

# Class XI Session 2025-26

## Subject - Economics

### Sample Question Paper - 9

Time Allowed: 3 hours

Maximum Marks: 80

#### General Instructions:

1. This question paper contains two sections:

Section A – Micro Economics

Section B – Statistics

2. This paper contains 20 Multiple Choice Questions type questions of 1 mark each.

3. This paper contains 4 Short Answer Questions type questions of 3 marks each to be answered in 60 to 80 words.

4. This paper contains 6 Short Answer Questions type questions of 4 marks each to be answered in 80 to 100 words.

5. This paper contains 4 Long Answer Questions type questions of 6 marks each to be answered in 100 to 150 words.

#### Section A

1. Fill in the blanks: [1]

\_\_\_\_\_ economic deals with opinions, policy evaluation and idealistic part of economics.

2. Which of the following statements is true? [1]

a) All of these

b) Index numbers are helpful in formulating policy

c) There is only one method to calculate the arithmetic mean

d) Mode cannot be calculated in the case of open-end classes

3. If all the points lie on the same downward sloping line, the correlation is said to be [1]

a) negative correlation

b) perfect correlation

c) perfect positive correlation

d) perfect negative correlation

4. **Assertion (A):** The selected items can be said to be representative of the universe. [1]

**Reason (R):** In the process of sampling each unit of the universe has an unequal chance of being selected.

a) Both A and R are true and R is the correct explanation of A.

b) Both A and R are true but R is not the correct explanation of A.

c) A is true but R is false.

d) A is false but R is true.

5. Rahul made the following runs in different matches. Calculate the average mean of the runs by step deviation method. [1]

Runs	5-15	15-25	25-35	35-45	45-55
Frequency	10	12	17	19	22

a) 33.87

b) 13.45



c) 23.84

d) 36.85

6. A monthly price index that uses the price changes in consumer goods and services for measuring the changes in consumer prices over time is known as the [1]

a) IIP

b) Laspeyres Index

c) Paasche Index

d) CPI

7. A teacher has taught one student who scored 95 marks, she claims that her 100% students have secured more than 90%. What is she doing? [1]

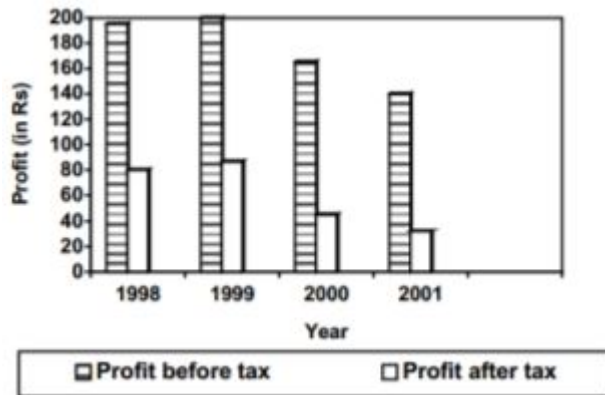
a) She is interpreting the data

b) She is presenting the data

c) She is publishing the data

d) She is misusing the statistics

8. Identify the bar graph [1]



a) Simple diagram

b) Sub-divided bar diagram

c) Line diagram

d) Multi-Bar Diagram

9. When we want to classify the data given in numerical terms, which method of classification of data is used? [1]

a) Conditional classification

b) Quantitative classification

c) Chronological classification

d) Qualitative classification

10. The data consist of scores on three different scales of Political attitudes. [1]

Scale-A	Scale-B	Scale-C
3	5	4
2	6	6
1	5	8
5	2	2
7	8	1

For the correlation between the Scale-A and the Scale-C, N =

a) 8

b) 5

c) 7

d) 6

11. Why is 'r' preferred to covariance as a measure of association? [3]

12. Which average would be more suitable to know the average size of the readymade garments? [3]

OR



State some demerits of Mode.

13. The marks obtained by 25 students in a class are as follows: [4]

22, 28, 30, 32, 35, 37, 40, 41, 43, 44, 45, 45, 48, 49, 52, 53, 54, 56, 56, 58, 60, 62, 65, 68, 69

- i. Arrange the above data in the form of a frequency distribution taking class interval. 20-29, 30-39, 40-49, 50-59, 60-69

- ii. Form the less than cumulative frequency distribution also.

14. Construct a pie diagram to represent the cost of construction of a house in Delhi. [4]

Items	Expenditure (in %)
Labour	25
Bricks	15
Cement	20
Steel	15
Timber	10
Supervision	15

OR

The following data shows the number of cars manufactured by Maruti Ltd, Tata Motors and Hyundai in the year 2015-16. Represent it with the help of a pie-diagram.

Production of Cars (in Rs.)

Maruti Limited	15,75,000
Tata Motors	7,25,000
Hyundai	5,50,000

15. State the steps taken in collection of data. [4]

16. i. What methods are used for constructing Consumer Price Index number? [6]

- ii. Construct index number of 2015 from the given data by the simple aggregative method and the simple average of relative method.

Commodity	A	B	C	D	E	F
Price in 2015 (Rs.)	10	18	16	14	12	17
Price in 2010 (Rs.)	8	15	12	10	8	12.5

17. The following series relates to the daily income of workers employed in a firm. Compute [6]

- i. highest income of lowest 50% workers.  
ii. minimum income earned by top 25% workers.  
iii. maximum income earned by lowest 25% workers.

Daily Income (in ₹)	Number of Workers
10-14	5
15-19	10
20-24	15





a) ₹ 720

b) ₹ 770

c) ₹ 721

d) ₹ 630

26. Fill in the blanks: [1]

The costs which vary as the level of output varies are called \_\_\_\_\_. (prime costs, real costs)

27. In the long run competitive market? [1]

a) Every firm will earn economic profit

b) Every firm will incur losses

c) Every firm will earn only normal profit

d) The firm will earn no profit

28. Massive unemployment shifts the PPC to the left. Defend or refute. [3]

OR

Discuss the central problems of an economy.

29. Explain the implications of 'homogeneous products' feature of perfect competition. [3]

30. FDI not only brings investment to the domestic economy but also brings new technology. How would the availability of new technology (relating to the auto industry) impact the short period production function of a car manufacturer in India? [4]

31. Give the meaning of producer's equilibrium. A producer produces that quantity of his product at which Marginal Cost and Marginal Revenue are equal. Is he earning maximum profits? Give reasons for your answer. [4]

OR

Explain the conditions of producer's equilibrium with the help of a marginal cost and marginal revenue schedule.

32. State whether the following statements are true or false. Give valid reasons in support of your answer. [4]

a. The coefficient of price elasticity of demand for the commodity is inversely related to the number of alternative uses of the commodity.

b. Luxury goods often have lower price elasticity of demand.

33. Distinguish between demand by an individual and market demand with the help of a schedule. [6]

34. Answer the following questions [6]

(a) Define an indifference curve. Why is it convex to the origin? [3]

(b) What happens when:  $\frac{MU_X}{P_X} > \frac{MU_Y}{P_Y}$ ? [3]

# Solution

## Section A

1. 1. Normative

2.

(b) Index numbers are helpful in formulating policy

**Explanation:**

Index numbers are helpful in formulating policy because Wholesale price index number (**WPI**), consumer price index number (**CPI**), and industrial production index (**IIP**) are widely used in policy-making.

3.

(d) perfect negative correlation

**Explanation:**

The type of diagram in this case is also known as Scatter Diagram with Negative Slant.

In negative slant, the correlation will be negative, i.e. as the value of x increases, the value of y will decrease. The slope of a straight line drawn along the data points will go down.

4.

(c) A is true but R is false.

**Explanation:**

The selected items can be said to be representative of the universe because in the process of sampling each unit of the universe has an equal chance of being selected.

5. (a) 33.87

**Explanation:**

Runs	Frequency	M	FM	A=30, d	C=10, d1	Fd1
5-15	10	13	100	-20	-2	-20
15-25	12	20	240	-10	-1	-12
25-35	17	30	510	0	0	0
35-45	19	40	760	+10	=1	+19
45-55	22	50	1100	+20	+2	+44
Total	80	Total	2710		Total	+31

$$\text{Mean by step deviation} = A + \frac{\text{Sum of the } fd_1}{\text{sum of frequency}} \times C$$

$$= 30 + \left(\frac{31}{80} \times 10\right) = 33.87$$

6.

(d) CPI

**Explanation:**

Consumer price index (CPI). Since, data here belongs to consumers, we compute CPI.

7.

(d) She is misusing the statistics

**Explanation:**

She has not used any statistical tool to make her claim valid. She cannot generalise her claim without using data. So, she is misusing statistics.

8.

(d) Multi-Bar Diagram

**Explanation:**

Multiple bar diagrams (m) are used for comparing two or more sets of data, in the given bar graph, comparison is shown between profit before tax and profits after tax.

9.

(b) Quantitative classification

**Explanation:**

Because quantitative method always deals with numerical terms and numbers.

10.

(b) 5

**Explanation:**

N means the number of items in the series.

11. Although correlation coefficient is similar to the covariance in a manner that both measure the degree of linear relationship between two variables, but the correlation coefficient is generally preferred to covariance due to the following reasons:

i. The correlation coefficient is scale free and has no unit.

ii. The value of the correlation coefficient (r) lies between 0 and 1. Symbolically  $-1 \leq r \leq +1$

12. Mode will be the most suitable as it is the value occurring most frequently in a set of observations. So if we have a set of observations like

36, 32, 28, 30, 28, 28, 36, 28, 32, 28, 28, 30, 28, 30, 28, 28

Then from this set of observations we can easily see that 28 is occurring maximum number of times. So mode will be 28. This means that size 28 is the most demanded size and this can be taken as the average

OR

i. It is difficult to find the modal class for bi-modal and tri-modal distributions.

ii. The value of mode is not based on each and every item of the series.

iii. When frequencies of all items are identical, it is difficult to identify the modal value.

iv. As compared to mean, mode is affected to a great extent, by sampling fluctuations.

v. Calculation of mode involves the cumbersome procedure of grouping the data. If the extent of grouping changes, there will be a change in the modal value.



- vi. Mode is not suitable for further mathematical treatment.  
vii. Mode is not rigidly defined as there are several methods for calculating its value.

13. Given the data in individual series, we first convert given data into frequency distribution using tally marks. Now, less than cumulative frequency is obtained by adding successively the frequencies of all the previous classes including the class against which it is written. The cumulate is started from the lowest to the highest size.

i. The frequency distribution of given data is shown below

Class Interval	Tally Bar	Frequency (f)
20-29		2
30-39		4
40-49		8
50-59		6
60-69		5
<b>Total</b>		25

ii. (a) To form cumulative frequency distribution (less than) of the given distribution, the exclusive group will be formed.

Class Interval	Exclusive Group	Frequency (f)
20-29	19.5-29.5	2
30-39	29.5-39.5	4
40-49	39.5-49.5	8
50-59	49.5-59.5	6
60-69	59.5-69.5	5
<b>Total</b>		25

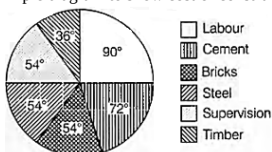
(b). Cumulative frequency distribution (less than) is given below:

Class Interval	Frequency	Cumulative frequency (cf)
Less than 29.5	2	2
Less than 39.5	4	4+2=6
Less than 49.5	8	8+6=14
Less than 59.5	6	14+6=20
Less than 69.5	5	20+5=25

14. For constructing a pie diagram, it is necessary to convert the percentage into corresponding degrees in the circle. Since one circle contains 360 degrees, therefore we multiply the expenditure percentage by 3.6. i.e.  $\frac{360}{100}$  which is equal to 3.6. This conversion is shown in the following table :

Items	Expenditure (in %)	Expenditure in Degree
Labour	25	$\frac{25}{100} \times 360^\circ = 90^\circ$
Bricks	15	$\frac{15}{100} \times 360^\circ = 54^\circ$
Cement	20	$\frac{20}{100} \times 360^\circ = 72^\circ$
Steel	15	$\frac{15}{100} \times 360^\circ = 54^\circ$
Timber	10	$\frac{10}{100} \times 360^\circ = 36^\circ$
Supervision	15	$\frac{15}{100} \times 360^\circ = 54^\circ$
	100	360°

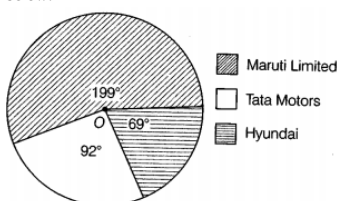
A pie diagram to show cost of construction of a house in Delhi is given below



OR

Name of the Company	Production	percentage values	Angle (in degree)
Maruti Limited	15,75,000	$\frac{15,75,000}{28,50,000} \times 100 = 55.26$	$\frac{55.26 \times 360}{100} = 199^\circ$
Tata Motors	7,25,000	$\frac{7,25,000}{28,50,000} \times 100 = 25.43$	$\frac{25.43 \times 360}{100} = 92^\circ$
Hyundai	5,50,000	$\frac{5,50,000}{28,50,000} \times 100 = 19.3$	$\frac{19.3 \times 360}{100} \approx 69^\circ$
<b>Total</b>	28,50,000		360°

In the above table, we have calculated the percentage values of the production figures first and then we have computed the angle in degrees for each value. The pie diagram for the above data is given below:



15. **Develop a complete plan for survey:** It is important to draw a complete plan for a statistical survey before we start collecting data actually.

**Decide whether to adopt census method or sample method:** For conducting survey on any issue, the investigator has two options: sample and census. Which method will depend on budget, availability of time and accuracy requirement? Preparing Questionnaire: Designing the questionnaire is influenced by many considerations like number of questions to be included, language of questions, types of questions, ordering of the questions etc.

**Mode of Distribution of Questionnaire:** There are different ways in which questionnaire can be sent. It can be personal or by post or by e mail. In personal it can be filled either by respondent or enumerator.

**Check the filled in forms for completeness and consistency:** It is the last stage in collection of data. This stage comes when duly filled forms are returned by the respondents. Each questionnaire must be examined and edited if necessary.

16. (i) There are two methods of constructing Consumer Price Index number:

i. **Family Budget Method** This method computes CPI on the basis of family budget, using the given formula.

$$\text{Consumer Price Index} = \frac{\sum IW}{\sum W}$$

ii. **Aggregative Method** This is the most popular method for constructing Consumer Price Index number, and is computed with the help of the following formula.

$$\text{Consumer Price Index} = \frac{\sum p_1 q_0}{\sum p_0 q_0} \times 100$$

(ii)

#### Construction of Index Number

In simple aggregative method, we just sum up price values whereas in simple average of price relatives, we take mean of price relatives.

Commodity	Price in 2010 in (Rs.) ( $p_0$ )	Price in 2015 in (Rs.) ( $p_1$ )	$I \left( \frac{p_1}{p_0} \times 100 \right)$
A	8	10	125
B	15	18	120
C	12	16	133.3
D	10	14	140
E	8	12	150
F	12.5	17	136
N = 6	$\sum p_0 = 65.5$	$\sum p_1 = 87$	$\sum I = 804.3$

i. **Simple Aggregative Method**

$$P_{01} = \frac{\sum p_1}{\sum p_0} \times 100 = \frac{87}{65.5} \times 100 = 132.8$$

ii. **Simple Average of Relative Method**

$$P_{01} = \frac{\sum I}{n} = \frac{804.3}{6} = 134.05$$

17.

Daily Income	Exclusive Group	Number of Workers (f)	Cumulative Frequency (cf)
10-14	9.5-14.5	5	5
15-19	14.5-19.5	10	15
20-24	19.5-24.5	15	30
25-29	24.5-29.5	20	50
30-34	29.5-34.5	10	60
35-39	34.5-39.5	5	65
		$n = \sum f = 65$	

#### Calculation of Quartiles

(i)	(ii)	
The second quartile is the 50th percentile or the Median	The <i>third quartile</i> corresponds to the value that lies halfway between the median and the highest value in the distribution. It, therefore, marks the region which encloses the 75% of the initial data or 25% of the end data.	The <i>first quartile</i> corresponds to and the lowest value in the distribution. It, therefore, marks the region which encloses the 25% of the initial data.
To find the highest income of the lowest 50% of workers, we calculate second quartile i.e., median (M)	To find the minimum income earned by the top 25% of workers, we calculate upper quartile ( $Q_3$ ).	To find the maximum income earned by the bottom 25% of workers, we calculate lower quartile ( $Q_1$ )
$m = \text{Size of } \left( \frac{n}{2} \right) \text{ th item} = \left( \frac{65}{2} \right) \text{ th item} = 32.5 \text{th item}$ 32.5th items lie in class 24.5-29.5 $M = l_1 + \frac{\frac{n}{2} - cf}{f} \times c = 24.5 + \frac{32.5 - 30}{20} \times 5 = 24.5 + \frac{2.5}{20} \times 5 = 24.5 + 0.6$ $\Rightarrow M = 25.1$	$Q_3 = \text{Size of } 3 \left( \frac{n}{4} \right) \text{ th item} = \left( \frac{3 \times 65}{4} \right) \text{ th item} = 48.75 \text{th item}$ 48.75th item lies in class interval 24.5-29.5 $\therefore Q_3 = l_1 + \frac{\frac{3n}{4} - cf}{f} \times c = 24.5 + \frac{48.75 - 30}{20} \times 5 = 24.5 + \frac{18.75 \times 5}{20} = 24.5 + 4.7$ $\Rightarrow Q_3 = 29.2$	$Q_1 = \text{Size of } \left( \frac{n}{4} \right) \text{ th item} = 16.25 \text{th item}$ 16.25th item lies in class interval 14.5-19.5 $Q_1 = l_1 + \frac{\frac{n}{4} - cf}{f} \times c = 14.5 + \frac{16.25 - 5}{10} \times 5 = 14.5 + 5.625$ $\Rightarrow Q_1 = 19.92$

OR

The value of compassion towards fellow human beings is reflected here. Mr X is keeping the shoes of handicaps which has low margins which reflects that he has good human values in his heart to care for the less fortunate section of the society. It also highlights the social welfare value as he wants to help the needy class of the society.

#### Section B

18. 1. Falling

19.

(d) They have alternate uses

**Explanation:**

Economic resources are the assets which an economy may have available to supply and produce goods and services to meet the ever changing needs and wants of individuals and society as a whole.

20.

(d) only i

**Explanation:**

When demand increases more than supply, equilibrium price will increase. The right shift in the demand curve is relatively more than that of the supply curve. Effectively, both equilibrium price and quantity tend to increase.

21.

(c) availability of close substitutes

**Explanation:**

Demand for goods which have close substitute is relatively more elastic. When the price of such good rises, the consumers have the option of shifting to its substitute.

22. (a) Both A and R are true and R is the correct explanation of A.

**Explanation:**

Both A and R are true and R is the correct explanation of A.

23. 1. Contract





24.

(c) Do not advertise because they can sell as much as they wish at the prevailing price

**Explanation:**

The firms under perfect competition produce homogeneous goods and the price is uniform in the market. These firm dont advertise their product as their is perfect knowledge among buyers and sellers about the product.

25.

(b) ₹ 770

**Explanation:**

₹ 770

26. 1. prime costs

27.

(c) Every firm will earn only normal profit

**Explanation:**

abnormal losses will attract new firms into the industry and abnormal losses will lead to exit of firms . But in the long run firms earn only normal profits. So normal profits induces many firms to enter or leave the industry in the long run. This has an effect on the price which ultimately results in a situation of only normal profits for the firms.

28. PPC is drawn on the assumption that the given resources are fully as well as efficiently utilised. Unemployment is a situation when resources are not fully utilised. Or, it is a situation of underutilisation of resources. It would mean that the economy is not operating on the PPC but somewhere inside the PPC. PPC would not shift to the left. Difference between actual output and potential output will increase.

OR

Central problems of an economy are. What to produce, How to produce, and For whom to produce. 'What to produce' relates to the problem of choice of goods and services to be produced and the quantity to be produced. 'How to produce' relates to the choice of technique of production. It involves a choice between labour-intensive technique and capital - intensive technique. 'For whom to produce' relates to the distribution of goods and services across different sections of society. It focuses on the issue of Economic Equality.

29. In Perfect Competition, all sellers sell identical units of a product or all units of goods are identical in color, shape, size or packing of the product of each seller. A buyer will have no reason to prefer the product of any particular seller.

Implications:

- There are no selling costs(cost of marketing and selling a product)
- Because of homogeneous products (one that cannot be distinguished from competing products from different suppliers), there is a single price in the whole market.
- Transportation costs may also be avoided.
- he negative implication of this feature is that the consumers are deprived of the different varieties of products like garments.

30. A production function is defined for a given technology. The short period production function of a firm is drawn on the assumption of a given technology. It is the technical knowledge that determines the maximum levels of output that can be produced using different combinations of inputs. If the technology improves, the maximum levels of output obtainable for different input combinations increase. We then have a new production function. Thus, with the FDI the new technical know-how would bring in a shift in the whole production function of a car manufacturer in India because more output would be available from the same amount of inputs. The cost function describes the least cost of producing each level of output given prices of factors of production and technology (of the auto industry). In terms of costs, the (Indian) firm's AC curve (of a car manufacturer) would shift downward. It would prompt the firm to produce more at the going/ prevailing price.

31. Producer's equilibrium refers to a situation, where a producer is producing that level of output, at which his profits are maximized. In other words, it is a situation of profit maximisation. Following are the two conditions of producer's equilibrium

- Marginal Revenue (MR) = Marginal Cost (MC), and
- MC must be rising beyond the point of equilibrium.

Following schedule explains the producer's equilibrium

Marginal Cost and Revenue Schedule		
Output	(MR in Rs)	(MC in Rs)
1	12	15
2	12	12
3	12	10
4	12	9
5	12	8
6	12	7
7	12	8
8	12	9
9	12	10
10	12	12
11	12	15

At 2nd level of output Marginal Revenue and Marginal Cost are equal but at the 3<sup>rd</sup> level of output Marginal Revenue > Marginal Cost (12 > 10). Hence, firms will continue to expand production as its profits are not yet maximised. The producer will be in equilibrium at the 10<sup>th</sup> level of output because beyond this level, Marginal Cost exceeds Marginal Revenue.

OR

A producer strikes his equilibrium when two conditions are satisfied:

- MR = MC, and
- MC is greater than MR after the MC = MR output level.

MR-MC can be explained by schedule:

Output (units)	Price (₹)	TR (₹)	TC (₹)	MR (₹)	MC (₹)	Profit (TR - TC) (₹)
1	8	8	6	8	6	2
2	8	16	14	8	8	2
3	8	24	20	8	6	4
4	8	32	28	8	8	4
5	8	40	38	8	10	2



Here,  $MR = MC$  in two situations:

- i. In-case of 2 units of output.
- ii. In-case of 4 units of output.

However, while in situation 1 (when output = 2 units)  $MC$  is still falling, while in situation 2 (when output = 4 units)  $MC$  is rising. Here equilibrium will be struck when 4 units of output are produced, not when 2 units of output are produced.

32. a. The given statement is false: A commodity with a number of alternative uses carries positive relation with the coefficient of price elasticity of demand. With the fall in the price of such a commodity the quantity demanded increases as people can put it for different uses.
- b. The given statement is false: If the price of luxury goods increases, people may postpone its consumption. Hence the demand is elastic in nature.
33. Individual demand refers to the quantity of a good that a consumer demands at a particular price in a given period of time.

◦ **Individual Demand Schedule**

Price of Ice-cream (Rs)	Quantity demanded (units) by (A)
1	4
2	3
3	2
4	1

Market demand is the sum of different individuals demand at different price level at a particular period of time

◦ **Market Demand Schedule**

Price of Ice-cream (Rs)	A's Demand	B's Demand	Market demand (A+B)
1	4	5	$4 + 5 = 9$
2	3	4	$3 + 4 = 7$
3	2	3	$2 + 3 = 5$
4	1	2	$1 + 2 = 3$

34. Answer the following questions

- (i) **Indifference Curve** refers to the graphical representation of various alternative combinations of bundles of two goods among which the consumer is indifferent. Alternately, the indifference curve is the locus of points that show such combinations of two commodities which give the consumer the same level of satisfaction.
- Indifference curve is convex to the point of origin because of Diminishing Marginal Rate of Substitution. For every additional unit of a good, a consumer is willing to give up less and less amount of another good as the utility that he derives from its consumption goes on diminishing.
- (ii) This situation implies that by spending a rupee on Good-X, the consumer gets greater marginal utility than in the case of Good-Y. Accordingly, he will spend more on X than Y. As consumption of X rises,  $MU_X$  will fall. On the other hand, as consumption of Y falls,  $MU_Y$  will rise. The consumer will stop buying more of X in place of Y only when  $\frac{MU_X}{P_X} = \frac{MU_Y}{P_Y}$ .

