TIME: 3 HOURS   **Max Marks – 80**

GENERAL INSTRUCTIONS: -

1. This question paper contains two sections:

    Section A – Statistics for Economics

    Section B – Micro Economics
2. This paper contains 20 Multiple Choice Questions of 1 mark each.
3. This paper contains 4 Short Answer Questions of 3 marks each to be answered in 60 to 80 words.
4. This paper contains 6 Short Answer Questions of 4 marks each to be answered in 80 to 100 words.
5. This paper contains 4 Long Answer Questions of 6 marks each to be answered in 100 to 150 words.

Q. No.	SECTION A – STATISTICS FOR ECONOMICS	MARKS
1	Read the following statements carefully: - **Statement 1:** Sum of deviation of values of a series from arithmetic mean is zero. **Statement 2:** Arithmetic Mean and median for a series can never be equal. In light of the given statements, choose the correct alternative from the following: a) Statement 1 is true and Statement 2 is false. b) Statement 1 is false and Statement 2 is true. c) Both Statements 1 and 2 are true. d) Both Statements 1 and 2 are false.	1
2	Which of the following can be used to locate median graphically? (Choose the correct alternative) a) Histogram b) Bar graph c) Ogive d) Arithmetic Line graph	1
3	Value of correlation coefficient lies between _____ and _____. (Choose the correct alternative) a) -1 , 0 b) -1 , +1 c) 0 , infinity d) d) $-\infty$, $+\infty$	1
4	Which of the following is not a method to collect primary data: - a) Approaching the owner of a company for information about employees. b) Directly contacting the informants for information. c) Contacting people for collecting information over telephone. d) Asking informants to fill a questionnaire sent to them through e-mail.	1

5	Which of the following define statistics in singular sense?
	        I) Collection of data
	        II) Organization of data
	        III) Aggregates of facts
	        IV) Data collected in a systematic manner
	Alternatives: -
	        a) I & II
	        b) I, II & III
	        c) II & III
	        d) d) II & IV
		1

6	"Kabir collected data regarding the pass percentage of students in class 12 board exams of a school for the last five years." This data will be classified as: -
	
	Alternatives: -
	        a) Qualitative classification
	        b) Quantitative classification
	        c) Chronological classification
	        d) Geographical classification
		1

7	Read the following statements: Assertion (A) and Reason (R). Choose the correct alternative from those given below.
	Assertion (A): A continuous frequency distribution can be presented using a histogram.
	Reason (R): Histogram is a graphical method of presenting data.
	Alternatives: -
	        a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
	        b) Both Assertion (A) and Reason (R) are true, but Reason (R) is *not* the correct explanation of Assertion (A).
	        c) Assertion (A) is true, but Reason (R) is false.
	        d) Assertion (A) is false, but Reason (R) is true.
		1

8	Which of the following is not affected by extreme values?
	        I. Arithmetic Mean
	        II. Median
	        III. Mode
	
	Alternatives: -
	        a) I and II
	        b) II and III
	        c) I and III
	        d) Only I
		1

9	Correlation can be estimated graphically with the help of _____.	
	(Choose the correct alternative)	
	Alternatives: -	
	a) Ogive	
	b) Line graph	
	c) Bar diagram	
	d) Scatter diagram	1

10	"October retail inflation to be below 7%, says RBI guv"	
	Source: Times Of India, Nov 13, 2022.	
	Retail inflation is calculated as the change in_____.	
	(Choose the correct alternative)	
	Alternatives: -	
	a) Wholesale price index	
	b) Consumer price index	
	c) Cost of living index	
	d) Both (b) & (c)	1

11	Calculate median from the following data: -	

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of Students	13	16	24	30	11	8

3

OR

The average marks of 39 students of a class is 50. The marks obtained by 40th student is 39 more than the average marks of all the 40 students. Find the arithmetic mean marks of all 40 students.

3

12	"Statistical data is used by the government and the policy makers to formulate suitable policies for economic development." Illustrate with two examples.	3

13	Explain the following terms: -	
	a) Enumerator	
	b) Investigator	
	c) Respondent	
	d) Census method	4

14	A) Draw a pie diagram for the following data: -	

Item of expenditure	Food	Fuel	Clothing	Misc.
% expenditure	36	30	25	9

4

For visually impaired candidates only in lieu of Q14 (A)

A) What is the difference between percentage bar diagram and sub-divided bar diagram?

4

OR

B) Differentiate between inclusive and exclusive series.

4

15	Calculate weighted mean for the following data: -	

Items (X)	92	48	70	65	80	90
Weight (W)	1	2	3	2	1	1

4

16	Calculate Karl Pearson's coefficient of correlation for the following data: -						
	Marks in Math	48	35	17	23	47	
	Marks in Economics	45	20	40	25	45	6

OR

Calculate rank correlation for the following data: -

X	64	63	39	40	97	31	7
Y	26	44	4	48	65	43	40

6

17	Prepare consumer price index for the following data: -

Commodity	Base period		Current period	
	Price (P_0)	Quantity (Q_0)	Price (P_1)	Quantity (Q_1)
A	2	12	3	15
B	5	10	8	12
C	6	15	7	10
D	3	8	4	5

6

SECTION B – MICROECONOMICS

18	If MRT is constant, shape of the production possibility frontier will be: -
	     a) Convex to the origin
	     b) Concave to the origin
	     c) Downward sloping straight line
	     d) Upward sloping straight line
		1

19	Which of the following is a factor affecting demand for a commodity: -
	
	     a) Availability of substitutes
	     b) Nature of the commodity
	     c) Price of substitute goods
	     d) All of the above
		1

20	Read the following statements – Statement 1 and Statement 2.
	 Statement 1: Marginal product is always rising.
	 Statement 2: Average product is the rate of change of total product.
	 In light of the given statements, choose the correct alternative from the following: -
	
	 Alternatives: -
	     a) Both Statement 1 and Statement 2 are true.
	     b) Both Statement 1 and Statement 2 are false.
	     c)Statement 1 is true but Statement 2 is false.
	     d) Statement 1 is false but Statement 2 is true.
		1

21	Read the following statements - Assertion (A) and Reason (R). Choose one of the correct alternatives given below: -
	 Assertion (A): Average Fixed Cost is always falling.
	 Reason (R): Total Fixed Cost is constant at all levels of output.
	 Alternatives: -
	     a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation
	       of Assertion(A)
	     b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct
	       explanation of Assertion(A)
	     c) Assertion (A) is true but Reason (R) is false.
	     d) Assertion (A) is false but Reason (R) is true.
		1

22	A producer supplies 200 units of a good at ₹10 per unit. Price elasticity of supply is 2. How many units will the producer supply if price rises by 10%?
	
	(Choose the correct alternative)
	
	Alternatives: -
	    a) 200
	    b) 220
	    c) 240
	    d) 260 **1**

23	Which of the following is NOT a feature of perfect competition market?
	    a) Heterogeneous product
	    b) Large number of buyers
	    c) Large number of sellers
	    d) Normal profits in the long run **1**

24	When output of a firm increases from 50 units to 55 units, its total revenue increases from ₹750 to ₹1100. The marginal revenue of the 55th unit will be: -
	    a) ₹150
	    b) ₹ 20
	    c) ₹ 70
	    d) ₹75 **1**

25	A government intervention in the market in the form of _____ generally creates a situation of _____ in the market. (Choose the correct alternative)
	
	Alternatives: -
	    a) Price ceiling, excess supply
	    b) Price ceiling, excess demand
	    c) Price floor, excess demand
	    d) Price floor, black marketing **1**

26	A market for a good is in equilibrium. If there is an improvement in the technology for producing the commodity, then what will be the correct order of the chain effects that will follow in the market.
	    I) Supply curve shifts to the right while demand remains unchanged.
	    II) The new equilibrium price is less than the initial price.
	    III) There is excess supply at the equilibrium price.
	    IV) This leads to competition among sellers which puts a downward pressure on the price.
	Alternatives: -
	    a) I, II, III, IV
	    b) IV, I, II, III
	    c) I, III, IV, II
	    d) IV, II, I, III **1**

27	From the set of the events given in column I and corresponding facts given in Column II, choose the incorrect pair of statements: -

	Column I		**Column II**
A	Excess demand	**(i)**	Competition among sellers
B	Excess supply	**(ii)**	Upward pressure on price
C	MR is constant	**(iii)**	AR is falling at constant rate
D	Equilibrium price	**(iv)**	The price which clears the market

	Alternatives: -
	         a) A-I
	         b) B-II
	         c) C-III
	         d) D-IV
		1

28	Explain the relation between total cost and total variable cost.	3
29	Differentiate between positive and normative economics. Give examples of each. **OR** Explain the central problem of "For Whom to Produce?"	3 3
30	Differentiate between extension in supply and increase in supply.	4

31	Nisha has ₹ 500 with her which she wants to spend on two goods, biscuits and pens. Biscuits cost ₹10 per pack and pens cost ₹ 25 per unit. Based on the information given, answer the following questions.
	     a) What is the equation of Nisha's budget line, assuming biscuits as X and pens as Y?
	     b) What should be Nisha's marginal rate of substitution to be in equilibrium?
	     c) State any four combinations of the two goods that belong to Nisha's budget set.
	 OR
	 If demand for a good rises from 25 units to 45 units due to a fall in its price from ₹ 10 to ₹ 8 per unit,
	     a) What can you say about the price elasticity of demand for the good using total expenditure method? Give reasons.
	     b) What type of goods are generally characterized by this type of elasticity?
		
		 1
		 1
		 2
		
		 3
		
		 1

32	What will happen if the price prevailing in the market is
	     a) Above equilibrium price?
	     b) Below equilibrium price?
		
		 2
		 2

33	A consumer consumes two goods X and Y and is in a state of equilibrium. Prices of the goods are P x and P y respectively. Explain what will happen if I. $\dfrac{MUx}{Px} < \dfrac{MUy}{Py}$ II. P_y falls	 3 3
34	Study the table below and answer questions that follow: -	

Units of capital	2	2	2	2	2	2	2	2	2
Units of labour	1	2	3	4	5	6	7	8	9
Total product	10	24	40	50	58	64	68	68	60

a) Find Marginal Product for the production function given above.   3

b) Identify the three stages of the law of variable proportions from the above data.   3

OR

Study the table below Find the profit maximizing output for this firm. Give reasons for your answer.

Output	1	2	3	4	5	6	7	8	9
Marginal Revenue	10	10	10	10	10	10	10	10	10
Marginal Cost	12	10	9	7	5	4	8	10	14

6