CBSE Class 11

Economics

Sample Paper 08 (2019-20)

Maximum Marks: 80

Time Allowed: 3 hours

General Instructions:

i. All the questions in both sections are compulsory. Marks for questions are indicated against each question.
ii. Question numbers 1 - 10 and 18 - 27 are very short-answer questions carrying 1 mark each. They are required to be answered in one word or one sentence each
iii. Question number 11 - 12 and 28 - 29 are short-answer questions caring 3 marks each. Answers to them should not normally exceed 60-80 words each
iv. Question number 13 - 15 and 30 - 32 are also short-answer questions carrying 4 marks each. Answers to them should not normally exceed 80-100 words each
v. Question number 16 - 17 and 33 - 34 are long answer questions carrying 6 marks each. Answers to them should not normally exceed 100-150 words each
vi. Answer should be brief and to the point and the above word limit be adhered to as far as possible.

Section A

1. Fill in the blanks:

   _____ is the process of transforming inputs (Raw material) into output (finished goods).

2. State the meaning of qualitative classification.

3. Which of the following techniques deals with the association between two or more variables?

   a. Dispersion

   b. Index number

c. None of these

d. Correlation

4. Give two examples of positive correlation.

OR

What is negative correlation?

5. Given below is a statistical series.

Number of children in a family	1	2	3	4	5	6 and above
Frequency	3	14	16	7	3	2

It is an example of:

a. Exclusive series
b. Discrete series
c. Open-ended Series
d. All of the above

6. Fill in the blanks:

_____ is the short form for Bombay Stock Exchange (BSE).

7. State true or false:

Index number measures the absolute changes in the variables over time.

8. Fill in the blanks:

Data is presented in _____ and _____ in the form of a table.

9. Match the following:

(a) The frequency distribution of two variables is known as	(i) difference between the largest and the smallest observations
(b) Statistical calculation in classified	(ii) The upper-class limit of a class is

data are based on	excluded in the class interval
(c) Under Exclusive method	(iii) The class mid points
(d) Range is the	(iv) Bivariate Distribution

10. Fill in the blanks:

    _____ helps us to take optimum decisions regarding consumption and allocation of income to different foods and services.

11. Discuss how you would use the lottery method to select 3 students out of 10 in your class?

12. Calculate median from the following data
    8, 12, 15, 22, 35, 42, 45, 58

    OR

    Find the mean of first 8 odd numbers.

13. Which measure of dispersion is the best and how?

14. Give the features of a good diagrammatic presentation.

    OR

    What is shown on X-axis and Y-axis of a graph?

15. Find the mean deviation and its coefficient from the given data.

Class Interval	**Frequency(f)**
17.5 - 22.5	2
22.5 - 27.5	4
27.5 - 32.5	6
32.5 - 37.5	8
37.5 - 42.5	6
42.5 - 47.5	4

47.5 - 52.5	2
52.5 - 57.5	2

16. What are quartiles? How are quartiles, deciles and percentiles different from each other?

OR

The arithmetic mean gets distorted by extreme values in the series and that the value of arithmetic mean may not figure in the series at all. Write the limitations of mean with the help of above statement.

17. What are the merits and limitations of scatter diagram?

18. Give the meaning of economy.

19. State true or false:

When MR is zero, TR is maximum.

20. Match the following:

(a) A consumer has monotonic preferences, find the most preferred bundle by him	(i) Zero
(b) Slope of the demand curve is zero, its elasticity of demand is	(ii) Maximum
(c) What is the value of total utility at the point of satiety	(iii) The elasticity of demand is infinity
(d) What is the value of marginal utility at the point of satiety	(iv) 6 units of X good and 6 units of Y good

21. Abnormal profits mean

    a. Unexpected profits

    b. Same as normal profit

c. Profit in excess of normal profit

d. Profit under the normal profit

22. Fill in the blanks:

    Scarcity of resources gives rise to the problem of _____.

OR

    Fill in the blanks:

    The objective of microeconomics is to study the principles, problems, policies concerning the optimum utilization of _____.

23. Fill in the blanks:

    _____ is a system which provides people with the means to work and earn a living.

24. If the value of $\frac{MUx}{Px}$ is more than $\frac{MUy}{Py}$, the consumer_____?
    a. Will increase the consumption of good X and reduce good Y
    b. Will consume more of good X and good Y
    c. Will reduce the consumption of good X and increase good Y
    d. Will consume less of good X and good Y
25. Fill in the blanks:

    If the market supply is greater than market demand at any price, then there is _____.

26. A tutor earns Rs. 1000 per hour teaching economics. If he joins a school, he would earn on an average Rs. 300 per hour. What is the opportunity cost of teaching in school?

    a. Rs. 1000

    b. Rs. 1300

    c. Rs. 300

d. Rs. 700

27. MC=MR=AC=AR refers to the long-run equilibrium of a

    a. Competitive firm

    b. Monopoly firm

    c. Oligopoly firm

    d. None of these

28. Explain how the long-run equilibrium with free entry and exit, firms under perfect competition earn zero abnormal profits.

OR

Explain the feature 'interdependence of firms' in an oligopoly market.

29. Price elasticity of demand for a good is (-) 4 when the price of the good falls, its demand rises by 24%. Calculate the percentage decrease in price.

30. What is revenue of a firm? Give meaning of average revenue and marginal revenue. What happens to average revenue when marginal revenue is:

    (i) Greater than average revenue;

    (ii) equal to average revenue;

    (iii) less than average revenue?

31. Explain relationship between total utility and marginal utility with help of a schedule.

OR

A person's marginal utility schedule is given below. Derive their total utility schedule.

Amount Consumed	Marginal Utility
0	-
1	10

2	25
3	38
4	48
5	55

32. What is an 'Inferior' good? In what manner is the demand curve of such a good affected when income of the consumer increases? Use diagram.

33. Complete the following table.

Output (units)	**Total Cost (TC) (Rs)**	**Average Fixed Cost (AFC) (Rs)**	**Average Variable Cost (AVC) (Rs)**	**Marginal Cost (MC) (Rs)**
0	36	-	-	-
1	-	-	-	18
2	-	-	-	14
3	-	-	16	-
4	-	-	-	24

34. Giving reasons state whether the following statements are true or false:

    i. A monopolist can sell any quantity he likes at a price.
    ii. When equilibrium price of a good is greater than its market price, there will be competition among the sellers.

OR

Explain the changes that will take place in the market when the market price of a good is greater than its equilibrium price. Use the diagram.

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Solution

Section A

1. Production
2. The classification according to qualities or attributes of the data are called qualitative classification.
3. (d) Correlation
   Explanation: Correlation is a measure of association that tests whether a relationship exists between two variables.
4. i. Age of husband and age of wife.
   ii. increase in height and weight.

   OR

   The correlation is said to be negative when the variable move in opposite direction.
5. (b) Discrete series Explanation: Discrete series (c) Open ended Series
   Explanation: An open ended distribution means that one or more of your classes (or bins) is open-ended.
6. SENSEX
7. False
8. Rows, Columns
9. (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)
10. Economics
11. Random numbers tables are available either in a published form or can be generated by using appropriate software packages. The procedure for selecting a random sample of 3 students out of 10 in a class is as follows:

1. Assign a specific number between 1 and 10 to all the 10 students.

2. As the largest serial number is 10, we will consult two-digit random numbers in sequence.

3. We will select three numbers randomly. We will skip the random numbers greater than 10 as there is no student number greater than 10.

4. The 3 students whose serial numbers are randomly selected are considered as selected.

12. This is an individual series. The values have to be in ascending order. Here we see that the values are already in ascending order. The data is represented as below.

Calculation of Median

S.No	1	2	3	4	5	6	7	8
Values	8	12	15	22	35	42	45	58

Here, a number of items i.e., n=8 which is even. In case of even number of items, Median = Average of the middle two terms. The formula is given below.

$$Median = \frac{\text{Size of } \left(\frac{8}{2}\right) \text{ th item} + \text{Size of } \left(\frac{8}{2}+1\right) \text{ th item}}{2}$$

$$= \frac{\text{Size of 4 th item} + \text{Size of 5th item}}{2} = \frac{22+35}{2} = 28.5$$

$\therefore$ Median=28.5

OR

The first 8 odd numbers are 1, 3, 5, 7, 9, 11, 13 and 15.

$$\text{Mean}(\overline{X}) = \Sigma X/n$$

where ΣX is the sum of observations and n is the total no. of observations.

$$\therefore \overline{X} = \frac{1+3+5+7+9+11+13+15}{8} = 64/8 = 8$$

13. Standard deviation is considered to be the best measure of dispersion because of the reasons stated below:

    i. It is based on all values. Therefore, provides information about the complete

series. Because of this reason, a change in even one value affects the value of standard deviation.

ii. It is independent of origin but not of scale. Thus, if each value of the variable is multiplied by a constant, the value of standard deviation remains unaffected.

iii. It is useful in advanced statistical calculations like the comparison of variability in two data sets.

iv. It can be used in testing of hypothesis.

v. It is capable of further algebraic treatment.

Thus, standard deviation being the function of arithmetic mean satisfies all the characteristics lead down for an ideal measure of dispersion.

14. A good diagrammatic presentation should have the following features:

i. The presentation should be attractive, accurate, simple and easy to understand.

ii. It should communicate the required information effectively.

iii. The diagrams drawn to present the data should be proportionate in height and width.

iv. In the diagrammatic presentation, vertical diagrams should be preferred.

v. The data on the basis of which the diagrams are drawn should be clearly mentioned.

OR

Variable is shown on X-axis and frequencies are shown on Y-axis.

15. Calculation of Mean Deviation and coefficient of Mean Deviation. The given series is a continuous series. We have to take midpoint of the given class intervals. The mid-value is represented by m.

Class Interval	**Mid value(m)**	**Frequency(f)**	**fm**	$\|D\| = \|m - \overline{X}\|$, $\overline{X}$ = **36.2**	$f\|D\|$
17.5 - 22.5	20	2	40	16.2	32.4
22.5 - 27.5	25	4	100	11.2	44.8
27.5 - 32.5	30	6	180	6.2	37.2

32.5 - 37.5	35	8	280	1.2	9.6
37.5 - 42.5	40	6	240	3.8	22.8
42.5 - 47.5	45	4	180	8.8	35.2
47.5 - 52.5	50	2	100	13.8	27.6
52.5 - 57.5	55	2	110	18.8	37.6
	$\Sigma f = 34$	Σf_m = 1230			$\Sigma f\|D\|$ = 247.2

We have to calculate the Arithmetic mean.

$\overline{X} = \frac{\Sigma fm}{\Sigma f} = \frac{1230}{34} = 36.17 \approx 36.2$ where Σfm is the sum of frequencies multiplied by the mid value for each class interval.

Mean Deviation (MD) =$= \frac{\Sigma f|D|}{\Sigma f} = \frac{247.2}{34}$ = 7.27, where $\Sigma f|D|$ is the sum of the frequencies multiplied by the deviations. The deviations are taken from the arithmetic mean, which is 36.2.
Coefficient of MD = $\frac{MD}{Mean} = \frac{7.27}{36.2}$ = 0.20

So, we get the Mean Deviation as 7.27 and Coefficient of Mean Deviation as 0.20

16. Quartile is that value which divides the total distribution into four equal parts. So there are three quartiles, i.e. Q_1 Q_2 and Q_3. Q_1 Q_2 and Q_3 are termed as first quartile, second quartile and third quartile or lower quartile, middle quartile and upper quartile respectively. Quartiles.

    First or lower quartile (Q_1) divides the distribution in such a way that one fourth(25%) of total items fall below it and three fourth (75%) fall above it.

    Second Quartile is the Median.

    Third or upper quartile (Q_3) divides the distribution in such a way that three fourth (75%) of total items fall below it and one fourth (25%) fall above it.

    Deciles and Percentiles all are positional measures with following difference. Quartiles divide the series into four equal parts, deciles divide the series into 10 equal

parts, and percentiles divide the series into 100 equal parts. Method of their estimation is also similar.

OR

The limitations of mean are mentioned below:

i. The mean value may sometimes be that value which does not figure in the series at all.
ii. Arithmetic mean sometimes offers illogical conclusions.
iii. Arithmetic mean cannot be determined by inspection.
iv. Arithmetic mean is not suitable for qualitative characteristics such as honesty, beauty, etc.
v. In skewed distributions, arithmetic mean is not a suitable measure.
vi. The main defect of arithmetic mean is that it gets distorted by extreme values of the series.

17. **Merits**

(a) **Simplicity:** It is easy to plot even by a beginner.
(b) **Easy to Understand:** It is very easy and simple to understand. It can be easily understood and interpreted.
(c) **Helps to detect abnormal values:** Abnormal values in a sample can be easily detected.
(d) **Not affected by extreme values:** Values of extreme items do not affect this method. Such points are always isolated in diagram.

Demerits

(a) **Does not give exact figure:** This method depicts only if relation is positive or negative or no relation. But degree of correlation can't be predicted.
(b) **No mathematical or Algebraic Treatment is possible:** It is not possible to do any further mathematical treatment to the result.
(c) **Can't be used when variables are large:** The method is useful only when number of terms is small i.e. it can't be applied to 3-4 terms.
(d) **Can't be used when items are large:** The method is also useless when number of terms is very big i.e. in hundreds.
(e) **Does not give answer in quantitative terms:** It is not a quantitative measure of

the relationship between the variables. It is only a quantitative expression of the quantitative change.

18. An economy is a system which provides people with means to work and earn a living to satisfy their wants in the processes of production, consumption, exchange and investment.

19. True, TR is at its maximum point when MR is zero and its falls beyond this point.

20. (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

21. (c) Profit in excess of normal profit
    Explanation: When TR=TC the firm is able to meet all its cost and they earn normal profits in this situation. Any point above this point i.e. when TR = TC i.e where TR > TC the firm will earn abnormal profits

22. Choice

OR

Resources

23. Economy

24. (a) Will increase the consumption of good X and reduce good Y **Explanation:** $MU_X/P_X > MU_Y/P_Y$. In this case, the consumer is getting more marginal utility per rupee in case of good X as compared to Y. Therefore, he will buy more of X and less of Y. This will lead to fall in MU_X and rise in MU_Y. The consumer will continue to buy more of X till $MU_X/P_X = MU_Y/P_Y$

25. Excess supply

26. (c) Rs. 300
    Explanation: Opportunity cost refers to a benefit that a person could have received, but gave up, to take another course of action. Stated differently, an opportunity cost represents an alternative given up when a decision is made. This cost is, therefore, most relevant for two mutually exclusive events.
27. (a) Competitive firm

Explanation: In a perfectly competitive market, the firm will make normal profits in the long run and in this situation MR, MC, AC and AR will all be equal.

28. Equilibrium refers to a state of rest when no change is required. A firm (producer) is said to be in equilibrium when it has no inclination to expand or to contract its output. This state either reflects maximum profits or minimum losses.

    A perfectly competitive firm, in the long run, can earn normal profits only. In case, the industry is showing supernormal profits (TR > TC or AR > AC) new firms will join the industry. This will shift the market supply curve to the right. Accordingly, the market price will be reduced and supernormal profits will be wiped out.
    In case of negative abnormal profits (Losses), when (TR < TC, AR < AC) some of the existing firms will leave the industry. Accordingly, the market supply curve will shift to the left forcing the Price to move up till the situation of zero abnormal profits is reached.

    OR

    In an oligopoly market, there is a small number of big firms. Accordingly, there is a high degree of mutual interdependence. Implying that, price and output policy of one firm has a significant impact on the price and output policy of the rival firms in the market. When one firm lowers its price the rival firms may also lower the price. And, when one firm raises its price, the rival firms may not do so. It is because of the interdependence that it becomes very difficult to estimate the change in a firm's sales caused by a change in price. Implying that a precise relationship between price and sales cannot be established or, demand curve under this market is indeterminate/undefined.

29. Percentage change in Demand = 24%
    Elasticity of Demand
    $(E_d) = \frac{\%\text{ Change in quantity demanded}}{\%\text{ Change in price}}$
    $(-)4 = \frac{24}{\%\text{ change in price}}$
    % Change in price = $\frac{24}{(-)4} = -6$, or
    % Change (decrease) in price = 6%

30. Revenue of a firm refers to receipts from the sale of a given quantity of commodity in the market. It is the total income of the firm.

    TR= Qty * Price

    Average revenue: The per unit revenue received from the sale of given amount of output is known as Average Revenue.

    AR = $\frac{Total\ Revenue}{Qty}$

    Marginal revenue: Marginal revenue is the additional revenue received when an additional unit of output is sold.

    $$MR_n = TR_n - TR_{n-1}$$

    (i) When MR>AR, Average revenue rises
    (ii) when MR=AR, Average Revenue is constant and maximum
    (iii) when MR<AR, Average revenue falls.

31.

Quantity (Units)	**Total Utility**	**Marginal Utility**
0	0	-
1	8	8
2	14	6
3	18	4
4	20	2
5	20	0
6	18	-2

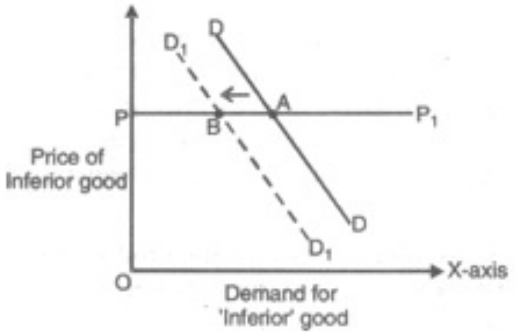
1. As long as MU decreases but is positive, TU increases at decreasing rate.
2. When marginal utility is equal to zero then total utility is maximum.
3. When marginal utility is negative. Total utility starts diminishing.

OR

As we know total utility is the sum total of marginal utilities as shown below.

Amount Consumed	Marginal Utility (Given)	Total Utility = ΣMU
0	-	0
1	10	10
2	25	35
3	38	73
4	48	121
5	55	176

32. Inferior good refers to that good, the demand for which decreases as income of buyer increases and vice versa. In case of inferior goods, income effect is negative.
Effect on demand curve when income of the consumer increases:
When income of the consumer increases, the consumer will prefer to shift to superior substitutes, because now he can afford them. The consumer will purchase less of inferior good or the demand for inferior goodwill fall at its existing price which means that the demand curve will shift leftward . So, the effect on the demand curve for inferior goods is just the opposite of what happens in case of normal good. For a normal good increase in income increases the demand and shifts the demand curve to the right whereas for a inferior good, the demand decreases with an increase in income and the demand curve shifts leftward.
Original Demand Curve = DD
Demand for inferior good = PA
When income increases:
New Demand Curve = D_1D_1
(Backward/Leftward Shifting)
When the demand curve shifts leftward, the new demand for the inferior good is PB and we can see that PB(new demand) <PA(old demand) . So, the diagram helps us in understanding that with an increase in income, demand for inferior good falls.



33. **Cost Schedule**

Output (Q) (units)	**Total Cost (TC) (Rs)**	**Average Fixed Cost (AFC) (Rs)**	**Average Variable Cost (AVC) (Rs)**	**Marginal Cost (MC) (Rs)**
0	36	0	0	0
1	54	36	18	18
2	68	18	16	14
3	84	12	16	16
4	108	9	18	24

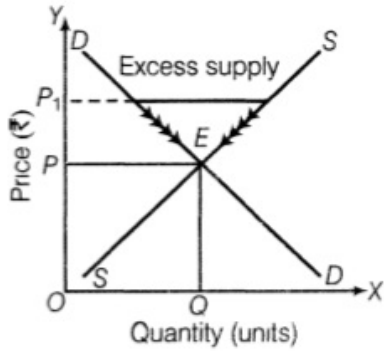
34. i. The given statement is false. Since we know that a monopoly market is characterised by a single seller of a product which has no close substitutes. However, this does not allow the monopolist to sell any quantity of the product at a higher price. If he wants to increase the demand of his product, then he will have to lower the price of the product because monopolist has no control over the quantity that he can sell, rather it depends on the buyers. Further, a monopolist faces a downward demand curve this means that if he increases the price of the product it will reduce the demand for its product.

ii. The given statement is correct because we know that when the equilibrium price of a good is more than its market price, there will be competition among the sellers. At a price higher than market price, there will be excess supply, i.e. supply of a commodity will be greater than its demand, so the sellers will "compete" among themselves to be able to sell the goods to a limited number of customers. This will lead to the decrease in the price of the commodity and eventually demand will again be equal to supply.

OR

Market Equilibrium: Equilibrium is a situation of the market at which demand of a commodity is equal to its supply. In this case, there is neither excess demand nor excess supply and we have a stable price (equilibrium price).

Changes in market price are greater than equilibrium price: When price prevailing in the market is higher than that of equilibrium price, demand for a commodity will be less than its supply i.e. there will be excess supply in the market. It creates competition among the sellers because they are unable to sell all they want to sell at existing prices. It will lead to falling in price causing extension of demand and contraction of supply. The process of an extension and contraction would continue till the equilibrium between supply and demand is struck.
Thus, an equilibrium price will be restored through the free play of market forces of demand and supply. This can be explained with the help of a diagram:



In the above diagram E is the equilibrium point because at this point demand is equal to supply. At this point price is equal to P (equilibrium price). Now when the price is greater than the equilibrium price i.e. $OP_{1,}$ we have excess supply but the equilibrium price (P) is again restored by the free play of market forces.