**Practical Assignment 01**

**Qn 01:** Calculate (i) Laspeyres’, (ii) Paasche’s and (iii) Fisher’s index numbers from the following data.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Commodity** | **Base year price**  **(Rs.) ()** | **Base year quantity ()** | **Current year price (Rs.) ()** | **Current year quantity ()** |
| A | 10 | 30 | 12 | 50 |
| B | 8 | 15 | 10 | 25 |
| C | 6 | 20 | 6 | 30 |
| D | 4 | 10 | 6 | 20 |

**Ans 01:**

**Computation of Price Index Numbers**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Commodity** |  |  |  |  |  |  |  |  |
| **A** | 10 | 30 | 12 | 50 | 360 | 600 | 300 | 500 |
| **B** | 8 | 15 | 10 | 25 | 150 | 250 | 120 | 200 |
| **C** | 6 | 20 | 6 | 30 | 120 | 180 | 120 | 180 |
| **D** | 4 | 10 | 6 | 20 | 60 | 120 | 40 | 80 |
| **Total** |  |  |  |  | 690 | 1150 | 580 | 960 |

1. Laspeyres’ index
2. Paasche’s index
3. Fisher’s price index

**Qn 02:** You are given the following information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **2010** | | **2013** | |
| **Commodity** | **Price (Rs.)** | **Expenditure (Rs.)** | **Price (Rs.)** | **Quantity** |
| **A** | 25 | 1000 | 40 | 50 |
| **B** | 22 | 396 | 40 | 30 |
| **C** | 54 | 864 | 30 | 44 |
| **D** | 20 | 800 | 30 | 45 |
| **E** | 18 | 540 | 42 | 15 |

Compute price index for 2013 by Fisher’s Method.

**Ans 02:** In this problem, we are given the prices and expenditures for each commodity in the base and current year. We know that

By using the above formula, we can obtain the quantity consumed by each commodity in the base and current year.

**Computation of Fisher’s index number**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Commodity** |  |  |  |  |  |  |  |  |
| **A** | 25 | 1000 | 40 | 40 | 50 | 1250 | 1600 | 200 |
| **B** | 22 | 396 | 18 | 40 | 30 | 660 | 720 | 1200 |
| **C** | 54 | 864 | 16 | 30 | 44 | 2376 | 480 | 1320 |
| **D** | 20 | 800 | 40 | 30 | 45 | 900 | 1200 | 1350 |
| **E** | 18 | 540 | 30 | 42 | 15 | 270 | 1260 | 630 |
| **Sum** | **3600** |  |  |  |  | **5456** | **5260** | **6500** |

**Qn 03:** Calculate Kelly’s Price Index from the following data.

|  |  |  |  |
| --- | --- | --- | --- |
| **Commodity** | **Quantity** | **Price (₹)** | |
| **Base year** | **Current year** |
| **A** | 10 | 140 | 180 |
| **B** | 7 | 400 | 550 |
| **C** | 6 | 100 | 250 |
| **D** | 8 | 125 | 150 |
| **E** | 4 | 200 | 300 |

**Ans 03:**

Calculation of Kelly’s Price Index

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Commodity** | **Quantity**  **(q)** | **Price (₹)** | |  |  |
| **Base year ()** | **Current year**  **()** |  |  |
| **A** | 10 | 140 | 180 | 1400 | 1800 |
| **B** | 7 | 400 | 550 | 2800 | 3580 |
| **C** | 6 | 100 | 250 | 600 | 1500 |
| **D** | 8 | 125 | 150 | 1000 | 1200 |
| **E** | 4 | 200 | 300 | 800 | 1200 |
| **Sum** |  |  |  | 6600 | 9550 |

Kelly’s Price Index is given by