

UNIVERSITY OF CALICUT
SCHOOL OF DISTANCE EDUCATION
(2011 Admn. onwards)

IV Semester

Core Course for B.A ECONOMICS

QUANTITATIVE METHODS FOR ECONOMIC ANALYSIS-II

QUESTION BANK & ANSWER KEY

Choose the correct Answer from the bracket.

1. Which one of the following is line reversal list?

a. $P_{01} \times Q_{01} = \frac{\sum P_1 q_1}{\sum P_0 q_0}$

c. $P_{01} \times P_{12} \times P_{20} = 1$

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

d. $P_{01} \times P_{10} \neq 1$

2. A good index number is one which satisfies

(1) Unit test (2) Time reversal test (3) Factor reversal test

Which of the following is correct

a. 1 only

c. 2 & 3

b. 2 only

d. 1, 2 & 3

3. Which one of the following statement is correct?

(1) Laspeyres' index shows an upward bias

(2) Paastes' index shows an upward bias

(3) Laspeyres' index shows an downward bias

(4) Paasches' index shows an downward bias

a. 1 & 4

c. 2 & 3

b. 1 only

d. 3 & 4

4. The weighted average of price relations using basic values as weights is same as the

a. Laspeyres quantity index

c. Laspeyres price index

b. Paasches' price index

d. Kelly's price index

5. Which one of the following indices satisfies both time reversal and factor reversal list ?
- a. Laspeyres index number
 - b. Fischer's index number
 - c. Paasches index number
 - d. Bowley's index number
6. Which one of the following index numbers is based on Geometric Mean ?
- a. Laspeyres index number
 - b. Fischer's index number
 - c. Paasches index number
 - d. Bowley's index number
7. If the Paasches' index is 196 and Fishers index is 210, What is the value of the Laspeyres' index?
- a. 220
 - b. 215
 - c. 225
 - d. 230
8. The price index that uses base year quantities as weights is called
- a. Paasches index
 - b. Laspeyres index
 - c. Fischer's index
 - d. Whole sale price index
9. The major purpose of price index is to measure change in the
- a. Standard of living
 - b. Gold content of money
 - c. Buying power of money
 - d. Capacity to produce
10. Which of the following statement is not correct ?
Fishers' index :
- a. Lies between Laspeyres' (L) & Paasches' index
 - b. is the Arithmetic mean of L & P
 - c. is the Geometric mean of L & P
 - d. is equal to L or P if $L = P$
11. In consumer price index number weights are determining on the basis of
- a. Actual price of the index
 - b. the consumption pattern of the class of population
 - c. Actual consumption Expenditure
 - d. Both price & consumption expenditure
12. The procedure of combining two or more overlapping series of index numbers into one continuous series is called

- a. Splicing
b. Base shifting
- c. Deflating
d. None of these
13. Consumer price index number indicates
- a. The General price level
b. The Wholesale price level
- c. Export price
d. All of these
14. Number of components of a time series are
- a. Two
b. Four
- c. Many
d. Cannot be stated
15. The principle of least squares can be used for finding
- a. Cyclical variation
b. Irregular variation
- c. Seasonal variation
d. Secular trend
16. Index Numbers measure
- a. the change in base year prices
b. the change in current year prices
- c. real changes
d. None of the above
17. Simple fixed quantity relative
- a. $\frac{Q_0}{Q_1} \times 100$
b. $\frac{Q_1}{P_1} \times 100$
- c. $\frac{Q_1}{Q_0} \times 100$
d. $\frac{P_1}{Q_0} \times 100$
18. The day to day irregularities in business activity are the example of
- a. Secular trend
b. Seasonal fluctuations
- c. Cyclical fluctuations
d. random or erratic fluctuations
19. $\frac{\sum P_1 q_0 + \sum P_1 q_1}{\sum P_0 q_0 + \sum P_0 q_1} \times 100$ is the formula for calculating
- a. Bowley's index
b. Fisher's index
- c. Marshall - Edgeworth index
d. Kelley's index
20. Fisher's ideal index Number satisfies
- a. Time reversal & factor reversal list
b. only time reversal list
- c. only factor reversal list
d. circular list

21. Fishers ideal index is obtained as :
- the sum of Laspeyre's & paasche's indices
 - the geometric mean of Laspeyre's & paasche's indices
 - the arithmetic mean of Laspeyre's & paasche's indices
 - the harmonic mean of Laspeyre's & paasche's indices
22. $\frac{\sum P_1 q_0}{\sum P_0 q_0} \times 100$ is the formula for calculating
- Bowley's index
 - Fisher's index
 - Laspeyre's index
 - Paasche's index
23. Laspeyre's index measures change in
- fixed market basket
 - current consumption
 - both fixed and current market basket
 - None
24. $\frac{L + P}{2}$ is the formula for calculating
- Fishers index
 - Bowley's Method
 - Laspeyre's index
 - paasche's index
25. Making allowances for the effect of changing price levels is called
- Splicing
 - Base shifting
 - Deflating
 - None of these
26. The consumer price index Numbers is also known as
- cost of living index number
 - Price of living index
 - Retail index
 - All the above
27. Recurrent variations in time series that usually last longer than a year is known as
- Seasonal variation
 - Secular trend
 - Irregular variation
 - Cyclical variation
28. Paasche's index measures change in
- fixed market basket
 - current consumption
 - both fixed and current market
 - None

29. Weather or climate changes are examples of
- Secular trend
 - Seasonal variation
 - Cyclical variation
 - Irregular variation
30. Method of moving average is used to measure
- Secular trend
 - Seasonal Variations
 - Cyclical variation
 - Irregular Variation
31. If I_{OK} is the price index number of the year K with base year 0 and I_{KO} is the price index of the year 0 with base year K, then time reversal list requires
- $I_{OK} \cdot I_{KO} = 1$
 - $\sqrt{I_{OK} \cdot I_{KO}} = 1$
 - $\frac{I_{OK} \cdot I_{KO}}{2} = 1$
 - $I_{OK} \cdot I_{KO} = -1$
32. A lock-out in a factory for a month is associated with the component of time series
- Trend
 - Seasonal variation
 - Cyclic variation
 - Irregular variation
33. If 100 and 140 respectively be the Laspeyre's and Paasche's index number, then Fishers index number is
- $\frac{100 + 140}{2}$
 - $\sqrt{100 \times 140}$
 - 100×140
 - $\sqrt{\frac{100 \times 140}{2}}$
34. Consumer price index number is constructed for
- a well defined section of people
 - workers only
 - all people
 - All the above
35. Which one is not the test of index Number
- Unit test
 - Time reversal test
 - Triangular Test
 - Factor reversal test
36. The average of Laspeyre's and Paasche's index number which gives Fisher's index number is
- AM
 - GM
 - HM
 - Weighted average

37. Purchasing power of money
- price index $\times 100$
 - $Price\ index / 100$
 - $100 / Price\ index$
 - Real wage
38. Factor reversal list permits the interchange of
- Base periods
 - Price & Quantity
 - Weights
 - None of the above
39. The method which is not used for estimating seasonal components of a time series
- Ratio to trend method
 - Link relative method
 - Method of simple average
 - Method of least squares
40. Cost of living index is known as
- Consumer price index
 - whole sale price index
 - Quantity index
 - None
41. Paasches index number is based on
- Base year quantity
 - Current year quantity
 - Day year quantity
 - None
42. The formula for Fisher's index number
- $\frac{\sum P_1 q_0 + \sum P_0 q_1}{\sum P_0 q_0 + \sum P_1 q_1}$
 - $\sqrt{\frac{\sum p_1 q_0}{\sum p_0 q_1} \times \frac{\sum p_1 q_1}{\sum p_0 q_1}}$
 - $\frac{\sum P_1 q_0}{\sum P_0 q_0} + \frac{\sum P_1 q_1}{\sum P_0 q_1}$
 - None
43. The formula, $P_{01} \times Q_{01} = \frac{\sum P_1 q_1}{\sum P_0 q_0}$ shows
- Factor reversal test
 - Time reversal test
 - Unit test
 - None
44. Measures of change in the level of phenomenon is called
- Correlation
 - Dispersion
 - Mean
 - Index Numbers

45. Which of the following is described as 'barometers of economic activity'?
- Index number
 - Correlation
 - Regression
 - Time series
46. The formula $\frac{\sum p_1 q_1}{\sum p_0 q_1} \times 100$ is used to measure
- Laspeyres index
 - Paasche's index
 - Fisher's index
 - Bowley's index
47. Test to determine whether a given method will work both forward & backward
- Unit test
 - Factor reversal test
 - Time reversal test
 - None
48. Data which are collected, observed or recorded at successive intervals of time is known as
- Index Numbers
 - Time series
 - Regression
 - correlation
49. Earthquake is an example of
- Secular trend
 - Seasonal variation
 - Cyclical variation
 - Irregular variation
50. All methods of index numbers except simple (unweighted) aggregative index satisfies
- Unit test
 - Time Reversal list
 - Factor reversal test
 - Circular test
51. The word statistics is used as
- Singular nouns
 - Both Singular and Plural noun
 - Plural noun
 - neither singular nor plural
52.regarded as the father of statistics
- H.G.Wells
 - Horace Secrist
 - A.L.Bowley
 - Gotfried Achen wall

53. The word statistics was used in.....
- a) 1749
 - b) 1849
 - c) 1790
 - d) 1801
54. Statistics is
- a) Science only
 - b) art only
 - c) Science and art
 - d) neither science nor art
55. Statistics can.....
- a) Prove anything
 - b) disprove any thing
 - c) neither prove nor disprove anything is just a tool
 - d) none of these
56. Bar diagrams aredimensional diagrams
- a) one
 - b) two
 - c) three
 - d) None of these
57. The number of observations corresponding to a class is known asof that class.
- a) Population
 - b) frequency
 - c) Class interval
 - d) None of these
58. Diagrams and graphs are the tools of.....
- a) Collection of data
 - b) analysis of data
 - c) Summarisation of data
 - d) Presentation of data
59. Circle diagram is also called
- a) Pie diagram
 - b) Pictogram
 - c) Sectors
 - d) None of these
60. Histogram is a
- a) graph
 - b) Curve
 - c) diagram
 - d) Pictogram
61. In a Histogram bars.....
- a) touch each other
 - b) do not touch
 - c) either way
 - d) neither way
62. With the help of histogram we can prepare
- a) frequency polygon
 - b) frequency cure
 - c) both
 - d) done

- 74) When 5 is added to all the observations then mean is
a) Increased by 5
b) not changed
c) decreased by 5
- 75) Average is a measure of
a) Central tendency
b) dispersion
c) Symmetry
d) Concentration
- 76) Histogram can be used to estimate.....
a) Median
b) mode
c) Mean
d) quartile
- 77) Deciles divide the data in toequal parts.
a) 100
b) 10
c) 2
d) 4
- 78) The positional value which divide the data into 100 equal parts are
a) decile
b) percentile
c) quartiles
d) Octiles
- 79) Which of the following represents median ?
a) Fiftieth percentile
b) First quartile
c) Sixth decile
d) 20th percentile
- 80) When Mean = 20 Median = 30, Mode = ?
a) 40
b) 50
c) 60
d) 70
- 81) Quartile deviation includes the
a) First 50%
b) Last 50%
c) Central 50%
- 82) Harmonic Mean is theof arithmetic Mean
a) Reciprocal
b) Substitute
c) both of these
d) none of these
- 83) Standard deviation is alwaysthan range
a) greater
b) less
c) neither less than or greater than
- 84) Square of standard deviation of a distribution is the
a) Median
b) Variance
c) Mode
d) none of these

- 85) Quartile deviation ismeasure of dispersion
 a) absolute b) relative
 c) neither absolute nor relative
- 86) The best measure of dispersion is
 a) range b) variance
 c) quartile deviations d) standard deviation
- 87) The measure of dispersion based on all the observations of the series is
 a) range b) quartile deviation
 c) Standard deviation d) Inter quartile range
- 88) The Mean is 1000 and standard deviation is 50 then coefficient of variation is
 a) 15 b) 5
 c) 8 d) 10
- 89) Semi interquartile range is
 a) $Q_3 - Q_1$ b) $\frac{Q_3 - Q_1}{2}$
 c) $\frac{Q_3 + Q_1}{2}$ d) $\frac{Q_3 - Q_1}{4}$
- 90) Mean deviation is minimum when deviations are taken from
 a) Mean b) Median
 c) Mode d) Zero
- 91) Measures of dispersion which ignores the sign is.....
 a) Mean deviation b) range
 c) Quartile deviation d) standard deviation
- 92) When 5 is added to all the values of a series then standard deviation
 a) does not change b) becomes 5 times
 c) Increased by 5 d) decreased by 5
- 93) In a normal distribution Q.D =
 a) $\frac{2}{3}SD$ b) $\frac{4}{5}SD$
 c) $(SD)^2$ d) \sqrt{SD}
- 94) For the open-end class frequency distribution the appropriate measure of dispersion is.....
 a) range b) Quartile deviation
 c) Mean deviation d) Standard deviation

105. If the correlation between X and Y of the data
- X: x_1 x_2 x_3
 Y: y_1 y_2 y_3 is equal to r, then the correlation coefficient between U and V of the data
- U: x_1-2 x_2-2 x_3-2
 V: y_1+4 y_2+4 y_3+4 is equal to
- r
 - $\frac{1}{2}$
 - $\frac{1}{4}$
 - None of the above
106. If b_1 and b_2 are the regression coefficient of Y on X and that of X on Y respectively and r is the correlation coefficient between X and Y then:
- $r = b_1 b_2$
 - $r^2 = \sqrt{b_1 b_2}$
 - $r \sigma_x \sigma_y = b_1 b_2$
 - none of these
107. The correlation coefficient between x and y of the data
- x: 2 7
 y: 4 10 is equal to:
- 0.5
 - 1
 - 0.8
 - None of these
108. The correlation coefficient between X and Y will have positive sign when
- X is increasing, Y is decreasing
 - Both X and Y are increasing
 - X is decreasing, Y is increasing
 - There is no change in X and Y
109. The correlation coefficient between X and Y is 0.6. Their covariance is 4.8 and the variance of X is 4. Then the variance of Y is:
- 2
 - 9
 - 4
 - 16
110. The value of the correlation coefficient lies between:
- 0 and 1
 - 1 and +1
 - 30 and +3
 - None of these
111. If one of the regression coefficients is greater than 1, then the other must be:
- Greater than 1
 - Equal to 1
 - Less than 1
 - Zero

112. Given that correlation coefficient $r = 0.8$, covariance of X and Y is 6 and variance of y is 9,
then the standard deviation of X is:
- 2
 - 1
 - 2.5
 - 3
113. The coefficient of correlation:
- Always positive
 - Always negative
 - Cannot be negative
 - Can be both positive and negative
114. Relation between two variables is determined by
- Dispersion
 - Mean
 - Correlation
 - Regression
115. Maximum value of correlation is
- 2
 - 1.5
 - 1
 - 0
116. Minimum value of correlation is
- 2
 - 1.5
 - 1
 - 0
117. In case there is no relation between the variables, value of coefficient of correlation will be:
- 2
 - +1
 - +2
 - 0
118. Coefficient of correlation measure
- Direction of the relation
 - Degree of the relation
 - Both (a) and (b)
 - None of the above
119. Range of the coefficient of correlation is
- ± 2
 - ± 1
 - ± 0.5
 - ± 0.25
120. As the value of X increases, if Y also increases, then coefficient of correlation will be
- Positive
 - Negative
 - Zero
 - None of the above

121. As the value of X increases, if value of Y decreases, then coefficient of correlation will be
- Positive
 - Negative
 - Zero
 - None of the above
122. In case coefficient of correlation is positive, the curve representing the relation will be
- Upward sloping
 - Downward sloping
 - Vertical
 - Horizontal
123. Vertical curve represent the value of correlation coefficient to be
- Positive
 - Negative
 - Zero
 - All of the above
124. Horizontal curve represents the value of coefficient of correlation to be
- Positive
 - Negative
 - Zero
 - All of the above
125. In case, coefficient of correlation is negative, the curve representing the relation will be
- Upward sloping
 - Downward sloping
 - Vertical
 - Horizontal
126. In case of simple correlation, the number of variables involved are
- 1
 - 2
 - 3
 - 4
127. In case of multiple correlation, the number of variables involved are greater than
- 1
 - 2
 - 3
 - 4
128. Scatter diagram is
- Mathematical method of finding out correlation
 - Positional method of finding out correlation
 - Graphic method of finding out correlation
 - None of the above
129. When variations in the values of two variables have a constant ratio, there will be
- Linear correlation
 - Zero correlation
 - Non-linear correlation
 - None of the above

130. Graph of variables having linear relation will be
- Curved
 - Hyperbola
 - Straight line
 - None of the above
131. Graph of variables having non-linear relation will be
- Curved
 - Hyperbola
 - Straight line
 - None of the above
132. Karl Pearson's coefficient of correlation method of measuring correlation is
- Graphic
 - Mathematical
 - Positional
 - None of the above
133. Coefficient of correlation is independent of
- Change of scale
 - Change of origin
 - Both change of scale and change of origin
 - None of the above
134. Spearman's method of calculating coefficient of correlation is based on
- Magnitude
 - Rank
 - Actual figure
 - None of the above
135. Geometric mean of two regression coefficients is
- Mean
 - Dispersion
 - Variation
 - Correlation
136. Coefficient of determination is equal to
- r^2
 - \sqrt{r}
 - r
 - none of the above
137. Correlation between price and demand is normally
- Negative
 - Positive
 - Zero
 - None of the above
138. Correlation between price and supply is normally
- Negative
 - Positive
 - Zero
 - None of the above
139. Which is the most widely used method of calculating correlation?
- Scatter diagram
 - Karl Pearson's
 - Charles Spearman's
 - None of the above

140. The state which has the lowest IMR in India is
- Kerala
 - Goa
 - Madhya Pradesh
 - Uttar Pradesh
141. Vital statistics is mainly concerned with
- births
 - deaths
 - marriages
 - all the above
142. Complete count of the heads of people of a country is known as:
- census
 - vital statistics
 - demography
 - none of the above.
143. Vital statistics throws light on:
- changing pattern of the population during intercensal period
 - growth of population
 - fertility of races
 - all the above
144. The registration of births, deaths and marriages are:
- a fancy of society
 - a part of medical research
 - a legal document
 - all the above
145. In India, the collection of vital statistics started for the first time in
- 720
 - 1886
 - 1969
 - 1946.
146. The registration of vital statistics in India suffers from :
- incomplete reporting
 - incomplete coverage
 - lack of accuracy
 - all the above
147. Registration of vital statistics is organized at the apex by :
- Director General
 - Registrar General
 - Census Commissioner
 - all the above
148. At state level, the registration of vital statistics is carried by :
- Director of economics and statistics
 - Chief Returning Officer
 - Chief Registrar
 - none of the above
149. Vital Statistics is obtained through :
- census operation
 - registration system
 - survey method
 - all the above

150. The advantage of sampling registration is that:
- it has full coverage
 - it is more accurate
 - it provides the estimate for rural and urban areas separately
 - all the above
151. The sampling registration system record:
- age and sex
 - birth rates
 - death rates
 - all the above
152. Vital statistics is greatly utilized by:
- actuaries
 - planners
 - social reformers
 - all the above
153. Vital rates customarily expressed as :
- percentages
 - per thousand
 - per million
 - per trillion
154. The child bearing age in India is
- 20-24 years
 - 20-29 years
 - 15-49 years
 - 13-48 years
155. The fertility of women in India is maximum in the age group:
- 15-20
 - 20-24
 - 25-29
 - 15-29
156. The death rate obtained for a segment of a population is known as :
- specific death rate
 - crude death rate
 - standardized rate
 - vital index
157. The age specific death rate for the babies of age less than one year is specifically called:
- neonatal death rate
 - infant mortality rate
 - maternal mortality rate
 - foetal death rate
158. The death rate of babies under one month is known as :
- neonatal mortality rate
 - infant mortality rate
 - maternal mortality rate
 - foetal death rate
159. The death rate of women due to delivery of children is termed as :
- neonatal mortality rate
 - infant mortality rate
 - maternal mortality rate
 - foetal death rate

160. Age specific mortality rates fail to reveal:
- mortality conditions
 - age distribution of persons
 - sex ratio
 - all the above
161. Standardised death rates are particularly useful for :
- comparing the death rates in males and females
 - comparing the death rates of two regions
 - both (a) and (b)
 - neither (a) or (b)
162. Fertility rates mainly doped on :
- total female population
 - total population
 - female population of child bearing age
 - number of newly born babies
163. Population growth is mainly concerned with:
- total number of births
 - number of male births
 - number of female births
 - none of the above
164. Sex ratio is defined as
- $\frac{\text{number of males}}{\text{number of female}} \times 100$
 - $\frac{\text{number of females}}{\text{number of male}} \times 1000$
 - $\frac{\text{number of male}}{\text{number of females}} \times 100$
 - $\frac{\text{number of males}}{\text{number of female}} \times 1000$
165. The measure which is not used for mortality is
- Crude death rate
 - Age specific death rate
 - Standardised death rate
 - Crude birth rate
166. Which state has the highest Infant Mortality rate in India?
- Kerala
 - Goa
 - Madhya Pradesh
 - Uttar Pradesh
167. In India collection of vital statistics started for the first time in
- 1720
 - 1886
 - 1969
 - 1946
168. Child bearing age in India is
- 20-24
 - 20-29
 - 15-49
 - 13-48 years

169. Crude Death Rate (CDR) =
- $\frac{\text{Annual Mean Population}}{\text{Annual Deaths}} \times 100$
 - $\frac{\text{Annual Mean Population}}{\text{Annual Deaths}} \times 1000$
 - $\frac{\text{Annual Deaths}}{\text{Total Population}} \times 1000$
 - None of these
170. Death rate obtained for a segment of a population is known as
- Specific death rate
 - Crude death rate
 - Standardised rate
 - Vital index
171. Standardised death rates are particularly useful for comparing death rates
- in males and females
 - of two regions
 - both
 - none
172. Fertility rates mainly depend on
- Total Population
 - Total Female Population
 - Female Population of Child bearing age
 - Number of newly born babies
173. Generally, the relation between NRR and GRR is
- $\text{NRR} = \text{GRR}$
 - $\text{NRR} < \text{GRR}$
 - $\text{NRR} > \text{GRR}$
 - none of these
174. Increase in Population indicates
- $\text{NRR} = 1$
 - $\text{NRR} < 1$
 - $\text{NRR} > 1$
 - none of these
175. All the following are measures of fertility except
- Crude Birth Rate
 - Age Specific Fertility Rate
 - Infant Mortality Rate
 - Net Reproduction Rate
176. The measure which is not used for mortality is
- Crude Death Rate
 - Age Specific Death Rate
 - Standardised death rate
 - Crude birth rate
177. Which of the following is not a measure of mortality?
- Crude death rate
 - Specific death rate
 - Infant mortality rate
 - Crude birth rate

ANSWER KEY

1	b	28	b	55	c	82	a	109	d	136	a	163	c
2	c	29	b	56	a	83	b	110	b	137	a	164	b
3	a	30	c	57	b	84	b	111	c	138	b	165	d
4	a	31	a	58	d	85	a	112	c	139	b	166	c
5	b	32	d	59	a	86	d	113	d	140	b	167	b
6	b	33	b	60	a	87	c	114	c	141	d	168	c
7	c	34	a	61	a	88	b	115	c	142	a	169	b
8	b	35	c	62	c	89	b	116	c	143	d	170	a
9	c	36	b	63	b	90	b	117	d	144	c	171	b
10	b	37	c	64	a	91	a	118	c	145	b	172	b
11	b	38	b	65	c	92	a	119	b	146	d	173	b
12	a	39	d	66	a	93	a	120	a	147	b	174	c
13	a	40	a	67	d	94	b	121	b	148	c	175	c
14	b	41	b	68	c	95	a	122	a	149	d	176	d
15	d	42	d	69	b	96	c	123	c	150	d	177	d
16	a	43	a	70	b	97	b	124	c	151	a		
17	c	44	d	71	a	98	b	125	b	152	b		
18	d	45	a	72	a	99	c	126	b	153	d		
19	c	46	b	73	b	100	c	127	b	154	c		
20	a	47	c	74	a	101	c	128	c	155	c		
21	b	48	b	75	a	102	a	129	a	156	a		
22	c	49	d	76	b	103	c	130	c	157	b		
23	a	50	a	77	b	104	c	131	a	158	a		
24	b	51	b	78	b	105	a	132	b	159	c		
25	c	52	d	79	a	106	d	133	c	160	d		
26	d	53	a	80	b	107	b	134	b	161	b		
27	d	54	c	81	c	108	b	135	d	162	c		

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