QB365 Question Bank Software Study Materials

Applied Statistics 50 Important 1 Marks Questions With Answers (Book Back and Creative)

12th Standard

Business Maths and Statistics

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

1) A time series is a set of data recorded _____.

(a) Periodically (b) Weekly (c) successive points of time **(d) all the above**

2) A time series consists of _____.

(a) Five components **(b) Four components** (c) Three components (d) Two components

3) The components of a time series which is attached to short term fluctuation is _____.

(a) Secular trend (b) Seasonal variations (c) Cyclic variation **(d) Irregular variation**

4) Factors responsible for seasonal variations are _____.

(a) Weather (b) Festivals (c) Social customs **(d) All the above**

5) The additive model of the time series with the components T, S, C and I is _____.

(a) $y = T + S + C \times I$ (b) $y = T + S \times C \times I$ **(c) $y = T + S + C + I$** (d) $y = T + S \times C + I$

6) Least square method of fitting a trend is _____.

(a) Most exact (b) Least exact (c) Full of subjectivity (d) Mathematically unsolved

7) The value of 'b' in the trend line $y = a + bx$ is _____.

(a) Always positive (b) Always negative **(c) Either positive or negative** (d) Zero

8) The component of a time series attached to long term variation is trended as _____.

(a) Cyclic variation **(b) Secular variations** (c) Irregular variation (d) Seasonal variations

9) The seasonal variation means the variations occurring with in _____.

(a) A number of years **(b) within a year** (c) within a month (d) within a week

10) Another name of consumer's price index number is: _____.

(a) Whole-sale price index number **(b) Cost of living index** (c) Sensitive (d) Composite

11) Cost of living at two different cities can be compared with the help of _____.

(a) Consumer price index (b) Value index (c) Volume index (d) Un-weighted index

12) Laspeyre's index = 110, Paasche's index = 108, then Fisher's Ideal index is equal to: _____.

(a) 110 (b) 108 (c) 100 **(d) 109**

13) Most commonly used index number is: _____.

(a) Volume index number (b) Value index number **(c) Price index number** (d) Simple index number

14) Consumer price index are obtained by: _____.

(a) Paasche's formula (b) Fisher's ideal formula (c) Marshall Edgeworth formula **(d) Family budget method formula**

15) Which of the following Index number satisfy the time reversal test?

(a) Laspeyre's Index number (b) Paasche's Index number **(c) Fisher Index number** (d) All of them

16) While computing a weighted index, the current period quantities are used in the: _____.

(a) Laspeyre's method **(b) Paasche's method** (c) Marshall Edgeworth method (d) Fisher's ideal method

17) The quantities that can be numerically measured can be plotted on a _____.

(a) p - chart (b) c – chart **(c) x bar chart** (d) np – chart

18) How many causes of variation will affect the quality of a product?

(a) 4 (b) 3 **(c) 2** (d) 1

19) Variations due to natural disorder is known as _____.

(a) random cause (b) non-random cause (c) human cause (d) all of them

20) The assignable causes can occur due to _____.

(a) poor raw materials (b) unskilled labour (c) faulty machines **(d) all of them**

21) A typical control charts consists of _____.

(a) CL, UCL (b) CL, LCL **(c) CL, LCL, UCL** (d) UCL, LCL

22) $\bar{X}$ chart is a _____.

(a) attribute control chart **(b) variable control chart** (c) neither Attribute nor variable control chart

(d) both Attribute and variable control chart

23) R is calculated using _____.

(a) $x_{max} - x_{min}$ (b) $x_{min} - x_{max}$ (c) $\bar{x}_{max} - \bar{x}_{min}$ (d) $\bar{\bar{x}}_{max} - \bar{\bar{x}}_{min}$

24) The upper control limit for $\bar{X}$ chart is given by _____.

(a) $\bar{X} + A_2\bar{R}$ (b) $\bar{\bar{X}} + A_2 R$ **(c)** $\bar{\bar{X}} + A_2\bar{R}$ (d) $\bar{\bar{X}} + A_2\bar{\bar{R}}$

25) The LCL for R chart is given by _____.

(a) $D_2\bar{R}$ (b) $D_2\bar{\bar{R}}$ (c) $D_3\bar{\bar{R}}$ **(d)** $D_3\bar{R}$

26) The component of a time series which is attached to short term fluctuations is _____

(a) Seasonal variations (b) Cyclic variation (c) Irregular variation **(d) all the above**

27) A decline in the sales of ice cream during November to March is associated with _____

(a) Seasonal variation (b) Cyclical variation (c) random variation (d) Secular trend

28) Index numbers are expressed in terms of _____

(a) percentages (b) ratios (c) absolute value (d) all the above

29) Most commonly used index numbers are _____ index number

(a) diffusion (b) price (c) value **(d) none of these**

30) Variation due to assignable causes in the product occur due to, _____

(a) faulty process (b) carelessness of operators (c) poor quality of raw material **(d) all the above.**

31) An additive model of time series with the components T, S, C and I is _____

(a) y = T + S + C - I (b) y = T + S x C + I **(c) y = T + S + C + I** (d) y = T + S + C x I

32) The normal equations for estimating a and b so that the line y = ax + b may be the line of best fit are _____

(a) $a\Sigma x^2 + b\Sigma x = \Sigma xy$, $a\Sigma x + nb = \Sigma y$ (b) $a\Sigma x + b\Sigma x^2 = \Sigma xy$, $a\Sigma x^2 + nb = \Sigma y$ (c) $a\Sigma x + nb = \Sigma xy$, $a\Sigma x^2 + b\Sigma x = \Sigma y$

(d) $a\Sigma x^2 + nb = \Sigma xy$, $a\Sigma x + b\Sigma x = \Sigma y$

33) In a line of best fit y = 5.8 (x - 1994) + 41.6, the value of y when x = 1997 is _____

(a) 50 (b) 54 **(c) 59** (d) 60

34) Fine data relating to x and yare to be fit in a straight line. It is found that Σx = 0 and Σy = 15. Then the y- intercept of the line is_____

(a) 1 (b) 2 **(c) 3** (d) 42

35) The normal equations of fitting a straight line y = ax+ b are 10a + 5b = 15 and 30a + 10b = 43. The slope of the line of best fit is _____

(a) 1.2 **(b) 1.3** (c) 13 (d) 12

36) Choose the odd one out

(a) Secular trend (b) seasonal variation **(c) Simple averages** (d) cyclic variations

37) Choose the odd one out

(a) Diagnose the lack of quality in raw material (b) Identify the lack of quality in machines

(c) To check whether the end product has the quality what the consumer expects from the manufacturer

(d) To compare the cost ofliving with the current year

38) Choose the odd one out

(a) It aims at a certain quality level to be guaranteed to the customers (b) It is easy to interpret

(c) It is easy to construct (d) It has three control lines

39) The components used in the time series y = T + S + C + l are _____

(a) seasonal **(b) secular** (c) trend value (d) original value

40) The methods of measurements of trends are _____

(a) Graphic (b) semi averages (c) least squares **(d) control charts**

41) The terms prosperty, recession, depression and recovery are in particular attached in _____

(a) secular trend (b) seasonal fluctuation **(c) cyclic movements** (d) irregular variation

42) A decline in sale of ice cream during November to March is associated with _____

(a) seasonal variation (b) cyclical variation (c) random variation (d) secular trend

43) Index number is_____

(a) measure of relative change (b) special type of an average (c) a percentage relative **(d) all the above**

44) Most commonly used index numbers are _____

(a) diffusion index number (b) price index number (c) value index number **(d) none of these**

45) The weights used in Paasche,s formula belong to _____

(a) the base period **(b) the current period** (c) to any orbitary chosen period (d) none of these

46) Variation is the items produced in a factoring may be due to _____

(a) chance causes (b) assignable causes **(c) both (a) and (b)** (d) neither (a) or (b)

47) Chance variation in the manufactured product is _____

(a) controlable (b) not controlable (c) both (a) and (b) **(d) none of these**

48) The causes leading to vast variation in the specification of a product are usually due to _____

(a) random process **(b) assignable causes** (c) non-traceable causes (d) all the above

49) Variation due to assignable causes in the product occur due to _____

(a) faulty process (b) carelessness of operation (c) poor quality of raw materials **(d) all the above**

50) The normal equation for estimating a and b so that the line Y = aX+b may be the line of best fit are _____

(a) $a\Sigma X^2 + b\Sigma X = \Sigma XY, a\Sigma X + nb = \Sigma Y$ (b) $a\Sigma X + b\Sigma X^2 = \Sigma XY, a\Sigma X^2 + nb = \Sigma Y$

(c) $a\Sigma X + nb = \Sigma XY, a\Sigma X^2 + b\Sigma X = \Sigma Y$ (d) $a\Sigma X^2 + nb = \Sigma XY, a\Sigma X + b\Sigma X = \Sigma Y$