

## Questions -

A series of numerical figures which show the relative position is called

- a) index number
- b) relative number
- c) absolute number
- d) none

*a) index number*

An index number is best described as:

- (a) An absolute number
- (b) A ratio of quantities
- (c) A ratio or average of ratios expressed as a percentage
- (d) A weighted total

The index number for the base year is always taken as:

- (a) 1
- (b) 50
- (c) 100
- (d) 1000

**Which of the following is NOT a use of index numbers?**

- (a) Measuring price changes
- (b) Studying trends
- (c) ~~Exact~~ measurement of individual prices
- (d) Deflating monetary values

**Index numbers are often constructed from:**

- (a) Population
- (b) Census data
- (c) Samples
- (d) Secondary data only

*Random sampling*

Which average is theoretically best for  
constructing index numbers?

- (a) Arithmetic Mean
- (b) Geometric Mean
- (c) Harmonic Mean
- (d) Median

It makes  
time reversal  
possible

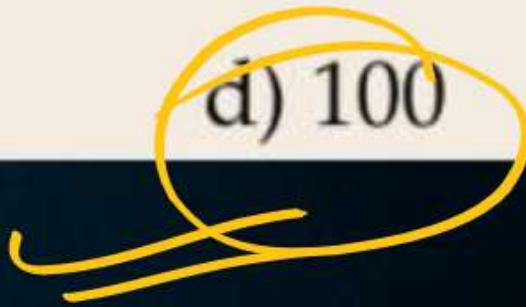
## Questions -



Index number for the base period is always taken as

- a) 200
- b) 50
- c) 1

- d) 100



## Questions -



           play a very important part in the construction of index numbers.

a) weights

b) classes

c) estimations

d) none

## Questions -



Price relative is equal to

~~a)~~ 
$$\frac{\text{Price in the given year} \times 100}{\text{Price in the base year}}$$

c) 
$$\text{Price in the given year} \times 100$$

b) 
$$\frac{\text{Price in the year base year} \times 100}{\text{Price in the given year}}$$

d) 
$$\text{Price in the base year} \times 100$$

$$\frac{P_1}{P_0} \times 100$$

Simple aggregative index suffers from which defect?

- (a) Time bias
- (b) Unit bias → does not satisfy unit test
- (c) Sampling bias
- (d) Seasonal bias

$$P_{01} = \frac{\sum P_1}{\sum P_0} \times 100$$

Laspeyres Price Index uses which **weights?**

- (a) Current year prices
- (b) Current year quantities
- (c) Base year quantities
- (d) Average quantities

## Paasche Price Index uses:

- (a) Base year quantities
- (b) Current year quantities
- (c) Base year prices
- (d) Average prices

Fisher's Ideal Index is:

- (a) Arithmetic mean of Laspeyres & Paasche
- (b) **Geometric mean** of Laspeyres & Paasche
- (c) Harmonic mean of Laspeyres & Paasche
- (d) Median of indices

$$f = \sqrt{L \times P}$$

## Questions -

Weighted G.M. of relative formula satisfy \_\_\_\_\_ test

- a) Time Reversal Test
- b) Circular test
- c) Factor Reversal Test
- d) none

Unit Test

All  
except

Simple aggregation.

Time Reversal

Simple Relatum, Fisher, Weighted Relatum, Welsch, Marshall

Factor Reversal

Fisher

## Questions -



Laspeyre's formula does not satisfy

- a) Factor Reversal Test
- b) Time Reversal Test
- c) Circular Test
- d) all the above

## Circular Test is satisfied by:

- (a) Fisher Index
- (b) Laspeyres Index
- (c) Paasche Index
- (d) Simple GM of price relatives & weighted aggregate with fixed weight

## Circular Test deals with:

- (a) Unit change
- (b) Base shifting
- (c) Quantity change
- (d) Sampling error

Time Period

$$P_{01} \times P_{10} = 1$$

Crorean

$$P_{01} \times P_{12} + P_{13} \times P_{30} = 1$$

Questions - Time Reversal Test states:

- (a)  $P_{01} + P_{10} = 1$
- (b)  $P_{01} \times P_{10} = 1$
- (c)  $P_{01} - P_{10} = 0$
- (d) None

Questions - Factor Reversal Test states:

- (a)  $P_{01} = Q_{01}$
- (b)  $P_{01} \times Q_{01} = V_{01}$
- (c)  $P_{01} + Q_{01} = V_{01}$
- (d) None

$$\begin{aligned} P_{01} \times Q_{01} &= V_{01} \\ &= \frac{\sum P_i Q_i}{\sum P_0 Q_0} \end{aligned}$$

Chain Index is formed using:

- (a) Fixed base
- (b) Link relatives**
- (c) Weighted averages
- (d) Value relatives

| <u>Link<br/>Relatives</u> | <u>Chain Index</u>       |
|---------------------------|--------------------------|
| -                         | 100                      |
| 110                       | $100 \times 110\% = 110$ |
| 140                       | $110 \times 140\% = 154$ |
| 150                       | $154 \times 150\% = 231$ |

$$\text{Chain index} = \frac{\text{Chain index of previous year} \times \text{Link Relative of current year}}{100}$$

## Questions -

Chain index is equal to

(a) 
$$\frac{\text{link relative of current year} \times \text{chain index of the current year}}{100}$$

(b) 
$$\frac{\text{link relative of previous year} \times \text{chain index of the current year}}{100}$$

(c) 
$$\frac{\text{link relative of current year} \times \text{chain index of the previous year}}{100}$$

(d) 
$$\frac{\text{link relative of previous year} \times \text{chain index of the previous year}}{100}$$

## Questions -



$P_{01}$  is the index for time

- (a) 1 on 0
- (b) 0 on 1
- (c) 1 on 1
- (d) 0 on 0

A diagram of a linked list node. It consists of a vertical line with a circle at the top. A horizontal line extends from the left side of the vertical line, labeled 'Base' in yellow. Another horizontal line extends from the right side, labeled 'Current' in yellow. The text 'Base' is written below the 'Base' pointer, and 'Current' is written below the 'Current' pointer. The entire diagram is in yellow.

## Questions -

$P_{10}$  is the index for time

(a) 1 on 0

(b) 0 on 1

(c) 1 on 1

(d) 0 on 0

  
P 10 0 on 1  
Base      current

Questions -



Fisher's Ideal Formula dose not satisfy \_\_\_\_\_ test

- (a) Unit Test
- (b) Circular Test
- (c) Time Reversal Test
- (d) none

\_\_\_\_\_ satisfies circular test

- a) ~~G.M.~~ of price relatives or the weighted aggregate with fixed weights
- b) A.M. of price relatives or the weighted aggregate with fixed weights
- c) H.M. of price relatives or the weighted aggregate with fixed weights
- d) none

## Questions -

The formula for conversion to current value

(a) Deflated value = 
$$\frac{\text{Price Index of the current year}}{\text{previous value}}$$
  

$$\qquad\qquad\qquad \text{current value}$$

(b) ~~Deflated value = 
$$\frac{\text{Price Index of the current year}}{\text{Price Index of the previous year}}$$~~

(c) Deflated value = 
$$\frac{\text{Price Index of the previous year}}{\text{previous value}}$$

(d) Deflated value = 
$$\frac{\text{Price Index of the previous year}}{\text{previous value}}$$

| <u>Salary</u> | <u>Index</u> | <u>Real Salary</u> |
|---------------|--------------|--------------------|
| 1000          | 100          | <u>1000</u>        |
| 2000          | 150          | <u>2000</u>        |
| 3500          | 240          | <u>3500</u>        |

## Questions -

Shifted price Index = 
$$\frac{\text{Original Price} \times 100}{\text{Price Index of the year on which it has to be shifted}}$$

(a) True      (b) false      (c) both      (d) none

| Old Base | Year | Index | Now index                      |
|----------|------|-------|--------------------------------|
|          | 2010 | 100   | $\frac{100}{140} \times 100 =$ |
|          | 2011 | 120   | $\frac{100}{140} \times 120 =$ |
| New Base | 2012 | 140   | 100                            |
|          | 2013 | 180   | $\frac{100}{140} \times 180 =$ |

## Questions -



If the prices of all commodities in a place have increased 1.25 times in comparison to the base period, the index number of prices of that place now is

- (a) 125
- (b) 150
- (c) 225
- (d) None of these.

~~X~~

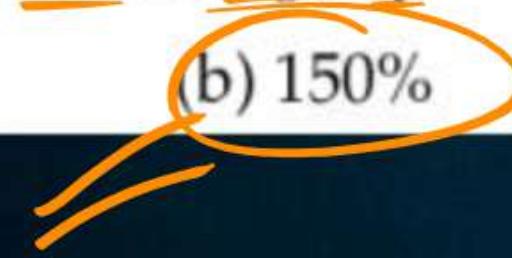
Base Price = 100

$$\begin{array}{rcl} \text{Increase} & = & 100 \times 1.25 = 125 \\ & & \hline & & 225 \end{array}$$

## Questions -

If the index number of prices at a place in 1994 is 250 with 1984 as base year, then the prices have increased on average by

- (a) 250%
- (b) 150%
- (c) 350%
- (d) None of these.



|      |              |
|------|--------------|
| 1984 | index<br>100 |
| 1994 | 250)         |

$$\text{Increase} = 150$$

## Questions -



If the prices of all commodities in a place have decreased 35% over the base period prices, then the index number of prices of that place is now

- (a) 35
- (b) 135
- (c) 65
- (d) None of these.

Price = 100

(→) Dec -  $\frac{-35}{65}$

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## Questions -



Test whether the index number due to Walsh given by :

$$I = \frac{\sum P_1 \sqrt{Q_0 Q_1}}{\sum P_0 \sqrt{Q_0 Q_1}} \times 100$$

Sum

Satisfies is :-

(a) Time reversal Test. ~~✓~~

(c) Circular Test.

(b) Factor reversal Test.

(d) None of these.

## Questions -



When the cost of Tobacco was increased by 50%, a certain hardened smoker, who maintained his formal scale of consumption, said that the rise had increased his cost of living by 5%. Before the change in price, the percentage of his cost of living was due to buying Tobacco is

(a) 15%      (b) 8%      (c) 10%      (d) None of these.

$$\underbrace{\text{Tobacco} \times 50\%}_{=} = 5$$

$$\begin{aligned}\text{Tobacco} &= \frac{5}{50\%} \\ &= 10\end{aligned}$$

## Questions -

During the certain period the C.L.I. goes up from 110 to 200 and the Salary of a worker is also raised from 330 to 500, then the real terms is

(a) Loss by ₹ 50      (b) Loss by 75      (c) Loss by ₹ 90      (d) None of these.

C L I      Salary      Real Salary

|     |     |                           |
|-----|-----|---------------------------|
| 110 | 330 | $\frac{330}{110\%} = 300$ |
| 200 | 500 | $\frac{500}{200\%} = 250$ |

## Questions -



Two indices that is current on base and base on current should be reciprocals of each other in

- (A) Unit test
- (C) Circular test

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- (B) Time reversal test
- (D) Average weighted test

$$P_{01} \times P_{10} = 1$$

$$P_{01} = \frac{1}{P_{10}}$$

## Questions -



Which sampling technique can be used for the construction of Index numbers ?

- (A) Systematic sampling
- (B) Quota sampling
- (C) Cluster sampling
- (D) Random sampling

From the year 2015 to 2025, Consumer price index increased from 125 to 196. During this period, salary of the employees as per 7<sup>th</sup> pay commission recommendations was revised from ₹ 25,000 to ₹ 37,250. In real terms, an employee should get following amount as an additional amount to maintain his previous standard of living :

- (A) ₹ 1,965
- (B) ₹ 1,950
- (C) ₹ 1,945
- (D) ₹ 14,200

|      |              |                        |
|------|--------------|------------------------|
| 2015 | Index<br>125 | <u>Salary</u><br>25000 |
| 2025 | 196          | 37250 = x              |

$$\frac{196}{125} = \frac{x}{25000}$$
$$39200 = x$$

Additional amount  
= 39200 - 37250  
= 1950

## Questions -



If the consumer price index number is 750, then the purchasing power of one rupee is \_\_\_\_\_.

- (A) 12.5 paise
- (B) 15 paise
- (C) 13.3 paise
- (D) 16.5 paise

Purchasing power of money

$$= \frac{1}{\text{Index}}$$

$$= \frac{1}{750\%}$$

$$= ₹ 0.1333$$