

## Questions -



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

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

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  *Random sampling.*

(d) Secondary data only

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

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

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

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 aggreg.

Time Reversal

Simple Relatm, Fisher, Weighted Relatm, W, M, Walsh, 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 aggregation with fixed weight



## Circular Test deals with:

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

Time Reversed

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

Circular

$$P_{01} \times P_{12} \times P_{23} \times P_{30} = 1$$



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

$$P_{01} \times Q_{01} = V_{01} \\ = \frac{\sum p_1 q_1}{\sum p_0 q_0}$$



Chain Index is formed using:

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

<u>Link Relatns</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

$P_0$  1 on 0  
Base current

## 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

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 = 
$$\frac{\text{Price Index of the current year}}{\text{previous value}}$$

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

(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	$\frac{1000}{100\%}$
2000	150	$\frac{2000}{150\%}$
3500	240	$\frac{3500}{240\%}$

## 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

	Year	Index	Now index
Old Base	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

$$\text{Base Price} = 100$$

$$\text{increase} = 100 \times 1.25 = 125$$

$$\underline{\underline{225}}$$

## 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.

	<u>index</u>
1984	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.

$$\begin{array}{r} \text{Price} = 100 \\ (-) \text{Dec} - 35 \\ \hline 65 \end{array}$$



## Questions -



Test whether the index number due to Walsh given by :

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

Satisfies is :-

(a) Time reversal Test.

(b) Factor reversal Test.

(c) Circular 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.

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

$$\text{Tobacco} = \frac{5}{50\%}$$
$$= 10$$

## 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.

<u>C L I</u>	<u>Salary</u>	<u>Real Salary</u>
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

~~(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

	Index	Salary
2015	125	25000
2025	196	37250 ⇒ x

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

$$\begin{aligned}\text{Additional amount} &= 39200 - 37250 \\ &= 1950\end{aligned}$$



## 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

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

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

$$= ₹ 0.1333$$