3CBSE

Class XI Economics

Sample Paper 4

Time: 3 hrs **Max. Marks: 80**

General Instructions:

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

Section A (Statistics for Economics)

Q. No.	QUESTION	Marks
1	Statistical data is essential for formulating policies of economic development. Illustrate with an example.	1
2	Bar diagram is a a. One dimensional diagram b. Two-dimensional diagram c. Tabular presentation of data d. None of the above	1
3	Which of the following case is not suitable for the method of collecting information from local source of primary data? a. Field of investigation is large. b. Information is required on regular basis. c. Information collected from educated respondents. d. Information accuracy is essential.	1
4	Distinguish between univariate and bivariate frequency distribution	1
5	Define pie or circular diagram. **OR** **Statement I-** The titles indicate the information contained in the row of the table. **Statement II-** It is the title of the rows of a table.	1

<table>
<tr><td></td><td>Statement III- It is the left most column of the table.
With reference to the statements, identify the part of table that is being described.</td><td></td></tr>
<tr><td>6</td><td>Give any one limitation of index numbers.</td><td>1</td></tr>
<tr><td>7</td><td>Which average divides the series into four equal parts?</td><td>1</td></tr>
<tr><td>8</td><td>Questionnaires are filled by the :
a. Investigator
b. Informant
c. Enumerator
d. None of the above</td><td>1</td></tr>
<tr><td>9</td><td>If the minimum value in a set is 12 and its range is 50, the maximum value of the set is:
a. 32
b. 42
c. 62
d. 72</td><td>1</td></tr>
<tr><td>10</td><td>_____ refers to all such methods by which conclusions are drawn relating to the universe or population on the basis of a given sample.</td><td>1</td></tr>
<tr><td>11</td><td>The following table shows the estimates of cost of production of Goods A, B, C and D. Present the data in the form of a sub-divided bar diagram:

<table><tr><td rowspan="2">Estimate of Cost</td><td colspan="4">Goods</td></tr><tr><td>A</td><td>B</td><td>C</td><td>D</td></tr><tr><td>Raw material</td><td>60</td><td>45</td><td>50</td><td>50</td></tr><tr><td>Wages</td><td>40</td><td>40</td><td>40</td><td>35</td></tr><tr><td>Fixed cost</td><td>10</td><td>12</td><td>15</td><td>10</td></tr><tr><td>Office expenses</td><td>10</td><td>8</td><td>10</td><td>5</td></tr><tr><td>Total</td><td>120</td><td>105</td><td>115</td><td>100</td></tr></table>
OR

Explain the following:
a. Frequency polygon
b. Histogram</td><td>3</td></tr>
<tr><td>12</td><td>In the following frequency distribution, if the arithmetic mean is 42, find the missing frequency.
<table><tr><td>Salaries (Rs)</td><td>5–15</td><td>15–25</td><td>25–35</td><td>35–45</td><td>45–55</td><td>55–65</td><td>65–75</td></tr><tr><td>Number of Employees</td><td>5</td><td>6</td><td>7</td><td>X</td><td>4</td><td>3</td><td>9</td></tr></table></td><td>3</td></tr>
</table>

<table>
<tr><td>13</td><td>Estimate the coefficient of variation of the following data:

<table><tr><td>Weight (kg)</td><td>0–10</td><td>10–20</td><td>20–30</td><td>30–40</td><td>40–50</td></tr><tr><td>Number of persons</td><td>42</td><td>20</td><td>32</td><td>28</td><td>8</td></tr></table></td><td>4</td></tr>
<tr><td>14</td><td>Distinguish between price index and quantity index.

OR

Construct Cost of Living Index for 1991 based on 2001 from the following data</td><td>4</td></tr>
<tr><td>15</td><td>Calculate the median, given the following data:

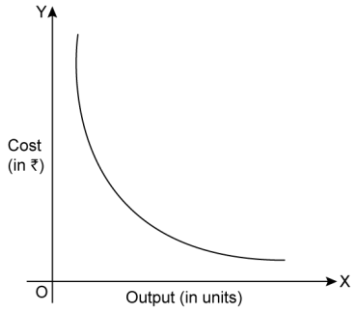
<table><tr><td>Mid-Value</td><td>15</td><td>25</td><td>35</td><td>45</td><td>55</td><td>65</td></tr><tr><td>Male (c.f.)</td><td>10</td><td>25</td><td>44</td><td>48</td><td>50</td><td>52</td></tr></table></td><td>4</td></tr>
<tr><td>16</td><td>Calculate the mode of the following distribution:
<table><tr><td>Marks</td><td>10 – 14</td><td>15–19</td><td>20–24</td><td>25–29</td><td>30–34</td><td>35–39</td><td>40–44</td><td>45 – 49</td><td>50–54</td></tr><tr><td>Number of students</td><td>28</td><td>84</td><td>182</td><td>248</td><td>261</td><td>131</td><td>42</td><td>9</td><td>2</td></tr></table></td><td>6</td></tr>
<tr><td>17</td><td>Determine the median value of the following series by using the less than give graphic method:

<table><tr><td>Marks</td><td>0–5</td><td>5–10</td><td>10–15</td><td>15–20</td><td>20–25</td><td>25–30</td><td>30–35</td><td>35–40</td></tr><tr><td>Number of students</td><td>3</td><td>5</td><td>10</td><td>10</td><td>26</td><td>22</td><td>18</td><td>4</td></tr></table>
OR

The following table shows monthly wages of 12 workers: 110, 135, 145, 160, 165, 170, 190, 200, 115, 150, 210, 195. Find quartile deviation.</td><td>6</td></tr>
<tr><td></td><td>Section B (Introductory Microeconomics)</td><td></td></tr>
<tr><td>18</td><td>At the break-even point for a firm:
a. TR = TC
b. TR > TC
c. TR < TC
d. TR = Zero</td><td>1</td></tr>
<tr><td>19</td><td>The demand curve of a firm would be a horizontal straight line under
a. Perfect competition
b. Monopoly</td><td>1</td></tr>
</table>

<table>
<tr><td></td><td>c. Oligopoly
d. Monopolistic competition</td><td></td></tr>
<tr><td>20</td><td>Define oligopoly.</td><td>1</td></tr>
<tr><td>21</td><td>Why does the Indian government believe in fixing the ‘support price’ for crops? Give reason.

OR
What is the relationship between support price and equilibrium price?</td><td>1</td></tr>
<tr><td>22</td><td>State whether the following statement is True or False.
In the long run, all factors are fixed.</td><td>1</td></tr>
<tr><td>23</td><td>If a seller gets Rs 1500 by selling three chairs, his Average Revenue is:
a. Rs 300
b. Rs 500
c. Rs 250
d. Rs 150</td><td>1</td></tr>
<tr><td>24</td><td>Give two examples on variable costs.</td><td>1</td></tr>
<tr><td>25</td><td>In the following schedule, producer’s equilibrium is at _____.

<table><tr><td>Output (units)</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>MR (Rs)</td><td>10</td><td>15</td><td>10</td><td>15</td><td>10</td></tr><tr><td>MC (Rs)</td><td>12</td><td>15</td><td>8</td><td>15</td><td>15</td></tr></table>
a. 2 units
b. 5 units
c. 4 units
d. 1 unit</td><td>1</td></tr>
<tr><td>26</td><td>Identify the following curve: Choose the correct alternative
 

a. AFC
b. TFC
c. AR
d. TVC</td><td>1</td></tr>
<tr><td>27</td><td>Define market equilibrium</td><td>1</td></tr>
</table>

<table>
<tr><td>28</td><td>Because of a fall in price of a commodity, the quantity demanded rises by 10%. The price elasticity of demand is given as (−0.5). What is the percentage fall in price of the commodity?</td><td>3</td></tr>
<tr><td>29</td><td>State the differences between fixed costs and variable costs.

OR
Complete the following table.

<table><tr><th>Output (Units)</th><th>Price</th><th>Marginal Revenue</th><th>Total Re-venue</th></tr><tr><td>1</td><td>-</td><td>16</td><td>-</td></tr><tr><td>2</td><td>12</td><td>-</td><td>24</td></tr><tr><td>3</td><td>-</td><td>6</td><td>-</td></tr><tr><td>4</td><td>7</td><td>-</td><td>28</td></tr></table></td><td>3</td></tr>
<tr><td>30</td><td>What is meant by market demand? What is market demand curve? How is it derived from the individual demand curve?</td><td>4</td></tr>
<tr><td>31</td><td>With a 10% rise in the price a commodity, the quantity supplied rises from 500 units to 550 units. Calculate the price elasticity of supply.</td><td>4</td></tr>
<tr><td>32</td><td>a. What is meant by production possibility curve?
b. What is the slope of PPC? What does it indicate? Why is PPC concave to the origin?

OR

What will be the impact of "Make in India" campaign on the production possibilities frontier of India? Explain with diagram.</td><td>4</td></tr>
<tr><td>33</td><td>With the help of a diagram, explain the impact of the following on the demand for a normal good.
a. Rise in income of the consumer
b. Change in taste and preferences away from the good</td><td>6</td></tr>
<tr><td>34</td><td>Explain the implications of the following features of perfect competition:
a. Large number of buyers and sellers
b. Homogeneous products

OR
Explain the following terms:
a. Break-even point
b. Shut-down point</td><td>6</td></tr>
</table>

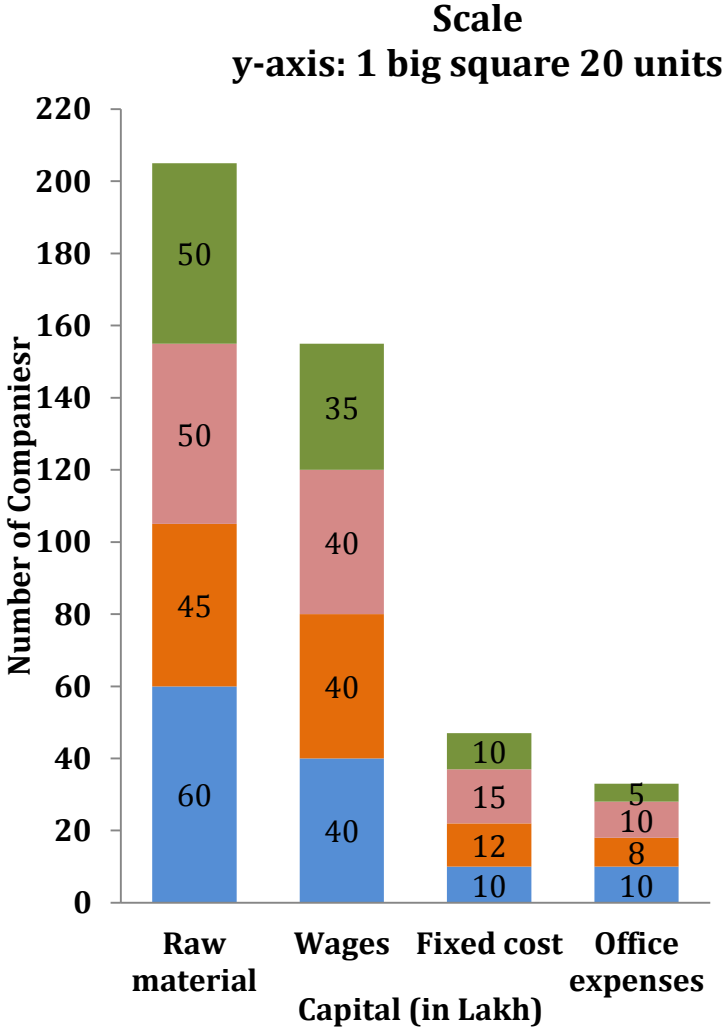
CBSE
Class XI Economics
Sample Paper 4
Solution

NOTE:
Solutions provided here are to guide students to prepare effectively and to help them score more marks. Please write the answers in your exam as per the given question and the marks allotted to that question.

Section A (Statistics for Economics)

<table>
<tr><th>Q. No.</th><th>Answer</th><th>Marks</th></tr>
<tr><td>1</td><td>If the government wants to formulate or modify labour laws, then the government will require statistical data on working conditions, number of working hours and minimum wages received by workers.</td><td>1</td></tr>
<tr><td>2</td><td>The correct option is (a). Bar diagram is a <u>one</u> dimensional diagram.</td><td>1</td></tr>
<tr><td>3</td><td>The correct option is (d). The method of collecting information from local source of primary data is not suitable in the case of information accuracy. This method of collecting primary data is suitable only if the field of investigation is large, information required on regular basis, collected from educated respondents and information accuracy is not essential.</td><td>1</td></tr>
<tr><td>4</td><td><table><tr><th>Univariate Frequency distribution</th><th>Bivariate frequency distribution</th></tr><tr><td>If the data is classified on the basis of single variable, then the distribution is known as univariate frequency distribution.</td><td>If the data is classified on the basis of two variables, then the distribution is known as bivariate frequency distribution.</td></tr></table></td><td>1</td></tr>
<tr><td>5</td><td>Pie diagram is a circle divided into various segments showing the percent values of a series.
OR

The part of the table being described in the statements is Stubs or row headings.
Stubs are titles that indicate the information contained in the row of the table.
It is the title of the rows of a table.
It is the left most column of the table. It is also called as stub column.</td><td>1</td></tr>
<tr><td>6</td><td>Limited Application - Generally index number are constructed for some specific purpose. The results of these applications may not be true if used for some other purpose.</td><td>1</td></tr>
</table>

7	Quartiles divide the series into four equal parts.	1
8	The correct option is (c). Questionnaires are filled by the enumerator.	1
9	Minimum value = 12, range = 50 Range Maximum value – Minimum value = 50 Maximum value – 12 = 50 Maximum value = 62	1
10	**Inferential statistics** refers to all such methods by which conclusions are drawn relating to the universe or population on the basis of a given sample. **For example:** a teacher estimates the average height of the class on the basis of only a sample of students.	1
11	 a. Presenting the frequencies in the form of rectangle and joining the mid-points of the tops of the consecutive rectangles is known as a frequency polygon. b. A histogram is a graph of a frequency distribution in which class intervals are given on the x-axis and the respective frequencies are	3

given on the y-axis. It is a two-dimensional diagram drawn for a continuous variable.

12

Salaries (X)	m	f	fm
$5-15$	10	5	50
$15-25$	20	6	120
$25-35$	30	7	210
$35-45$	40	x	40
$45-55$	50	4	200
$55-65$	60	3	180
$65-75$	70	9	630
		$\sum f = 34 + x$	$\sum fm = 1430 + 40x$

$$\bar{X} = \frac{\sum fm}{\sum f}$$

$$42 = \frac{1430 + 40x}{34 + x}$$

$$1428 + 42\,x = 1430 + 40\,x$$

$$2\,x = 2$$

$$\therefore \boxed{x = 1}$$

Thus, missing frequency is 1.

3

13

Weight	m	f	fm	$x=X-\bar{X}$	x^2	fx^2
0-10	10	42	420	-12	144	6048
10-20	15	20	300	-7	49	980
20-30	25	32	800	3	9	288
30-40	35	28	980	13	169	4732
40-50	45	8	360	23	529	4232
		$\sum f=130$	$\sum fm=2860$			$\sum fx^2=16280$

$$\bar{X}=\frac{\sum fm}{\sum f}=\frac{2860}{130}$$

$$\therefore \boxed{\bar{X}=22}$$

$$\text{StandardDeviation}\,(\sigma)=\sqrt{\frac{\sum fx^2}{\sum f}}=\sqrt{\frac{16280}{130}}$$

$$\therefore \boxed{\text{Standard deviation}\,(\sigma)=11.19}$$

$$\text{Coefficient of Variation} = \frac{\sigma}{\bar{X}}\times 100=\frac{11.19}{22}\times 100$$

$$\therefore \boxed{\text{Coefficient of Variation} = 50.86}$$

4

14		4

Price Index	Quantity Index
i. It measures general changes in prices between the current year and the base year.	i. It measures the average change in quantities and assists to compare changes in the physical quantity of commodities produced and consumed.
ii. Two methods to calculate Price Index Number are • Simple aggregative method • Simple average of price relative method	ii. Two methods to calculate Quantity Index Number are • Weighted average of price relative method • Weighted aggregative method
iii. It is also known as unweighted index number.	iii. It is also known as weighted index number.
iv. It considers the prices of the commodity of both base year and current year.	iv. It considers the weights of commodity assigned according to the quantity.

OR

Group	Group index Number (R)	Weights (W)	Weighted Relative (RW)
Clothing	110	20	2200
Housing	115	25	2875
Food	118	30	3540
Miscellaneous	120	40	4800
		Σ W = 115	Σ RW = 13,415

Cost of Living Index = $\frac{\sum RW}{\sum W} = \frac{13415}{115} = 116.65$

15	Lower limits and upper limits of class intervals are calculated using the following formula: Lower limit $(l_1) = m - \frac{1}{2}i$ Upper limit $(l_2) = m + \frac{1}{2}i$ where m is the mid-value and i is the difference between mid-values.	4

Mid value	Class Interval	Cumulative Frequency (c.f.)	Frequency (f)
15	$10-20$	10	10
25	$20-30$	25	$25-10=15$
35	$30-40$	44	$44-25=19$
45	$40-50$	48	$48-44=4$
55	$50-60$	50	$50-48=2$
65	$60-70$	52	$52-50=2$
			$N=\sum f=52$

Median =size of $\left(\frac{52}{2}\right)^{th}$ item

Median = size of 26^{th}item

26^{th} item lies in cumulative frequency 44 which corresponds to the class interval 30-40.
Thus, median class is 30-40.

Median $= l_1+\frac{\frac{N}{2}-\text{c.f.}}{f}\times i$

Median $=30+\frac{26-25}{19}\times 10$

$\therefore$ $\boxed{\text{Median}=30.52}$

16	As the given data comprises inclusive class intervals, let us convert it to exclusive class intervals as follows:	6

Class Interval	Exclusive Class Interval	Frequency (f)
$10-14$	$9.5-14.5$	28
$15-19$	$14.5-19.5$	84
$20-24$	$19.5-24.5$	182
$24-29$	$24.5-29.5$	248
$30-34$	$29.5-34.5$	261
$35-39$	$34.5-39.5$	131
$40-44$	$39.5-44.5$	42
$45-49$	$44.5-49.5$	9
$50-54$	$49.5-54.5$	2

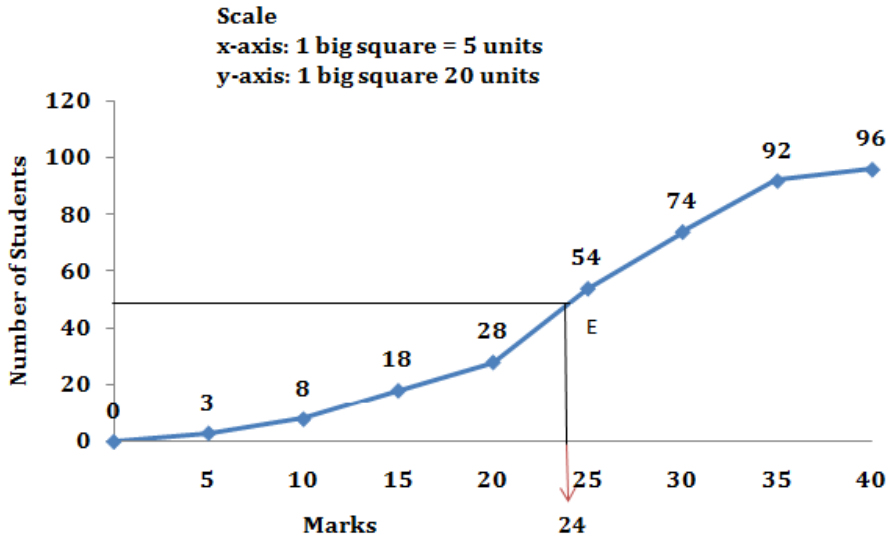
Modal class is (29.5-34.5) as it has the highest frequency of 261.

$$\text{Mode (Z)} = l_1+\frac{f_1-f_0}{2f_1-f_0-f_2}\times i$$

$$Z=29.5+\frac{261-248}{2(261)-248-131}\times 10$$

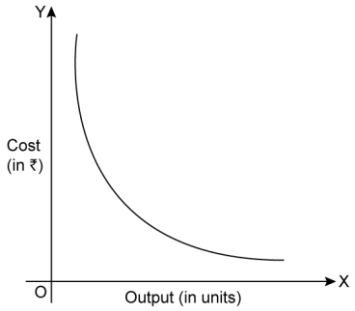
$$Z=29.5+\frac{130}{143}$$

$\therefore$ $\boxed{Z=30.40}$

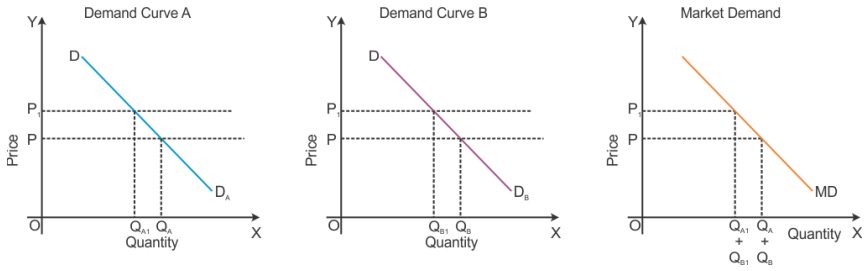
17	**Estimation of the median using the less than give approach** **<u>Step 1:</u>** Let us convert the series to a less than cumulative frequency distribution as follows: **<u>Step 2:</u>** Median =size of $\left(\frac{N}{2}\right)^{th}$ item will be marked on Y-axis. Median =size of $\left(\frac{96}{2}\right)^{th}$ item = 48 **<u>Step 3:</u>**  Draw a perpendicular line from 48 to the right to cut the cumulative frequency curve at Point E, and from the same point, draw a perpendicular on the x-axis to show the median value of the series. Thus, the point at which it touches the x-axis is the median value (24) of the series. **OR** Given data arranged in ascending order as follows: 110, 115, 135, 145, 150, 160, 165, 170, 190, 195, 200, 210	6

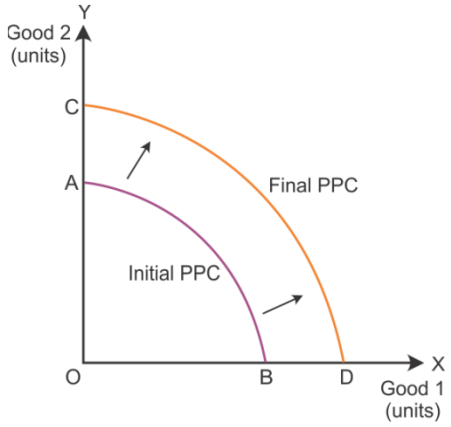
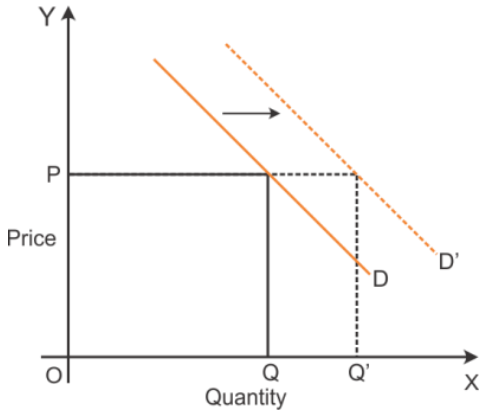
Marks	Cumulative Frequency (c.f.)
Less than 5	3
Less than 10	5 + 3 = 8
Less than 15	10 + 8 = 18
Less than 20	10 + 18 = 28
Less than 25	26 + 28 = 54
Less than 30	20 + 54 = 74
Less than 35	18 + 74 = 92
Less than 40	4 + 92 = 96

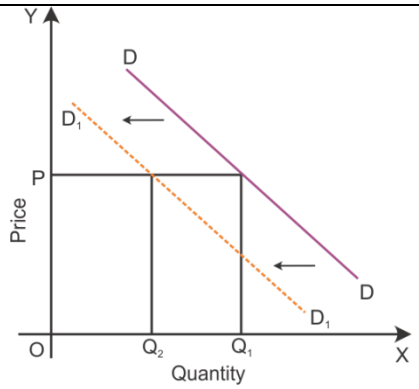
	$Q_1 = \left(\frac{N+1}{4}\right)^{th}$ item $= \left(\frac{12+1}{4}\right)^{th}$ item $= 3.25^{th}$ $Q_1 = 3^{rd} + \frac{1}{4}\left(\text{Size of } 4^{th} \text{ item} - \text{Size of } 3^{th} \text{ item}\right)$ $Q_1 = 135 + \frac{1}{4}(145-135) = 137.5$ $Q_3 = \left(\frac{3(N+1)}{4}\right)^{th}$ item $= \left(\frac{3\times 13}{4}\right)^{th}$ item $= 9.75^{th}$ $Q_3 = 9^{th} + \frac{3}{4}\left(\text{size of } 10^{th} - \text{size of } 9^{th}\right)$ $Q_3 = 190 + \frac{3}{4}(195-190) = 193.75$ $QD = \frac{Q_3 - Q_1}{2} = \frac{193.75-137.5}{2} = 28.125$	
	Section B (Introductory Microeconomics)	
18	The correct answer is a. Break-even point is said to take place when the firm can cover all the costs. At this point, TR is equal to TC.	1
19	The correct answer is (a). Under perfect competition, the demand curve of a firm is a horizontal straight line parallel to the x-axis. This indicates perfectly elastic demand under perfect competition	1
20	Oligopoly refers to a form of market in which there are only few giant firms against a large number of firms. There is a high degree of interdependence among the firms.	1
21	The Indian government believes in fixing the 'support price' for crops because the prices of some crops fall below the certain level which is not fair for the farmers to earn their livelihood. **OR** Support price is higher than equilibrium price.	1
22	**False.** In the long run, all the factors are variable. The firm can make changes in all inputs in order to make changes in the output.	1
23	The correct option is (b). Given: TR= 1500 Quantity = 3 AR = TR/Q =1500/3 **AR = 500**	1

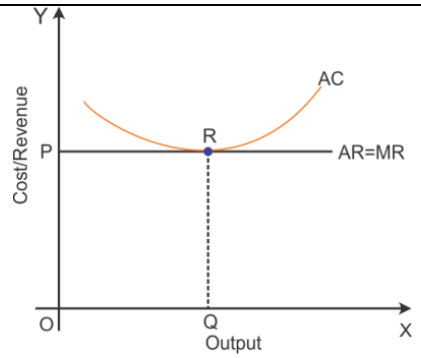
<table>
<tr><td>24</td><td>Expenditure on raw materials and wages of labourers.</td><td>1</td></tr>
<tr><td>25</td><td>The correct option is c.
Producer's equilibrium is at <u>4 units of output</u>.
It is because at this level of output both conditions of producers equilibrium are satisfied:
a. MC=MR and
b. MC becomes greater that MR after this level of output.</td><td>1</td></tr>
<tr><td>26</td><td>Average Fixed Cost Curve
 
</td><td>1</td></tr>
<tr><td>27</td><td>Market equilibrium refers to the situation when the quantity demanded of a commodity becomes equal to the quantity supplied.</td><td>1</td></tr>
<tr><td>28</td><td>$\text{Price elasticity of demand} = \frac{\text{Percentage change in demand}}{\text{Percentage change in price}}$
$(-0.5) = \frac{10}{\text{Percentage change in price}}$
$\text{Percentage change in price} = (-)20\%$
$\therefore$ Price falls by 20%</td><td>3</td></tr>
<tr><td>29</td><td>
<table>
<tr><th>Fixed Costs</th><th>Variable Costs</th></tr>
<tr><td>Fixed costs refer to the costs which remain constant irrespective of the level of output.</td><td>Variable costs refer to the costs which vary with the level of output.</td></tr>
<tr><td>They are never zero; even at zero level of output, fixed costs have to be incurred.</td><td>They are zero at zero level of output. They rise with the rise in output and fall with the fall in the level of output.</td></tr>
<tr><td>Example: Costs of plant and machinery</td><td>Example: Cost of raw material</td></tr>
</table>
OR
<table>
<tr><th>Output (Units)</th><th>Price</th><th>Marginal Revenue</th><th>Total Re-venue</th></tr>
<tr><td>1</td><td>16</td><td>16</td><td>16</td></tr>
<tr><td>2</td><td>12</td><td>8</td><td>24</td></tr>
</table>
</td><td>3</td></tr>
</table>

3	**10**	6	**30**
4	7	**2**	28

30	Market demand for a commodity refers to the total demand for the commodity by all the individual consumers in the market. The market demand curve shows the different total quantities of the commodity which are demanded by all consumers in the market at different prices. The market demand curve is derived from the individual demand curve by horizontally summing the various individual demand curves. This can be understood with the help of the following diagram:  Suppose for a commodity in the market, there are two consumers A and B. D_A is the demand curve for consumer A and D_B is the demand curve for consumer B. At P_0 price, the quantity demanded of the commodity by the two consumers is Q_A and Q_B. Accordingly, the market demand and the summation of the individual demand curve is $Q_A + Q_B$. As the price rises to P_1, the individual demand falls to Q_{A1} and Q_{B1}. The market demand is $Q_{A1} + Q_{B1}$. By joining the two points as obtained for the market demand, we get the market demand curve M_D.	4
31	$\text{Price elasticity of supply} = \frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in supply}}$ Now, $\text{Percentage change in quantity supplied} = \frac{550-500}{500} \times 100 = 10$ So, $\text{Price elasticity of supply} = \frac{10}{10} = 1$	4
32	**a.** The production possibility curve refers to the curve which shows the alternative combinations of production possibilities of two goods which can be produced with the given resources and the given technology. **b.** The slope of the production possibility curve is the marginal opportunity cost or the marginal rate of transformation. It indicates the units of one good which must be sacrificed for each additional unit of the other good. The slope of PPC is given by $\frac{\Delta Y}{\Delta X}$.	4

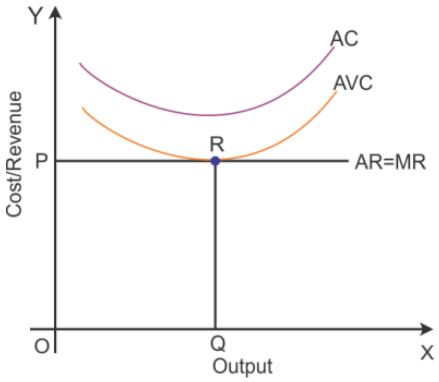
	The PPC is concave to the origin because of a rising marginal rate of transformation, or in other words, the rising slope of PPC. As the number of units produced of one good rises, for each additional unit of the good, greater units of the other good must be sacrificed. In other words, the opportunity cost of producing the good rises. This gives rise to the concave shape of PPC. **OR** The Make in India campaign focuses on inflow of foreign capital in India. This will increase the level of resources and lead to an increase in the country's production potential. Therefore, the production possibility curve will shift to the right i.e. the production possibility curve shifts from the initial curve AB to the final curve CD.  	
33	***Rise in income***: With a rise in income of the consumer, the demand for normal good increases. This can be understood with the help of the following diagram:  According to the diagram, DD is the initial demand curve. At OP price, OQ_1 quantity is demanded. If the income of the consumer rises, the demand curve shifts parallelly rightwards to D'. Here, at the same price, the quantity demanded of the commodity rises to OQ_2. **b.** ***Change in taste and preferences of consumers away from the commodity***: With change in taste and preferences of consumers away from the commodity, the quantity demanded of the commodity falls. This can be understood with the help of the following diagram:	6

	 According to the diagram, DD is the initial demand curve. At OP price, OQ_1 quantity is demanded. If the taste and preferences of the consumer moves away, the demand curve shifts parallelly leftwards to D_1D_1. Here, at the same price, the quantity demanded of the commodity falls to OQ_2.	
34	***Large number of buyers and sellers***: Under a perfect competition market, there are a large number of buyers and sellers such that each individual buyer or each individual seller constitutes only a small proportion of the total market. Consequently, no individual firm or individual buyer can influence the price in the market by altering the supply or demand of the commodity. This implies that in a perfect competition market, the price remains constant as determined by the industry. An individual firm is only a price taker. Implications of the feature: i. Firms remain a price taker. ii. Firms face a perfectly elastic demand curve. **b.** ***Homogeneous products***: Under perfect competition, the products sold by firms are completely homogeneous. In other words, they are exactly identical to each other in terms of size, shape and colour. Accordingly, the products of various firms are perfect substitutes of each other. Also, there is no need for any kind of selling costs or advertising costs. The presence of homogeneous products has the following implications: i. No single firm can control the market prices. There prevails uniform market price. ii. There is absolutely zero product differentiation. iii. Because of homogeneity of products, the market price which prevails is the minimum possible. **OR** **a.** ***Break-even point***: A firm is said to be at the break-even point when it is just able to cover all its costs, i.e. when price is equal to average cost.	6



According to the diagram, the break-even point is at Point R where price (OP) is equal to average cost (OQ).

b. ***Shut-down point***: A firm is said to be at the shut-down point when it is just able to cover only the variable costs. At this point, price is equal to average variable cost. As the firm is not able to cover the fixed cost, it is incurring loss equal to fixed costs. However, the firm will continue production till it can cover the fixed costs.



According to the diagram, the break-even point is at Point R where price (OP) is equal to average variable cost (OQ).