

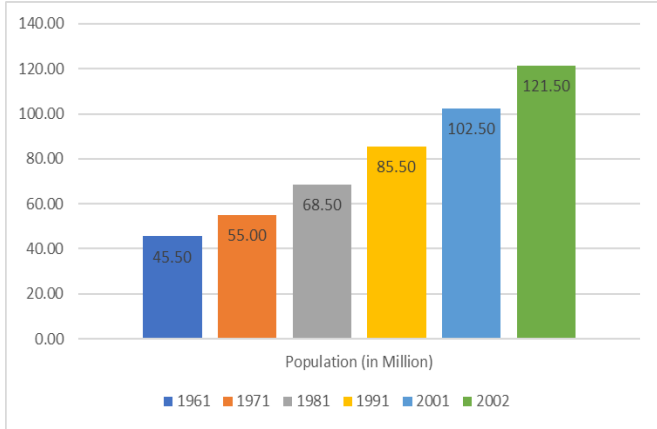
INDIAN SCHOOL MUSCAT
FINAL EXAMINATION 2023
ECONOMICS 030

CLASS:XI

Max. Marks: 80

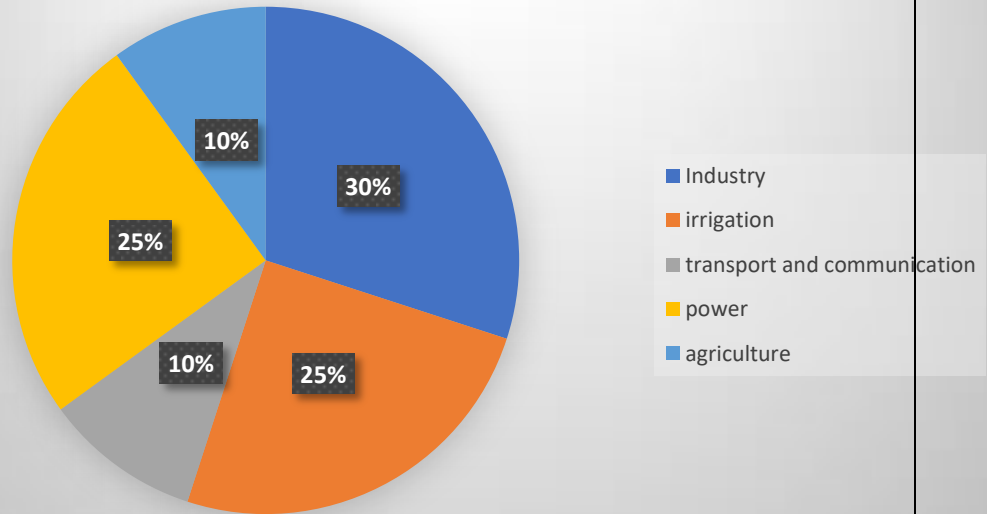
MARKING SCHEME

MARKING SCHEME																											
SET	QN.NO	VALUE POINTS	MARKS SPLIT UP																								
		SECTION A STATISTICS FOR ECONOMICS																									
B	1	(A) quantitative	1																								
B	2	(A) census OR (D) All of these	1																								
B	3	False	1																								
B	4	(B) Time	1																								
B	5	(A) Difference between the largest and the smallest observations	1																								
B	6	(C) continuous series	1																								
B	7	(C) c- iii	1																								
B	8	(B) Base year OR (D) all of these	1																								
B	9	(C) Assertion is true but Reason is False	1																								
B	10	Zero	1																								
B	11	<table border="1"><thead><tr><th>Class Interval</th><th>Tally Bar</th><th>Frequency (f)</th></tr></thead><tbody><tr><td>1-7</td><td> </td><td>15</td></tr><tr><td>8-14</td><td> </td><td>12</td></tr><tr><td>15-21</td><td> </td><td>15</td></tr><tr><td>22-28</td><td> </td><td>10</td></tr><tr><td>29-35</td><td> </td><td>6</td></tr><tr><td>36-42</td><td> </td><td>2</td></tr><tr><td></td><td></td><td>N=60</td></tr></tbody></table>	Class Interval	Tally Bar	Frequency (f)	1-7		15	8-14		12	15-21		15	22-28		10	29-35		6	36-42		2			N=60	3
Class Interval	Tally Bar	Frequency (f)																									
1-7		15																									
8-14		12																									
15-21		15																									
22-28		10																									
29-35		6																									
36-42		2																									
		N=60																									

		<div>OR</div> <div>Bar Diagram</div> <div></div>																																																	
B	12	<div>Coefficient of rank correlation</div> <table><tr><th>X</th><th>R1</th><th>Y</th><th>R2</th><th>D=(R1-R2)</th><th>D²</th></tr><tr><td>4</td><td>3</td><td>6</td><td>1</td><td>2</td><td>4</td></tr><tr><td>2</td><td>5</td><td>4</td><td>3</td><td>2</td><td>4</td></tr><tr><td>6</td><td>1</td><td>5</td><td>2</td><td>-1</td><td>1</td></tr><tr><td>3</td><td>4</td><td>2</td><td>5</td><td>-1</td><td>1</td></tr><tr><td>1</td><td>6</td><td>3</td><td>4</td><td>2</td><td>4</td></tr><tr><td>5</td><td>2</td><td>1</td><td>6</td><td>-4</td><td>16</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>ΣD² = 30</td></tr></table> <div>$r_s = \left[1 - \frac{6 \sum D^2}{N^3 - N} \right]$$= 1 - 6(30) / 6^3 - 6$$= 1 - 1.14$$= \underline{\underline{-0.14 \text{ (Low degree negative correlation) }}}$</div>	X	R1	Y	R2	D=(R1-R2)	D²	4	3	6	1	2	4	2	5	4	3	2	4	6	1	5	2	-1	1	3	4	2	5	-1	1	1	6	3	4	2	4	5	2	1	6	-4	16						ΣD² = 30	<div>Formula</div> <div>1 mark, 2</div> <div>marks</div> <div>for</div> <div>solution</div>
X	R1	Y	R2	D=(R1-R2)	D²																																														
4	3	6	1	2	4																																														
2	5	4	3	2	4																																														
6	1	5	2	-1	1																																														
3	4	2	5	-1	1																																														
1	6	3	4	2	4																																														
5	2	1	6	-4	16																																														
					ΣD² = 30																																														
B	13	<div>13.1 . One who investigates the interview for collection of data.</div> <div>13.2 (A) Primary data</div> <div>13.3 (B) Secondary sources</div> <div>13.4 (D) All of these</div>	<div>1</div> <div>1</div> <div>1</div> <div>1</div>																																																
B	14	<div>Mode using graphical method</div> <table><tr><th>X</th><th>f</th></tr><tr><td>0-10</td><td>2</td></tr><tr><td>10-20</td><td>6</td></tr><tr><td>20-30</td><td>20(f1)</td></tr><tr><td>30-40</td><td>6</td></tr><tr><td>40-50</td><td>3</td></tr><tr><td>Σf</td><td>37</td></tr></table>	X	f	0-10	2	10-20	6	20-30	20(f1)	30-40	6	40-50	3	Σf	37	<div>1 mark</div> <div>for</div> <div>formula,</div> <div>1 mark</div> <div>for graph</div> <div>, 2 marks</div> <div>for steps</div>																																		
X	f																																																		
0-10	2																																																		
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40-50	3																																																		
Σf	37																																																		

		<div>L1 = 20 , f1 = 20, f₀- 6 , f2 =6</div> <div>$Mode = l + \left(\frac{f_1 - f_0}{2f_1 - f_0 - f_2} \right) \times h$</div> <div><div>= 20 + (20-6 / 2(20- 6 - 6)</div><div>= 20+ 0.42 = 20.42</div><div><u>Mode = 20.42</u></div></div> <div>OR</div> <div><table><tr><th>Farm size</th><th>F</th><th>D= x-A</th><th>fd</th></tr><tr><td>64</td><td>8</td><td>2</td><td>16</td></tr><tr><td>62</td><td>18</td><td>1</td><td>18</td></tr><tr><td>62</td><td>12</td><td>0</td><td>12</td></tr><tr><td>61</td><td>9</td><td>-1</td><td>-9</td></tr><tr><td>60</td><td>7</td><td>2</td><td>14</td></tr><tr><td>59</td><td>6</td><td>3</td><td>18</td></tr><tr><td></td><td>F= 60</td><td></td><td>Fd = 69</td></tr></table></div> <div>$\bar{x} = a + \frac{\sum f_i d_i}{\sum f_i}$</div> <div><div>= 62+ 69 / 60 = 62+ 1.15</div><div><u>Mean = 63.15</u></div></div>	Farm size	F	D= x-A	fd	64	8	2	16	62	18	1	18	62	12	0	12	61	9	-1	-9	60	7	2	14	59	6	3	18		F= 60		Fd = 69	
Farm size	F	D= x-A	fd																																
64	8	2	16																																
62	18	1	18																																
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60	7	2	14																																
59	6	3	18																																
	F= 60		Fd = 69																																
B	15	<div><table><tr><th>Sector</th><th>Output in %</th><th>In degrees</th></tr><tr><td>Industry</td><td>30</td><td>108°</td></tr><tr><td>Irrigation</td><td>25</td><td>90°</td></tr><tr><td>Transport and Communication</td><td>10</td><td>36°</td></tr><tr><td>Power</td><td>25</td><td>90°</td></tr><tr><td>Agriculture</td><td>10</td><td>36°</td></tr></table></div> <div>Piechart:</div>	Sector	Output in %	In degrees	Industry	30	108°	Irrigation	25	90°	Transport and Communication	10	36°	Power	25	90°	Agriculture	10	36°	<div>2 marks for conversion, 2 marks for pie chart</div>														
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Irrigation	25	90°																																	
Transport and Communication	10	36°																																	
Power	25	90°																																	
Agriculture	10	36°																																	

output



B

16

Marks	f	m	fm	D(x-a)	fd
0-10	5	5	25	-20	-100
10-20	10	15	150	-10	-100
20-30	25	25	625	0	0
30-40	30	35	1050	10	300
40-50	20	45	900	20	400
50-60	10	55	550	30	300
	f=100		3300		800

Direct Method:

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

$$= \frac{3300}{100}$$

Mean = 33

Assumed Mean:

$$X = A + \frac{\sum fd}{\sum f}$$

$$= 25 + \frac{800}{100}$$

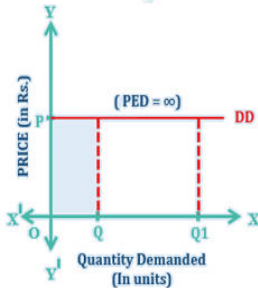
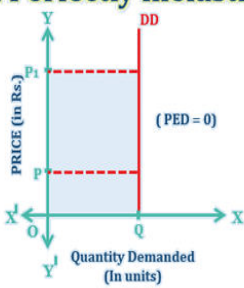
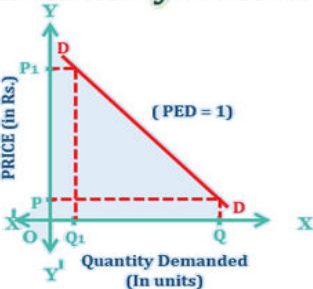
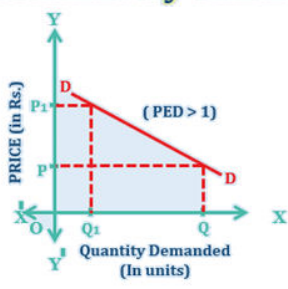
Mean = 33

OR

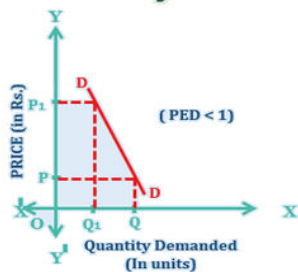
X	R1	Y	R2	D=R1-R2	D ²
55	3	12	5.5	-2.5	6.25
45	5	12	5.5	-0.5	0.25
50	4	40	1	3	9
10	10	6	8.5	1.5	2.25
25	8	20	4	4	16
25	8	4	10	-2	4
75	1	30	2	-1	1
40	6	9	7	-1	1
25	8	6	8.5	-0.5	0.25
67	2	25	3	-1	1
					$\sum D^2 = 41$

1 Mark
for
formula,
calculati
on each
2 marks

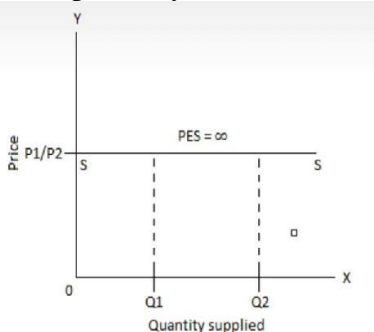
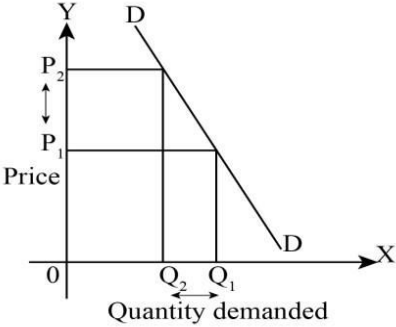
		$r_k = 1 - \frac{6 \left[\sum D^2 + \frac{(m^3_1 - m_1)}{12} + \frac{(m^3_2 - m_2)}{12} + \dots \right]}{n(n^2 - n)}$ = 1- 6 (41+1/12(8-2)+1/12(64-4) / 1000-10 = 1 – 251.5 / 990 = 0.25 = <u>1- 0.25 = 0.75 (High positive correlation)</u>																																																							
B	17	<table><tr><th>Commodity</th><th>2019 Price</th><th>2019 Qty.</th><th>2020 Price</th><th>2020 Qty.</th><th>p_1q_1</th><th>p_0q_1</th><th>p_1q_0</th><th>p_0q_0</th></tr><tr><td>A</td><td>2</td><td>20</td><td>5</td><td>15</td><td>75</td><td>30</td><td>100</td><td>40</td></tr><tr><td>B</td><td>4</td><td>4</td><td>8</td><td>5</td><td>40</td><td>20</td><td>32</td><td>16</td></tr><tr><td>C</td><td>1</td><td>10</td><td>2</td><td>12</td><td>24</td><td>12</td><td>20</td><td>10</td></tr><tr><td>D</td><td>5</td><td>5</td><td>10</td><td>6</td><td>60</td><td>30</td><td>50</td><td>25</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>199</td><td>92</td><td>202</td><td>91</td></tr></table> <div><div>Laspeyre’s Method: $P_{01} = \frac{\sum p_1q_0}{\sum p_0q_0} \times 100$ = 202 / 91 x100 221.97 121 % increase</div><div>Paasche’s method: $P_{01} = \frac{\sum p_1q_1}{\sum p_0q_1} \times 100$ = 199 /92 x100 216.30 116% increase</div></div>	Commodity	2019 Price	2019 Qty.	2020 Price	2020 Qty.	p_1q_1	p_0q_1	p_1q_0	p_0q_0	A	2	20	5	15	75	30	100	40	B	4	4	8	5	40	20	32	16	C	1	10	2	12	24	12	20	10	D	5	5	10	6	60	30	50	25						199	92	202	91	2 marks for formula 2 marks for formula calculation and 2 marks for solution
Commodity	2019 Price	2019 Qty.	2020 Price	2020 Qty.	p_1q_1	p_0q_1	p_1q_0	p_0q_0																																																	
A	2	20	5	15	75	30	100	40																																																	
B	4	4	8	5	40	20	32	16																																																	
C	1	10	2	12	24	12	20	10																																																	
D	5	5	10	6	60	30	50	25																																																	
					199	92	202	91																																																	
		SECTION B MICROECONOMICS																																																							
B	18	A) Increasing MRT								1																																															
B	19	A) Zero								1																																															
B	20	C) Leftward Shift ward								1																																															
B	21	C) < 1								1																																															
B	22	D) Statement 2 is true and Statement 1 is false								1																																															
B	23	A) TVC OR A) TR increases								1																																															
B	24	(B) increase production								1																																															
B	25	D) Es > 1 OR A) Decrease in supply								1																																															

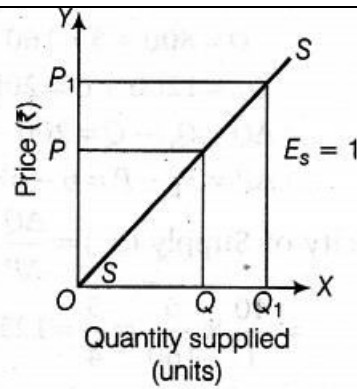
B	26	(A) Expansion in supply	1												
B	27	(C)Assertion is true but Reason is false	1												
B	28	<table border="1"><thead><tr><th>Positive Economics</th><th>Normative Economics</th></tr></thead><tbody><tr><td>a. It deals with what is or how the economic problems are actually solved</td><td>a. It deals with what ought to be or how the economic problems should be solved.</td></tr><tr><td>b. It can be verified with actual data</td><td>b. It cannot be verified with actual data</td></tr><tr><td>c. It aims to make real description of an economic activity</td><td>c. It aims to determine the ideals</td></tr><tr><td>d. It is based upon facts, and thus not suggestive</td><td>d. . It is based upon individual opinion and therefore, it is suggestive in nature</td></tr><tr><td>e.g. Prices in Indian economy are constantly rising</td><td>E.g., India should take steps to control rising prices.</td></tr></tbody></table> <p>(any three points)</p>	Positive Economics	Normative Economics	a. It deals with what is or how the economic problems are actually solved	a. It deals with what ought to be or how the economic problems should be solved.	b. It can be verified with actual data	b. It cannot be verified with actual data	c. It aims to make real description of an economic activity	c. It aims to determine the ideals	d. It is based upon facts, and thus not suggestive	d. . It is based upon individual opinion and therefore, it is suggestive in nature	e.g. Prices in Indian economy are constantly rising	E.g., India should take steps to control rising prices.	1 mark for each point.
Positive Economics	Normative Economics														
a. It deals with what is or how the economic problems are actually solved	a. It deals with what ought to be or how the economic problems should be solved.														
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e.g. Prices in Indian economy are constantly rising	E.g., India should take steps to control rising prices.														
B	29	<p>(A)Average Cost: It refers to the per unit fixed cost of production. It is calculated by dividing TFC by total output.</p> <p>(B)Marginal Cost: It refers to addition to total cost when one more unit of output is produced. $MC_n=TC_n-TC_{n-1}$</p> <p>(C)Total cost: it is the total expenditure incurred by a firm on the factors of production required for the production of a commodity. $TC= TFC+TVC$</p>	One mark each 1*1*1												
B	30	<p>Degrees of Elasticity of Demand (any four)</p> <div><div><p>1. Perfectly elastic</p></div><div><p>2. Perfectly inelastic</p></div><div><p>3. Unitary elastic</p></div><div><p>4. Relatively elastic</p></div></div>	Diagram and explanation on any four each one mark. 4												

5. Relatively inelastic



		<div>5. Relatively inelastic</div> <div></div>									
B	31	31.1 Inverse 31.2 Substitute 31.3 Fall 31.4 Nature of a commodity	1 1 1 1								
B	32	<div>A)</div> <table><tr><td>Original Quantity(Q) = 125 units</td><td>Original Price(P) = ₹8</td></tr><tr><td>Fall in Qunatity(▲Q) = 25 units</td><td>New Price (P1) = ₹6</td></tr><tr><td>New Quantity (Q1) = 100 units</td><td>Change in Price(▲P) = ₹2</td></tr><tr><td colspan="2">Elasticity of Supply (Es) = ?</td></tr></table> <div>Percentage change in Price = Change in Price / New Price * 100</div> <div>= 2/ 8 *100 = 25%</div> <div>Percentage change in Supply = Change in Quantity / New Quantity X100</div> <div>= 25/125*100 = 20%</div> <div>$E_s = \frac{\text{Percentage change in quantity supplied}}{\text{Percentage change in price}}$</div> <div>20 % / 25% = 0.8</div> <div>Es = 0.8 (Supply is less elastic as Es <1)</div> <div>OR</div> <div>Initial demand (Q) = 100 units</div> <div>Rise in price = Rs 5</div> <div>Fall in demand= 5units</div> <div>New demand = 95units (decrease in demand)</div> <div>Ed= -1.2</div> <div>Original Price= ?</div>	Original Quantity(Q) = 125 units	Original Price(P) = ₹8	Fall in Qunatity(▲Q) = 25 units	New Price (P1) = ₹6	New Quantity (Q1) = 100 units	Change in Price(▲P) = ₹2	Elasticity of Supply (Es) = ?		Formula 1 mark Substitut e with each 3 marks
Original Quantity(Q) = 125 units	Original Price(P) = ₹8										
Fall in Qunatity(▲Q) = 25 units	New Price (P1) = ₹6										
New Quantity (Q1) = 100 units	Change in Price(▲P) = ₹2										
Elasticity of Supply (Es) = ?											

		$Ed = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$ $1.2 = \frac{5}{5} \times \frac{P}{100}$ $1.2 \times \frac{5}{5} \times 100 = P$ $\frac{600}{5} = 120$ <p>Ed = P = 120 Price before change in demand (original price) = Rs 120</p>	
B	33	<p>A. Perfectly Elastic Supply: When there is an infinite supply at a particular price and the supply becomes zero with slight fall in price, then the supply of such a commodity is said to be perfectly elastic.</p>  <p>B. Less Elasticity Supply: When percentage change in the quantity demanded is less than percentage change in price, the demand for such a commodity is said to be less elastic .</p>  <p>C. Unitary Elastic Supply: Unitary Elastic Supply: When percentage change in quantity supplied is equal to percentage change in price, the supply for such a commodity is said to be unitary elastic.</p>	<p>2 marks each</p> <p>2* 3 = 6</p>



B

34

Complete the following :

A)

Output (units)	TC(₹) (AC*Output)	AC(₹) (TC / Output)	MC(₹) (TC _n -TC _{n-1})
0	50	--	--
1	70	70	20
2	100	50	30
3	151	33	51
4	207	51.75	56
5	267	53.4	60
6	337	56.1	70

OR

Variable Factor	TP (in units) (TP = ΣMP)	AP (in units) AP = TP /VF	MP (in units) MP _n = TP _n - TP _{n-1}
0	0	--	--
1	4	4	4
2	10	5	6
3	18	6	8
4	24	6	6
5	25	5	1

1 mark
for
formula
and 1
mark for
solving
* 3
compone
nts
3*2 = 6