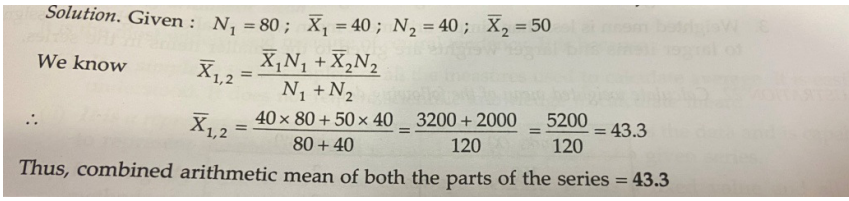


ECONOMICS 2024-25

MARKING SCHEME/ HINTS TO SOLUTIONS

NOTE: ANY OTHER RELEVANT ANSWER NOT GIVEN HEREIN BUT GIVEN BY CANDIDATE BE SUITABLY AWARDED.

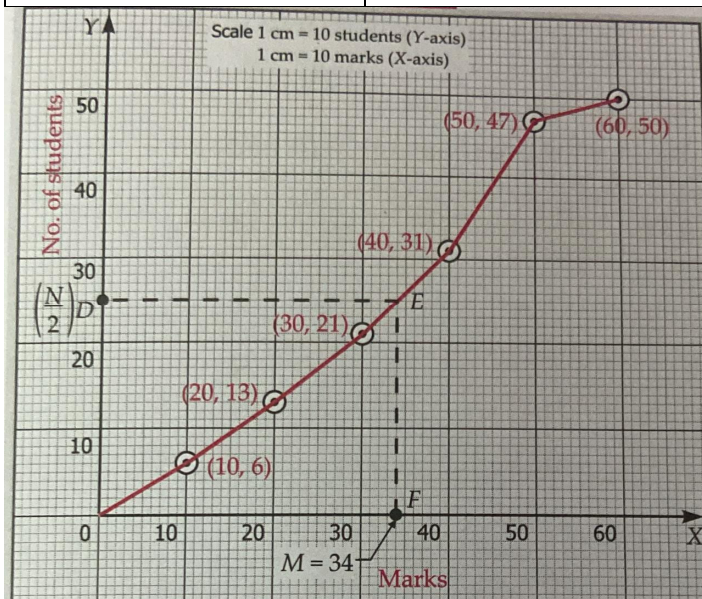
| Q.NO | Value Points | Marks | Total Marks |
|------|--|-------------|-------------|
| 1. | (B) When the classification of data does not present the details which are available in raw data. | 1 | 1 |
| 2. | (A) The upper class limit is excluded in the class interval. | 1 | 1 |
| 3. | (B) Statistics are true only on an average. | 1 | 1 |
| 4. | (D) Median | 1 | 1 |
| 5. | (B) Statement 1 is false and statement 2 is true. | 1 | 1 |
| 6. | (C) i&ii | 1 | 1 |
| 7. | (C) iii,c | 1 | 1 |
| 8. | (C) Assertion (A) is true but Reason (R) is false. | 1 | 1 |
| 9. | (C) iii,ii,i,iv | 1 | 1 |
| 10. | (D) 100 | 1 | 1 |
| 11. | Structured questions are closed ended questions i.e an alternative is to be chosen from the given options. Advantage –The responses are easy to compare & it is possible to draw conclusions. Disadvantage-These do not have a scope for individual responses. | 1 1 1 | 3 |
| 12 |  <p style="text-align: center;">OR</p> | 1 2 | 3 |

$$\begin{aligned} \text{Corrected Mean} &= \frac{\sum X - IC + C}{N} \\ &= \frac{(58 \times 50) + 40 + 42 - 25}{52 - 1} \\ &= \frac{2900 + 57}{51} \\ &= 57.98 \end{aligned}$$

1
1
1

13.

| MARKS | NO. OF STUDENTS |
|--------------|-----------------|
| LESS THAN 10 | 6 |
| LESS THAN 20 | 13 |
| LESS THAN 30 | 21 |
| LESS THAN 40 | 31 |
| LESS THAN 50 | 47 |
| LESS THAN 60 | 50 |



2

2

4

14.

| Marks(C.I) | frequency |
|------------|-----------|
| 0-20 | 2 |
| 20-40 | 4 |
| 40-60 | 6 |
| 60-80 | 2 |
| 80-100 | 1 |

1

| | | | | | | | | | | |
|--|----------------------|-----------|----|-----|----|----|-----|-----|---|---|
| 15. | Grouping Table | | | | | | | 1.5 | 4 | |
| | Marks (C.I) | frequency | II | III | IV | V | VI | | | |
| | 0-20 | 2 | | | | | | | | |
| | 20-40 | 4 | 6 | | | | | | | |
| | 40-60 | 6 | | 10 | 12 | | | | | |
| | 60-80 | 2 | 8 | | | 12 | | | | |
| | 80-100 | 1 | | 3 | | | 12 | | | |
| | Analysis Table | | | | | | | | | |
| | Marks(C.I) | I | II | III | IV | V | VI | | | |
| | 0-20 | | | | 1 | | | | | |
| | 20-40 | | | 1 | 1 | 1 | | | | |
| | 40-60 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 60-80 | | 1 | | | 1 | 1 | | | |
| | 80-100 | | | | | | 1 | | | |
| | Modal class- (40-60) | | | | | | | | | |
| $\text{Mode} = l + \left\{ \frac{(f_1 - f_0)}{2f_1 - f_0 - f_2} \right\} \times i$ $= 40 + \left\{ \frac{(6 - 4)}{12 - 4 - 2} \right\} \times 20$ $= 40 + (2 \times 20) / 6$ $= 40 + 6.66$ $= 46.66$ | | | | | | | 1.5 | | | |
| <p>The various index numbers are used for policy making:</p> <ol style="list-style-type: none"> Consumer index number is helpful in wage negotiations , formulation of policies related to income, price, rent, taxation and others. Whole sale price index is used to eliminate the effect of changes in prices on aggregates such as national income, capital formulation etc. WPI is also used to measure inflation. CPI is also used for measuring purchasing power of money and real wage. <p>(Any other)</p> | | | | | | | 1 | 1 | 1 | 1 |
| | | | | | | | 4 | | | |

OR

(i)

Solution. Rate of inflation = $\frac{X_t - X_{t-1}}{X_{t-1}} \times 100$

Here $t = 880$ and $t - 1 = 800$

Weekly rate of inflation

$$= \frac{880 - 800}{800} \times 100 = \frac{80}{800} \times 100 = 10\%.$$

1

2

1

ii) Price index number is a statistical device that measures and permits the comparison of the prices of given commodities. Simple aggregate method is unweighted method to calculate the price index no. . it is also known as actual price method. In this method, aggregate prices of commodities in the current year are divided by aggregate prices of these commodities in the base year.

1

1

2

16 (i)

Table no- 1

Classification of students & teachers going for educational exchange trip basis gender

(fig. in nos.)

| Person/gender | 2023 | | | 2024 | | |
|---------------|-----------|-----------|--------------|-----------|-----------|--------------|
| | Male | female | Total | Male | Female | Total |
| Students | 20 | 40 | 60 | 60 | 20 | 80 |
| Teachers | 2 | 3 | 5 | 3 | 3 | 6 |
| Total | 22 | 43 | 65 | 63 | 23 | 86 |

1(for mat)
1(ot her parts)

2(cel ls)

4

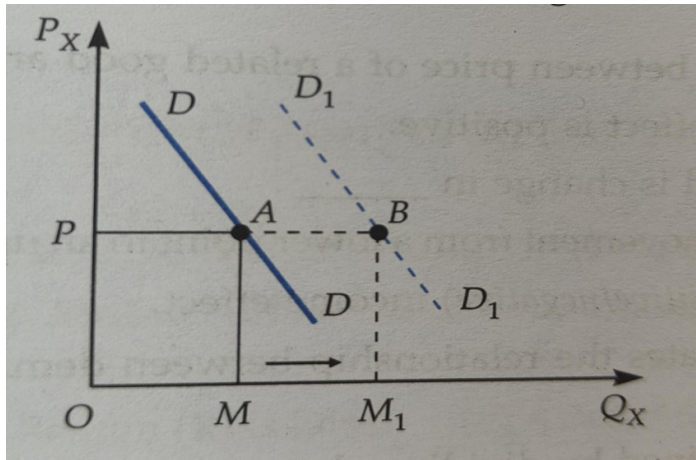
Footnote: Students & teachers of St. Stephen's College

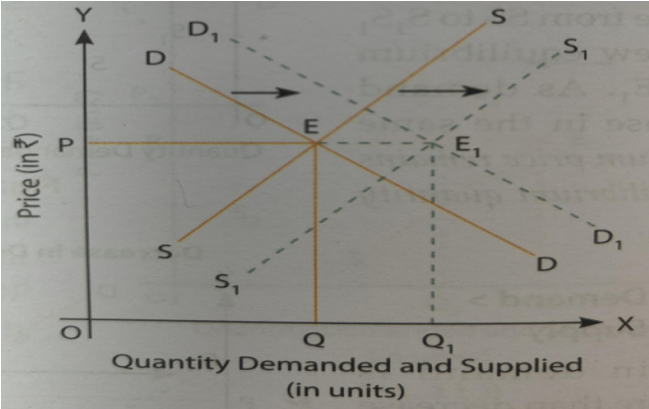
Source: College records

| | | | | | | | | |
|---|-------|-----------------|----|-----------------------|------|--------------------|---|--|
| (ii) | Items | Expenditure (%) | | Expenditure (degrees) | | 1 | | |
| | A | 50 | | 180 | | | | |
| | B | 15 | | 54 | | | | |
| | C | 10 | | 36 | | | | |
| | D | 25 | | 90 | | | | |
| <p>EXPENDITURE ON ITEMS</p> <p>A pie chart titled 'EXPENDITURE ON ITEMS' showing the distribution of expenditure across four items: A (blue, 50%), B (orange, 15%), C (grey, 10%), and D (yellow, 25%). A legend below the chart identifies the colors for each item.</p> | | | | | | | | |
| | | | | | | 1(key y ,diag ram) | 2 | |
| 17. | X | R1 | Y | R2 | D | D ² | 2 | |
| | 90 | 1 | 18 | 8 | -7 | 49 | | |
| | 88 | 2 | 25 | 7 | -5 | 25 | | |
| | 78 | 3.5 | 30 | 5 | -1.5 | 2.25 | | |
| | 78 | 3.5 | 30 | 5 | -1.5 | 2.25 | | |
| | 74 | 5 | 30 | 5 | 0 | 0 | | |
| | 70 | 6 | 42 | 2 | 4 | 16 | | |
| | 65 | 7 | 38 | 3 | 4 | 16 | | |
| | 62 | 8 | 47 | 1 | 7 | 49 | | |
| | | | | | | 159.5 | | |

| | | | |
|--|---|--|---|
| $r_k = 1 - \frac{6\{\sum D^2 + 1/12(m^3 - m) + 1/12(m^3 - m)\}}{n^3 - n}$ $= 1 - \frac{6[159.5 + 1/12(2 \times 2 \times 2 - 2) + 1/12(3^3 - 3)]}{8^3 - 8}$ $= 1 - \frac{6[162]}{504} = 1 - 1.93 = -0.93$ <p>There is fairly high degree of negative correlation between the X & Y variables.</p> <p style="text-align: center;">OR</p> <p>PROPERTIES OF CORRELATION COEFFICIENT</p> <ol style="list-style-type: none"> 1. r has no unit. It is a pure no. 2. A negative value of r indicates an inverse relation among two variables. E.g price and demand. 3. If r is positive the two variables move in the same direction. E.g price and supply. 4. The value of r lies between -1 and +1. 5. The magnitude of r is unaffected by the change of origin and change of scale. 6. If r=0 the two variables are not linearly correlated. (or any other) | 1 | | |
| | 1 | | 6 |
| | 1 | | |
| | 1 | | |
| | 1 | | |
| | 1 | | |
| | 1 | | 6 |
| | 1 | | |

| | | | |
|----|---|--|---|
| 18 | D) Increase in price of the good | | 1 |
| 19 | D) less than one | | 1 |
| 20 | A) i) d ii) c iii) a iv) b | | 1 |
| 21 | C) Statement 1 is true and statement 2 is false | | 1 |
| 22 | C) Assertion(A) is true but Reason (R) are is false | | 1 |
| 23 | A) Zero | | 1 |
| 24 | A) Average fixed cost | | 1 |
| 25 | D) All those combinations of two goods which are consumer can afford. | | 1 |

| | | | |
|----|---|-----------------------|------------|
| 26 | C) Law of diminishing marginal utility | | 1 |
| 27 | A) Leftward shift in demand curve | | 1 |
| 28 | <p>By these institutes skill development will improve. This would result in increase in the production potential of the country. So the PPC will shift to the right.</p> <p style="text-align: center;">OR</p> <p>Production below the potential means that total production in the economy is somewhere below the production possibility curve . When government starts employment generation schemes, as the economy is operating inside the PPC, the economy moves forward towards the PPC.</p> | 1 1 1 1 2 | 3 3 |
| 29 | Implication of Homogeneous Product' is that buyers treat the products as identical. Therefore, the buyers are willing to pay only the same price for the products of all the firms in the industry. It also implies that no individual firm is in a position to charge a higher price for its product. This ensures uniform price in the market. | | 3 |
| 30 | <p>With the increase in level of air pollution, the demand for air purifier will increase . There will be rightward shift in Market demand curve.</p> <p>DIAGRAM</p>  <p style="text-align: center;">OR</p> <p>(i) Quantity demanded of good X would decrease, with increase in price of good X due to operation of law of demand, which is depicted by upward movement along the demand curve.</p> <p>(ii) As income of consumer increases, he would demand more of the good as his disposable income increases and he is in a position to buy more of good X. Thus demand curve shifts to the right.</p> | 1 1 2 2 | 4 4 |

| 31 | <p>(I) The supply of cotton shirt will increase as price of input ie cotton , falls sharply due to bumper produce.</p> <p>(II) When increase in demand is proportionately equal to increase in supply, then rightward shift in demand curve from DD to D_1D_1 is proportionately equal to rightward shift in supply curve from SS to S_1S_1. The new equilibrium is determined at E_1. As both demand and supply increase in the same proportion, equilibrium price remains the same at OP, but equilibrium quantity rises from OQ to OQ_1</p>  | 1 2 1 | 4 | | | | | | | | | | | | | | | | | | | | |
|-------|--|-------------|--------|----|----|---|---|---|---|---|---|----|---|---|---|---|----|---|---|---|----|-------|---|
| 32 | <table border="1" data-bbox="337 978 1052 1272"> <thead> <tr> <th>PRICE</th> <th>OUTPUT</th> <th>TR</th> <th>MR</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>1</td> <td>7</td> <td>7</td> </tr> <tr> <td>5</td> <td>2</td> <td>10</td> <td>3</td> </tr> <tr> <td>3</td> <td>3</td> <td>9</td> <td>-1</td> </tr> <tr> <td>1</td> <td>4</td> <td>4</td> <td>-5</td> </tr> </tbody> </table> | PRICE | OUTPUT | TR | MR | 7 | 1 | 7 | 7 | 5 | 2 | 10 | 3 | 3 | 3 | 9 | -1 | 1 | 4 | 4 | -5 | 1/2x8 | 4 |
| PRICE | OUTPUT | TR | MR | | | | | | | | | | | | | | | | | | | | |
| 7 | 1 | 7 | 7 | | | | | | | | | | | | | | | | | | | | |
| 5 | 2 | 10 | 3 | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 | 9 | -1 | | | | | | | | | | | | | | | | | | | | |
| 1 | 4 | 4 | -5 | | | | | | | | | | | | | | | | | | | | |
| 33 | <p>Given $P_x=2$, $P_y=1$ and $MU_x=4, MU_y=4$</p> <p>A consumer will be in equilibrium when $MU_x/P_x=MU_y/P_y$.</p> <p>$4/2 < 4/1$, $2 < 4$</p> <p>This would induce the consumer to buy more of Y in place of X till $MU_x/P_x=MU_y/P_y$. With Explanation</p> | 3 3 | 6 | | | | | | | | | | | | | | | | | | | | |

| | | | |
|----|--|--|---|
| 34 | <p>The producer's equilibrium conditions are: (i) $MC = MR$ (ii) $MC > MR$ after equilibrium.</p> <p>Suppose $MC > MR$ In this situation, it will be profitable for the firm to produce more or less depending upon relative changes in MC and MR till $MC = MR$</p> <p>Suppose $MC < MR$ It will be profitable for the producer to produce more till $MC = MR$. $MC = MR$ not a sufficient condition to ensure equilibrium.</p> <p>Given $MC = MR$ suppose the behaviour of MC and MR is such that if one more unit is produced, MC becomes less than MR. Then in this case it will be profitable for the firm to produce more. Therefore, in this case though $MC = MR$ the producer is not in equilibrium.</p> <p>However, if after $MC = MR$ output, MC becomes greater than MR, it will be most advantageous for the firm to produce only upto $MC=MR$.</p> <p style="text-align: center;">OR</p> <p>It will not be possible to increase the supply of food grains continuously only by increasing seeds because of the law of variable proportions As we increase the use of seeds without changing other inputs, the production will increase but beyond the level, it will start falling</p> <p>Phase 1: Initially variable input is too small as compared to the fixed input. As production starts, there is efficient use of the fixed input, leading to rise in productivity of the variable input on account of division of labour. As a result, TP rises at increasing rate.</p> <p>Phase II: After a level of output, pressure on fixed input leads to fall in productivity of the variable input. As a result, TP continues to rise but at a decreasing rate.</p> <p>Phase III: The amount of variable input becomes too large in comparison to the fixed input causing decline in TP.</p> | <p>2</p> <p>2</p> <p>2</p> <p>1.5</p> <p>1.5</p> <p>1.5</p> <p>1.5</p> | 6 |
|----|--|--|---|