CBSE Class 11 Economics Question Paper Solution 2017

Q.	Part A - STATISTICS FOR ECONOMICS	Marks
1	(d). All of the above	1
2	(a). Quota sampling	1
3	Chronological classification means grouping raw data according to time as well as classification in either ascending or descending order with reference to time such as years, quarters, months, weeks. **OR** The primary objectives of data classification are: ● To consolidate the volume of data in such a way that similarities and differences can be quickly understood. Figures can consequently be ordered in sections with common traits. ● To aid comparison. ● To point out the important characteristics of the data at a flash. ● To give importance to the prominent data collected while separating the optional elements.	1
4	(a) Simple arithmetic mean	1
5	(a) Mean	1
6	Perfectly equal income distribution	1
7	True, The Lorenz Curve is a graphic method of measuring estimated dispersion. This curve is often used to measure the inequalities of income or wealth in a society.	1
8	(c) Minus one to plus one	1
9	(d) 10	1
10	(b) Consumer price index	1
11	The statistical data is important for Government and policy makers to formulate suitable policies of economic development. It not only helps in analysing and evaluating the outcomes of the past policies but also assists them to take corrective measures and to formulate new policies accordingly. **Examples:** 1. It can be ascertained by using statistical techniques whether the policy of family planning is effective in checking the problem of a rapidly growing population. 2. In preparing annual Government budgets, previous data of Government expenditures and Government resources are taken into consideration for estimating the allocation of funds among various projects.	3

12 **The differences between the primary and secondary data are:** 3

Basis	Primary Data	Secondary Data
(i) Definition	Primary data are those that are collected for the first time.	Secondary data refer to those data that have already been collected by some other person.
(ii) Originality	These are original because these are collected by the investigator for the first time.	These are not original because someone else has collected these for his own purpose.
(iii) Nature of Data	These are in the form of raw materials.	These are in the finished form.
(iv) Reliability	These are more reliable.	These are less reliable.

OR

The following are the main precautions that should be taken before using secondary data:

(i) Reliable agency: We must ensure the agency that has published the data should be reliable.
(ii) Suitability for the purpose of an enquiry: The Investigator must ensure that the data is suitable for the purpose of the present enquiry.
(iii) Adequacy and accuracy to avoid the impact of bias: It is necessary to use adequate data to avoid biases and prejudices leading to incorrect conclusions.
(iv) Method of collecting the data used: The investigator should also ascertain as to what method was used in collecting the data.

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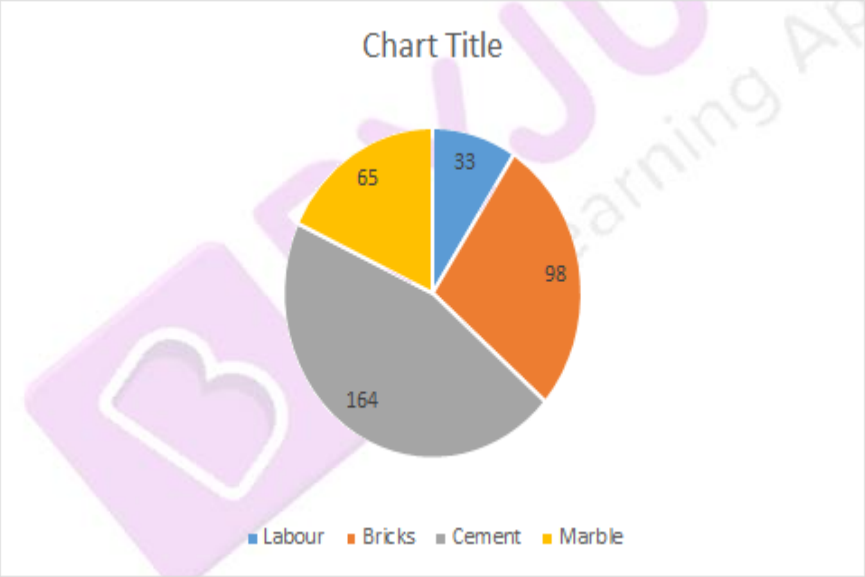
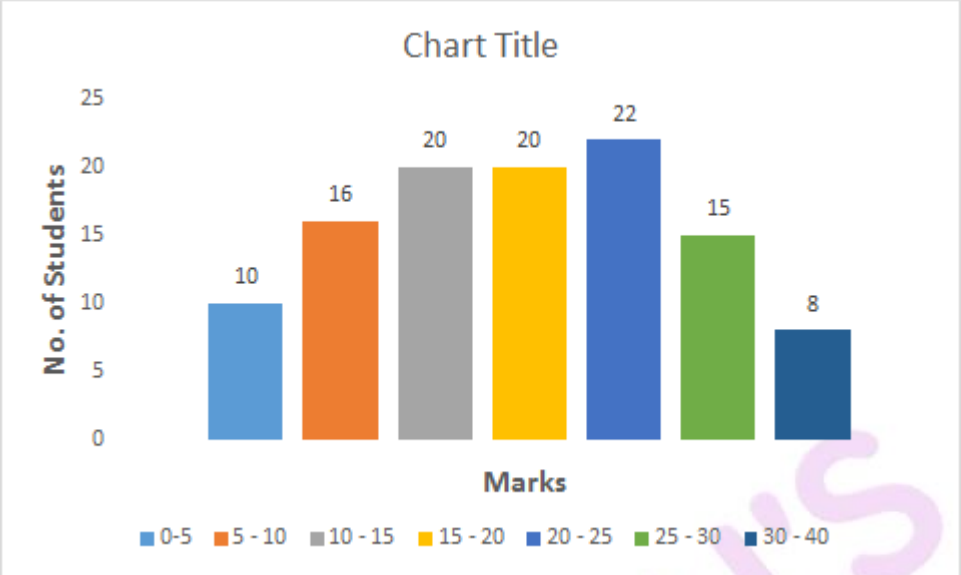
Items	Expenditures	Angle
Labour	1,000	$\frac{1,000}{11,000} \times 360^0 = 33^0$
Bricks	3,000	$\frac{3,000}{11,000} \times 360^0 = 98^0$
Cement	5,000	$\frac{5,000}{11,000} \times 360^0 = 164^0$
Marble	2,000	$\frac{3,000}{11,000} \times 360^0 = 65^0$
Total	**11,000**	**360^0**



OR

Marks	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25
No. of students	5	18	20	25	30



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Class interval	Frequency	C.F
0 - 10	5	5
10 - 20	15	20
20 - 30	**25 (f)**	45
30 - 40	8	53
40 - 50	3	56
	N = 56	

Median class is given by the size of $(N / 2)^{th}$ = (56 / 2)th item, which is the 28th item. This corresponds to the class interval of 20 − 30, so this is the median class.

Median = l_1 + (N/2 - c.f) / f x i
Median = 20 + (28 - 20) / 25 x 10
Median = 20 + 3.2
Thus, median = 23.2

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X	R_1	Y	R_2	$D^2 = (R_1 - R_2)^2$
90	1	20	5	16
20	5	70	1	16
36	4	55	2	4
78	2	46	4	4
45	3	52	3	0
Total				40

Here N = 5, $\Sigma D^2 = 40$

Now, $rk = 1 - \frac{6\Sigma D^2}{n(n^2-1)}$

$= 1 - \frac{6\,(40)}{5(5^2 - 1)}$

$= 1 - \frac{6\,(40)}{5(24)}$

$= 1 - \frac{240}{120}$

$= -1$

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Marks	No. of students (f)	Mid-Values (m)	C.F	Deviation from Median |dm| = |m - M| M = 19	(f|dm|)
0 - 5 5 - 10 10 - 15 15 - 20 20 - 25	4 7 8 5 6	2.5 7.5 12.5 17.5 22.5	4 11 19 23 29	16.5 11.5 6.5 1.5 3.5	66 80.5 52 7.5 21
	$\Sigma f = N =$ 29				$\Sigma(f\|dm\|) =$ 227

Median = Size of (N/2)th item
= (29/2)th item

= 14.5

Median = l_1 + (N/2 - c.f) / f x i
Median = 10 + (14.5 - 11) / 8 x 5
= 10 + 3.5 / 8 x 5
= 10 + .4375 x 5
= 10 + 2.1875
= 12.1875

M.D (M) = $\frac{\Sigma(f|dm|)}{\Sigma f}$
= $\frac{227}{29}$
= 7.83

Coefficient of Mean Deviation = $\frac{MDm}{M}$
= $\frac{7.83}{12.5}$
= 0.63

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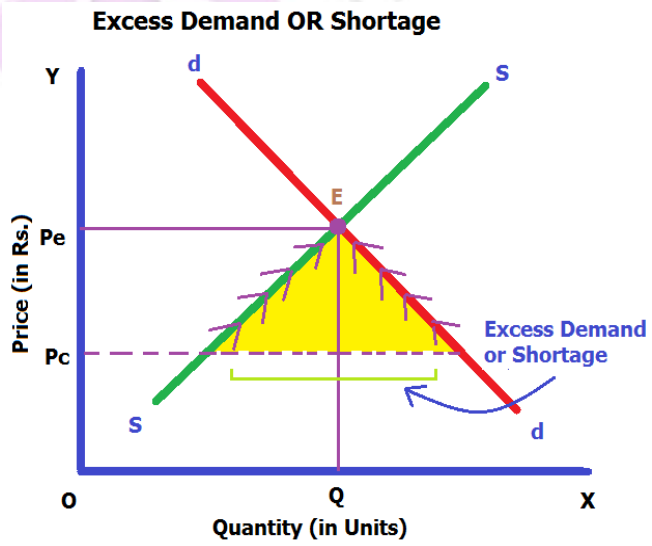
Marks *(X)*	**No. of students *(f)***	**Mid-Values *(m)***	***fm***	***m2***	***fm2***
0 - 4 4 - 8 8 - 12 12 - 16	4 8 2 1	2 6 10 14	8 48 20 14	4 36 100 196	16 288 200 196
	Σf = 15		Σfm = 90		Σfm^2 = 700

Mean = $\Sigma fm / \Sigma f$
= 90 / 15
= 6

Standard deviation, (σ) = $\sqrt{\frac{\Sigma fm^2}{\Sigma f} - (\overline{X})^2}$
or, (σ) = $\sqrt{700/15 - (6)^2}$
or, (σ) = $\sqrt{46.67 - 36}$
or, (σ) = $\sqrt{10.66}$
or, (σ) = 3.26

Coefficient of Variation = (σ / Mean) x 100
= (3.26 / 6) x 100
= 54.33

18	(a) Index numbers are economic barometers because it measures change in the price level, studies a change in the standard of living, is useful in planning and decision making, determines the level of production and helps the government in framing policy. Its important points are explained below: **(i) To measure change in the price level:** price index measure and compare prices of different commodities with the help of wholesale price index number (WIP). It is normally used to measure the level of inflation in an economy. **(ii) To study a change in the standard of living:** It helps to measure the living standard of people. Cost of living index measures the relative cost of living over time. **(iii) Useful in planning and decision making:** It is used as an important tool for business communities for drafting various plans and designing various policies. **(iv) To determine the level of production:** Index number of industrial production measures changes in the physical volume of production. (b) An appropriate base year must be chosen which is neither too far nor too near the current year. The base year should be a normal year and economically stable year. The period of abnormalities should not be considered as the base year.	6
	Part B - Micro Economics	
19	Suppose Bharat has three job offers: (i) To work in MNC at Rs.75, 000 per month. (ii) To work as Branch Manager of Private Bank at Rs.60,000 per month (iii) To work as Branch Manager in Government Bank at Rs.55,000 per month. In the given case, Bharat has accepted the offer for the job in MNC. Therefore, his opportunity cost for working in MNC is the cost of next best alternative forgone, i.e. Rs.60, 000 salary of Branch Manager of Private Bank.	1
20	(b) Utils	1
21	Equation of budget line = **Px.Qx + Py.Qy = M** Where, M = Money Income Px = Price of commodity X Qx = Quantity of commodity X Py = Price of commodity Y Qy = Quantity of commodity Y **OR** Marginal utility is a net addition to Total Utility by consuming one more unit of output.	1
22	False, IC is strictly Convex to origin i.e., MRSxy is always diminishing.	1

	Reason: Due to the law of diminishing marginal utility a consumer is always willing to sacrifice lesser units of a commodity for every additional unit of another good.	
23	Implicit cost implied the cost of self-supplied factors. It is the estimated value of the inputs supplied by the owners.	1
24	(b) Less than average revenue	1
25	(a) Perfect competition	1
26	(c) 5	1
27	(c) Oligopoly	1
28	Since a perfectly competitive firm must accept the price for its output as determined by the product's market demand and supply, it cannot choose the price it charges.	1
29	(i) “India jumped 23 points in the World Bank's ease of doing business index to 77th place, highest in 2 years.” This statement represents positive economic analysis. (ii) “Government should further liberalize the business rules.” This statement represents normative economic analysis. It is based on values and opinions.	3
30	‘Price Ceiling’ means fixation of the maximum or highest price of a commodity by the government.  • In the given diagram, OP_e is price fixed by market forces; and • OP_c is the ‘Maximum Price’ fixed by the government. It is less than the equilibrium price. • At the price ‘OP_c’ , there is excess demand equal to ‘MN’.	3

<table>
<tr><td></td><td>Implication: Shortage leads to Black Marketing and hoarding.

OR

Increase in demand for goods leads to a rightward shift in the demand curve. The increase in demand leads to competition among buyers causing a push in the market price. The increased price leads to an increase in the supply and a fall in demand leading to a new equilibrium where both the price and quantity demanded are higher.</td><td></td></tr>
<tr><td>31</td><td>Change in the income of the consumer
Increase in income: If the income of the consumer increases, it will enable him to buy more.
Price of the goods is the same and income has increased, so demand by a household will also increase.

Decrease in income: If the income of the consumer decreases, it will enable him to buy less.
Price of the goods is the same and income has decreased, so demand by consumers will also decrease.</td><td>4</td></tr>
<tr><td>32</td><td><table><tr><th>Output (Units)</th><th>TC</th><th>AC</th><th>MC</th></tr><tr><td>1</td><td>70</td><td>70</td><td>0</td></tr><tr><td>2</td><td>100</td><td>50</td><td>30</td></tr><tr><td>3</td><td>105</td><td>35</td><td>5</td></tr><tr><td>4</td><td>115</td><td>28.75</td><td>10</td></tr></table></td><td>4</td></tr>
<tr><td>33</td><td>(a) Product differentiation:
Product differentiation is one of the most important features of the monopolistic competition form of the market.
By product differentiation we mean products are not identical. They are different in terms of quality, size, design, colour etc. For example, soaps and toothpaste of all the companies have some unique features.
This unique feature gives monopoly power to the firm due to which it can charge a high price. For example, Apple Incorporation charges high prices for its gadgets due to its brand name, IOS interface etc.
(b) Perfect knowledge
Perfect knowledge among buyers implies that they know everything about the product like, the size, quality, price etc. So, no one pays more</td><td>4</td></tr>
</table>

due to ignorance. Its implication is that commodities are standardized and a uniform price prevails.

- Perfect knowledge among sellers implies that they know everything about the factor market and product market. They have equal access to all the inputs and know about their prices in different markets and different time periods. So, no individual firm enjoys any special benefit or suffers any loss in availing these factors.

OR

(a) Interdependence:

- Number of firms is limited so their decision about price and output does affect others. Firms cannot make independent decisions and they have to consider the reaction of rival firms.

Example:
There is an interdependence of decision about price and output between Coca Cola and Pepsi. If Coca Cola reduces the price, Pepsi will also have to reduce its price otherwise it will lose its market share.

(b) Large number of sellers:

- There are a very large number of sellers.
- The number of sellers is so large that each seller is just like a drop in the ocean. Under such conditions, no single seller can influence the market price of a commodity.
- As a result, uniform price prevails in the market.

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- Law of variable proportions is a concept of short run. This law states, as we combine more and more units of variable factor with the same fixed factors,
- Total Product initially increases at increasing rate, then at diminishing rate and reaches its maximum level and finally it falls.

Hypothetical schedule showing law of variable proportions

Capital (in Lac Rs.)	**Labour** (Number of workers)	**TP** (in units)	**MP** (in units)
1	1	4	4
1	2	10	6
1	3	18	8
1	4	24	6
1	5	28	4
1	6	**30**	2

6

1	**7**	**30**	**0**
1	8	28	(-) 2

Phase - 1 Phase of Increasing Returns

- Initially when we combine more units of labour with the same amount of capital, TP increases at an increasing rate and MP increases.
- In the above diagram this phase operates till '3' workers are employed.
- This phase ends at the level where MP is maximum.

· **Reason** - Fuller utilization of fixed factors, Division of labour & specialization.

Phase - 2 Phase of Diminishing Returns

- When we further increase the number of workers without changing capital, TP still rises but at a diminishing rate.
- In the above diagram this phase operates between '4' and '7' workers.
- This phase ends where MP is Zero and TP is maximum and constant.

· **Reason**–Factors of production are imperfect substitutes for each other, Ideal combination of fixed and variable factors is distorted.

Phase-3 Phase of Negative Returns

- Beyond a certain limit if we increase number of workers (units of variable factor) we start getting negative returns i.e., MP becomes negative and TP starts falling.
- In the given diagram this phase operates when more than '7' workers are employed with the same fixed factors (capital).

Reason – Scarcity of fixed factors, mismanagement.

35 | **Consumer equilibrium:** Equilibrium means state of maximum satisfaction. Consumer's equilibrium is a situation when he spends his given income on the purchase of one or more commodities in such a way that he gets maximum satisfaction and has no urge to change this level of consumption, given the prices of commodities. | 6

Conditions of consumer's equilibrium:

Let the two goods the consumer consumes be 'X' and 'Y'.

For a consumer to be in the state of equilibrium, following two conditions must be fulfilled:

I. MRSxy = Px/Py *{MRSxy is Ratio of ΔY and ΔX}*

II. MRSxy must fall as more of 'X' is consumed in place **of 'Y'.**

Explanation of the conditions of consumer's equilibrium:

Suppose, a consumer is not in the state of equilibrium. There can be following two situations:

Condition - i

- Suppose, MRSxy > Px/Py i.e. To obtain one more unit of good X, consumers are willing to sacrifice more units of Y as compared to what is required as per market rate Px/Py (MRE). So, the consumer purchases more of 'X'.

As a result, MRSxy falls and continues to fall until it is equal to Px/Py and the consumer is in equilibrium.

- Suppose, MRSxy < Px/Py i.e. To obtain one more unit of 'X' consumer is willing to sacrifice less units of 'Y' as compared to what is required as per market rate Px/Py (MRE)
  So, the consumer purchases less of 'X'. As a result, MRSxy rises and continues
  to rise until it is equal to Px/Py and the consumer is in equilibrium.

Condition - ii:
Unless MRSxy falls as consumer consumes more of X, the consumer will not reach equilibrium again
Diminishing marginal rate of substitution is a consequence of operation of law of diminishing marginal utility.

OR

$MU_A / P_A = MU_B / P_B$ (Consumer is in equilibrium)

Given that P_B rises, then
$MU_A / P_A > MU_B / P_B$ or $[MU_B / P_B < MU_A / P_A]$

Since per rupee MU for A is higher than per rupee MU of B, the consumer will reduce expenditure on B and increase that on A. So, When PA falls, demand for A rises.

Let the constant, the consumer will be in equilibrium when $MU_A/P_A=MU_B/P_B$
Now, suppose the price of good B, i.e.,PB rises. The situation changes. The consumer is no longer the respective prices of the two goods PB and PA. Other things remain in equilibrium, the above equality turns into an inequality: MUB/PB< MUA/PA It means that per rupee MU from consumption of A is greater than the consumption of B. This induces the consumer to buy more of A and less of B. The consumer transfers expenditure from B to A.