback in communication process

    (f) Role of Internet in business communication.

3. Answer the following : (any two)   20

    (a) Differentiate between hearing and listening. How does one cultivate effective listening skills?

    (b) What is corporate social responsibility? How is it relevant in the business world today?

    (c) Explain in detail any five psychological barriers to communication. What are the various means to overcome them.

4. Draft an application letter in response to the following advertisement:-   10

    "Wanted experienced computer programmers for a company based in Mumbai. The applicant should be a graduate with adequate knowledge in computer programming. Apply, with Bio-Data, to Box No. 56, The Times of India, Mumbai-400001".

5. Draft the following letters : (any four)   20

    (a) You are applying for the Master's programme in business management at National University of Singapore. Draft the statement of purpose.

TURN OVER

(b) Draft a recommendation letter for your marketing assistant who has given your name as referee in his application for the post of marketing manager in another company.

(c) Rakesh Verma has been offered the post of Accounts manager in Western India Electronics Ltd. Draft a letter of acceptance on his behalf.

(d) Rahul. P has changed his residence from Mumbai to Pune. He has secured a post of sales executive at Tata chemicals Ltd. Draft his letter of resignation from the post of sales executive at Hindustan Chemicals Ltd.

(e) Mr Hitarth of your marketing department has worked hard and proved his skills in marketing by contributing for the increase in the profit of your company. Write the letter of appreciation to him.

6. (a) Write a paragraph in about **150** words :- (**any one**)   5
     (i) Say no to plastic
     (ii) College life

(b) Read the following situation carefully and answer the questions given below:

The General manager of a reputed firm, Mr Vikas, found that his instructions were not carried out properly by the employees. He thought that the employees were not Qualified enough to follow his instructions. So, he tried hiring highly Qualified employees. But, the problems occurred again. Soon, Vikas realized that the employees were unable to understand his distinctly American accent. Vikas, took care to speak slowly using short sentences and simple language, besides repeating a couple of times.

     (1) Identify the barrier. What were the problems faced by the   3
     General manager due to the barrier?

     (2) What are the steps taken by Vikas to overcome the barrier?   2

———————

(3 Hours)   [Total Marks : 100

N.B. : (1) **All** the questions are **compulsory** and carry equal marks.
     (2) Draw sketches and diagrams wherever necessary.
     (3) Use of map stencil is permitted.
     (4) World map (appendix -2) should be tied along with your answer paper.

1. (A) Study the thematic map supplied to you (appendix 1) and answer the
     following questions.
       (i) What is theme and cartographic technique of the map.   2
       (ii) State the female life expectancy in India and China.   2
       (iii) Name any three countries having female life expectancy of more   3
            than 80 years.
       (iv) Which region has less than 65 years female life expectancy? State   3
            the reasons.

1. (B) Mark and name the following features at the most appropriate location in
     the outline map of the world supplied to you (appendix 2)
       (i) Largest desert in the world and Major mountain range in Asia.   2
       (ii) A densely populated region and a sparsely populated region.   2
       (iii) A country having coastal location and a country having continental   2
            location.
       (iv) Any two largest wind energy producing countries in the world.   2
       (v) Any two metropolition cities in northern hemisphere.   2

2. (a) What is Ecosystem? What are the functions of ecosystem?
   (b) Give the definition and scope of environment.
<div align="center">OR</div>
   (c) State the importance of environmental studies in detail?
   (d) Write notes on :
       (i) Food chain
       (ii) Ecological pyramids

[TURN OVER]

3. (a) Define conservation and state the methods of conservation.
   (b) Explain the problems associated with management of forest resource.

OR

   (c) Describe the types of resources with the help of suitable examples.
   (d) Give an account on resource utilization and sustainable development.

4. (a) Explain in detail pattern of population growth and associated problems in the World.
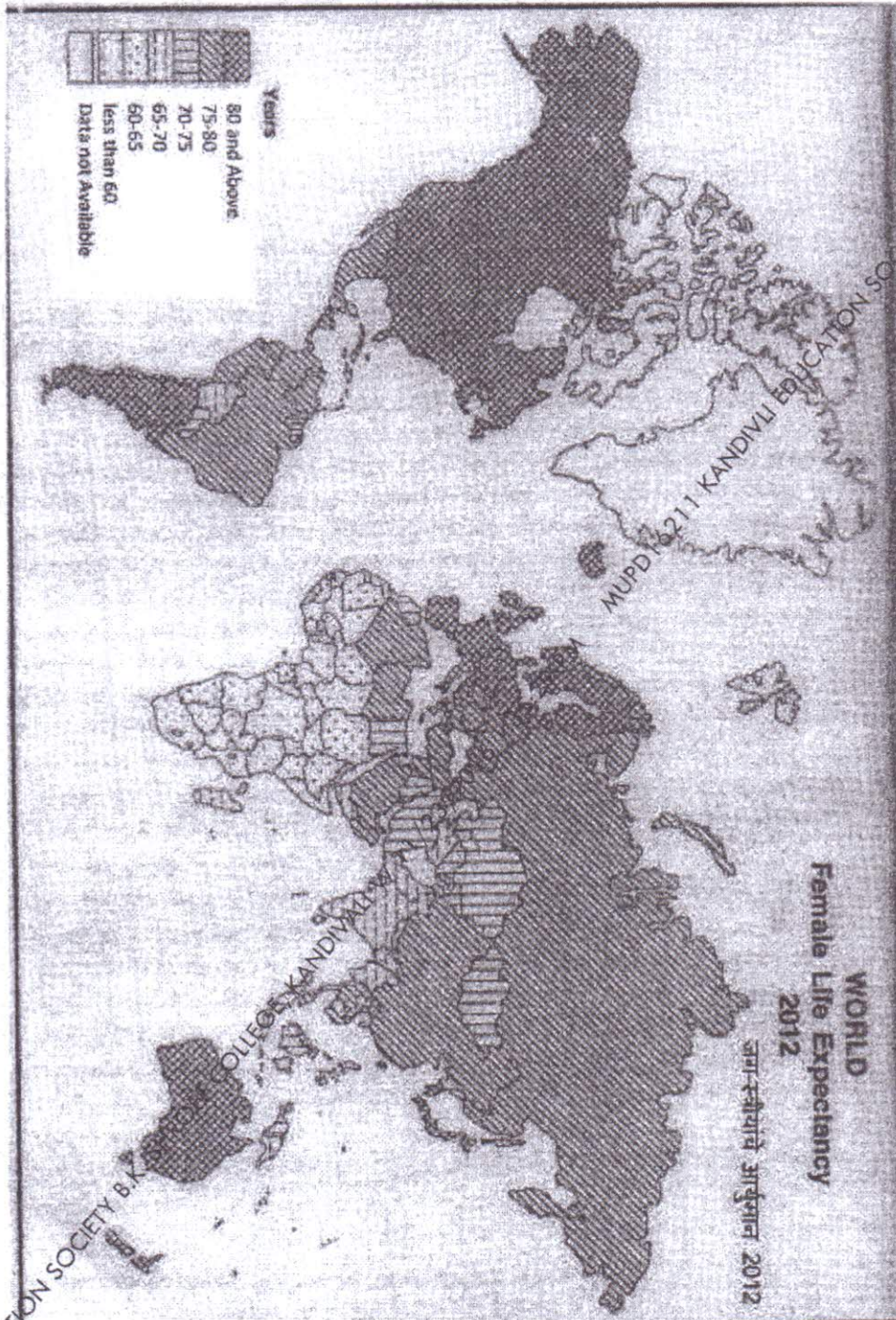   (b) Describe the measures taken to control population growth in India.

OR

   (c) Discuss on Human Development Index.
   (d) Give in detail population explosion in India.

5. (a) Write in detail degradation of water resources in urban areas.
   (b) State the problems arising due to migration in urban areas.

OR

   (c) Write notes on :
       (i) Urbanisation
       (ii) Urban Heat islands
   (d) Give an account on ' Smart Cities'

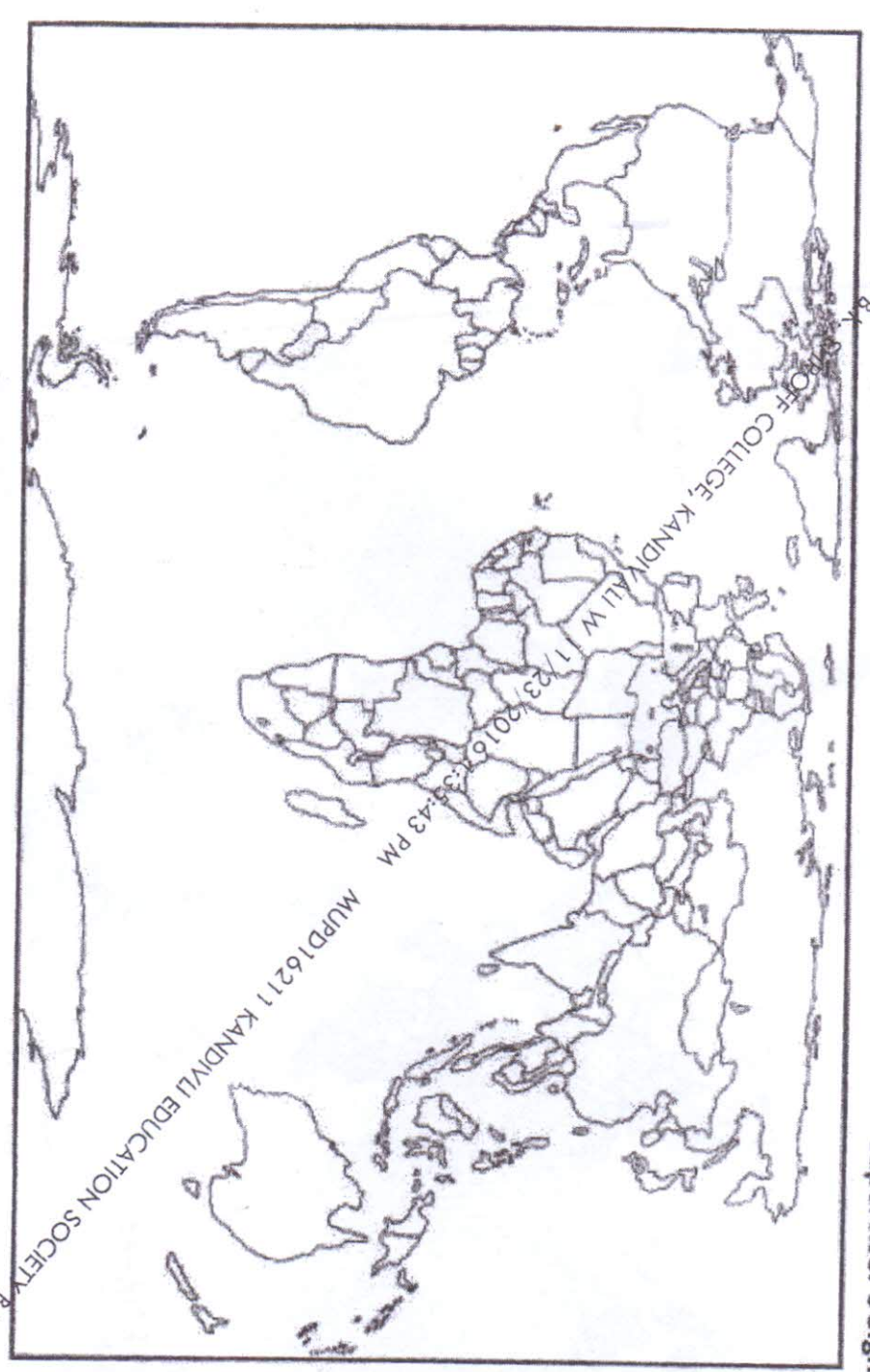
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5

Question No : 1 (a)   Appendix : 1

परिशिष्ट 1

WORLD
Female Life Expectancy
2012
जागतिक आयुर्मान 2012

Years

80 and Above
75-80
70-75
65-70
60-65
less than 60
Data not Available

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Question No. : 1 (b)   WORLD

Exam. Seat No.

Supervisor's Sign.

KEY

i.

ii.

iii.

iv.

v.

QP Code : 760301

(2½ Hours) [Total Marks :75

N.B. : (1) **All** questions are **compulsory**
 (2) Figures to the right indicates full marks.

1. (A) Choose the correct alternative(any **eight**):- 8
 (1) Shwetambar and _____are the two sects of Jainism
  (Digambar, Pitambar, Mahayana)
 (2) In India the state of_____has the lowest gender ratio.
  (Rajasthan, Haryana, Punjab)
 (3) The major cause of declining sex ratio is_____.
  (Poverty, Pollution, Smoking)
 (4) In_____there is farsightedness but not short-sightedness.
  (Hypermetropia, Myopia, Onomatopoeia)
 (5) Anti-Hindi agitations took place in _____India.
  (Northern, Southern, Western)
 (6) The_____border dispute is a dispute involving the Indian states of
  karnataka and Maharashtra.
  (Belgaum, Sangli, Pune)
 (7) Prime Minister is the_____head in India.
  (Executive, Judicial, Legislative)
 (8) _____is the commander-in-chief of all forces in India.
  (Prime Minister, Home Minister, President)
 (9) The main aim of every political party is to promote_____
  (Secularism, Casteism, Communalism)
 (10) _____is the head of the Gram Panchayat
  (President, Chairperson, Sarpanch)

 7

 (B) State whether the following statements are **True** or **False**:(any **seven**):-
 (1) Urban society is heterogeneous in nature.
 (2) India has no official religion.
 (3) Split personality is a type of psychosis mental disorder.
 (4) Polio is caused by a virus called poliovirus.
 (5) Caste system promotes social progress and modernization.
 (6) Regionalism can cause inter-state tension and confrontation.
 (7) Economic justice stands for removal of poverty.
 (8) The Constitution of India is rigid
 (9) Municipal council is also known as Nagar Parishad.
 (10) The Mayor is elected for a term of five years.

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2.   What steps should be taken to prevent violence against women in India.   15

OR

2.   Explain the services available to handicap persons in India.   15

3.   What are the measures to resolve lingustic conflicts in India.   15

OR

3.   Explain the economic ineqalities generated due to caste system in India.   15

4.   Describe the nature of Indian State as "Sovereign", "Secular" and "Socialist".   15

OR

4.   Explain the concept of fundamental duties and their classifications.   15

5.   Explain the concept of Panchayati Raj in India.   15

OR

5. Write short notes on(any **three**):-   15
     (a)   Multi-cultural society
     (b)   Cerebral Palsy
     (c)   Regional and Communal Parties.
     (d)   Parliamentary System
     (e)   Corruption in Politics.

_____

(मराठी रुपांतर)

(२½ तास)   (एकूण गुण:७५)

सूचना: (१) सर्व प्रश्न अनिवार्य आहेत.
        (२) उजवीकडील अंक पूर्ण गुण दर्शवितात.
        (३) आवश्यक वाटल्यास इंग्रजी प्रश्नपत्रिका पहावी

१. (अ) योग्य पर्याय निवडा.(कोणतेही **आठ**):-   ८
     (१) श्वेतांबर आणि_____हे जैन धर्माचे दोन पंथ आहे.
         (दिगंबर, पितांबर, महायना)
     (२) भारतातील_____या राज्याचे लिंग गुणोत्तर प्रमाण सर्वात कमी आहे.
         (राजस्थान, हरीयाणा, पंजाब)
     (३) घटत्या लिंग गुणोत्तराचे_____हे मुख्य कारण आहे.
         (दारिद्रय, प्रदुषण, धुम्रपान)
     (४) _____मध्ये लांबचे व्यवस्थित दिसते परंतु जवळचे दिसत नाही.
         (हायपरमेट्रोपिया, मायोपिया, ओनोमॅटोपोइया)

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Max. Marks: 100   Time: 3 Hrs.

N.B. 1. All questions are compulsory
   2. Figures to the right indicate marks allotted
   3. Graph papers will be provided on request
   4. Use of simple non-programmable calculator is allowed

SECTION-I

Q.1 Attempt **any 4** from the following:

a) Find the face value of a share if an investment of Rs. 9,00,000 put in to purchase
8% shares quoted at Rs. 15 each, earned a total dividend of Rs. 9600.   (5)

b) Mr. Chopra bought 400 shares of par value Rs. 10 each at the market price of Rs. 24
each. If the annual dividend distributed was at the rate of 12%, find Mr. Chopra's
total dividend and rate of return on investment.   (5)

c) Ram invested Rs 18,000 in a mutual fund scheme with entry load of 2.25% at
NAV Rs 110. How many units did he purchase? The current NAV is Rs 130.
Find the current value of his investment.   (5)

d) Katrina invested Rs. 15,000 on 5th of every month for 5 months in a SIP of a
mutual fund. The N.A.V.s on these dates were Rs. 42.26, Rs. 40.25, Rs. 49.57,
Rs. 51.45 and Rs, 39.32 respectively. There was same entry load of 2.3% for all these
months. Find the average acquisition cost per unit.   (5)

e) Mr. Bhavesh invested Rs. 50000/- in the purchase of mutual fund units at NAV
Rs. 16.50/-. Calculate the number of units purchased when the entry load of 1.2% was
applied. How many more units he could have purchased if the scheme was load free?   (5)

Q.2 Attempt **any 4** from the following:

a) In how many different ways can the letters of the word 'LEADING' be arranged such
that the vowels should always come together?   (5)

b) A committee of 5 persons is to be formed from 6 doctors and 5 nurses .Find the total
number of ways if committee consist of i) All doctors. ii) 3 doctors and 2 nurses.   (5)

c) Solve the following L.P.B. by graphical method.
Maximize $Z = 4x + 5y$
Subject to, $2x + 3y \leq 12$;
$\qquad x + y \leq 5; x \geq 0, y \geq 0$ (5)

d) Solve the following L.P.P. Graphically: (5)
Minimize $Z = 9x + 10y$,
subject to, $x + 2y \geq 30$,
$\qquad 3x + y \geq 30, x \geq 0, \ y \geq 0$

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e) A printing company prints two types of magazines A and B. The company earns Rs. 25 and Rs. 35 on each copy of magazines A and B respectively. The magazines are processed on three machines. Magazine A requires 2 hours on machine I, 4 hours on machine II and 2 hours on machine III. Magazine B requires 3 hours on machine I, 5 hours on machine II and 3 hours on machine III. Machines I, II, and III are available for 35, 50, and 70 hours per week respectively. Formulate the L.P.P. so as to maximize the total profit of the company.   **(5)**

SECTION-II

Q.3 Attempt **any 4** from the following:

a) Explain the measure of central tendency. State the requisites of good average.   **(5)**

b) Draw a less than cumulative frequency curve for the following data and locate median and two quartiles graphically.   **(5)**

Daily Wages	0-100	100-200	200-300	300-400	400-500	500-600
No. of workers	10	30	45	60	35	20

c) Find mean and mode from the following data .   **(5)**

Age in years	0-20	20-40	40-60	60-80	80-100
No. of persons	4	5	15	11	5

d) Find coefficient of variation from the following data.   **(5)**

Age in years	10-20	20-30	30-40	40-50	50-60
No. of mobile users	8	12	20	14	10

e) The following data gives the distribution of weights of boys and girls in the class. Find, combine arithmetic mean and decide which group is more consistent.   **(5)**

	Boys	Girls
Number	55	65
Mean weight	58 kgs	44 kgs
S.D	3 kgs	2 kgs

Q.4 Attempt **any 4** from the following:

a) Define the following terms with examples:
(i) Sample space (ii) Mutually exclusive events.   **(5)**

b) Given P(A)= 0.5, P(B) = 0.4 & P(A/B) = 0.25
Find, (i) P($\bar{B}$) (ii) P(A∩B)   (iii) P(A∪B)   **(5)**

c) A box contains 4 blue , 3 red and 2 black balls. If two balls are selected at random from the box, what is the probability that one is blue and one is red ball?   **(5)**

{TURN OVER

d) A problem on Mathematics is given to 2 students A and B who attempt it independently. Their chances of solving the problem are 1/3 and 3/4 respectively. What is the probability that, (i) the problem is solved?   (ii) it is solved by only one?   **(5)**

e) Following is the probability distribution of number of smart phones sold in a shop per day.

Number	0	1	2	3	4	5
Probability	K	0.3	0.15	0.15	0.1	2k

Find the value of k and E(X).   **(5)**

Q.5 Attempt **any 4** from the following:

a) Write a note on Decision Tree.   **(5)**

b) Given the following pay off table, find optimal decision using
(i) Laplace criterion   (ii) Maximax criterion   (iii) Maximin criterion   **(5)**

Course of Action	States of Nature		
	S1	S2	S3
A1	65	45	30
A2	75	25	105
A3	90	70	75

c) A physician purchases a particular vaccine on Monday of each week. The vaccine must be used within the week following, otherwise it becomes worthless. The vaccine cost Rs. 20 per dose and the physician charges Rs. 50 per dose. In the past 50 weeks, the physician has administered the vaccine in the following quantities.

Doses per week	20	30	40
No. of weeks	5	25	20

(i) Construct pay-off table   (ii) Determine the optimum number of doses the physician should buy using EMV criterion.   **(5)**

d) For the following pay-off table, select best decision using EOL criterion.   **(5)**

State of nature	Acts			Probability
	A1	A2	A3	
S1	80	40	100	0.3
S2	60	0	-20	0.2
S3	110	50	70	0.5

e) Draw a decision tree for the decision problem below and suggest the optimal choice. (Use EMV criteria)   **(5)**

Product option	Market demand		
	Poor	Average	Good
P	100	350	100
Q	150	250	150
Probability	0.3	0.55	0.15