

ASSIGNMENT – I

Chapter – 1

(INDEX NUMBERS)

(1) Describe the 'Index Numbers' and write down the characteristics of Index Numbers.

(2) Write about the importance (uses or merits) and limitations of the Index Numbers.

(3) Short notes:

- Types of Index Numbers
- Consumer Price Index

(4) From the data given below, construct the simple average index numbers of price relatives for the year 2002 taking 1998 as base year using (a) Arithmetic mean and (b) Geometric mean:

Expenses on	Food	Rent	Clothing	Education	Other
Price (Rs.) 1998	1800	1000	700	400	700
Price (Rs.) 2002	2000	1200	900	500	1000

(5) The following are two sets of retail prices of a typical family's shopping basket. Calculate the simple aggregate price index for 2008 using 2004 as the base year:

Commodity	Price (2004)	Price (2008)
Milk (1 Liter)	18	20
Eggs (1 Dozen)	15	18
Butter (1 Kg)	120	150
Bread (500 gm)	9	11

(6) Calculate the weighted average price relative index number from following data, using (a) weighted A.M. and (b) weighted G.M. [taking weight as the value of base year price at base year quantity]

Commodity	Prices		Quantity
	2000	2002	2000
A	18	20	20
B	12	14	40
C	15	16	10

(7) For the following data, calculate the price index number of 1999 with 1998 as the base year, using (a) Laspeyre's index (b) Paasche's index (c) Fisher's Ideal index (d) Marshall & Edgeworth's index:

Commodity	1998		1999	
	Price	Quantity	Price	Quantity
A	20	8	40	6
B	50	10	60	5
C	40	15	50	15
D	20	20	20	25

- (8) Calculate the weighted average (AM & GM) of quantity relative index and weighted aggregative of quantity relative index from the below data and for weight taking as total expenditure of base year:

Commodity	1995		2003
	Price	Quantity	Quantity
A	100	10	12
B	75	15	20
C	80	8	10
D	60	20	25
E	500	50	60

- (9) Obtain quantity index number from the following table using (a) Laspeyre's index (b) Paasche's index (c) Fisher's Ideal index (d) Marshall & Edgeworth's index:

Item	Price		Quantity	
	2005	2008	2005	2008
1	2	5	20	15
2	4	8	4	5
3	1	2	10	12
4	5	10	5	6

- (10) Calculate the Price index number & Quantity index number with weighted aggregative method from following data:

Commodity	2000		2002	
	Price	Total Value	Price	Total Value
A	5	50	4	48
B	8	48	7	49
C	6	18	5	20

- (11) Calculate the index number by the Fixed base method and Chain base method for the below data:

Year	1989	'90	'91	'92	'93	'94	'95	'96	'97	'98
Price	75	50	65	60	72	70	69	75	84	80

- (12) From the following price of commodities given in rupees per unit, find the Fixed base index number and the Chain base index number:

Commodity	1994	1995	1996	1997	1998
I	2	3	4	5	6
II	8	10	12	15	18
III	4	5	18	10	12

- (13) From the Chain base index numbers given below, find the Fixed base index numbers:

Year	2000	2001	2002	2003	2004
CBIN	80	110	120	90	140

- (14) Convert the following fixed base index numbers into chain base index numbers:

Year	1992	1993	1994	1995	1996	1997
FBIN	188	199	204	190	196	200

- (15) Compute the Fisher's Ideal index number from the data given below and show that it satisfies the time reversal test and factor reversal test:

Commodity	2001		2004	
	Price	Quantity	Price	Quantity
A	10	49	12	50
B	12	25	15	20
C	18	10	20	12
D	20	5	40	2

- (16) Compute the cost of living index number (CPI) using Aggregate expenditure method and Family budget method from following data:

Commodity	Price		Quantity
	2004	2008	2004
Wheat	1.0	1.2	200
Rice	3.0	3.5	50
Pulses	4.0	5.0	50
Ghee	20.0	30.0	20
Sugar	2.5	5.0	40
Oil	10.0	15.0	50
Fuel	2.0	2.5	60
Clothing	15.0	18.0	40