Question No: 1   (Marks: 1)   - Please choose one

The value of c2 is always ------------------

► <mark>Positive</mark>
► Negative
► ~
► None of these

Question No: 2   (Marks: 1)   - Please choose one

Which of the following indicates a strong positive correlation.
► $r = 0$
► $r = -0.793$
► <mark>$r = 0.913$</mark>
► $r = 0.45$

Question No: 3   (Marks: 1)   - Please choose one

Binomial expansion for $(3x - 2y)^0$ is equal to

► <mark>1</mark>
► $(3x - 2y)$
► $(0 \times 3x - 2y)$
► $(3x - 0 \times 2y)$

Question No: 4   (Marks: 1)   - Please choose one

New forecast =……

► <mark>Old forecast + proportion of error□..</mark>
► Old forecast - proportion of error □

► Old forecast * proportion of error □

► Old forecast / proportion of error □

Question No: 5   (Marks: 1)   - Please choose one

Which is the correct syntax for the determinant of a matrix given by the following array

	A	B	C	D	E	F
1						
2		Data	Data	Data	Data	
3						
4		3	2	4	3	
5		-1	3	5	4	
6		8	13	8	-9	
7		8	-8	4	1	
8						
9						
10						
11						
12						
13						

► =DETERM(B4:E7)

► =MDTERM(B4:E7)

► =MDETERM(B4:E7)

► =MDETERM(B4;E7)

Question No: 6   (Marks: 1)   - Please choose one

If C is the cost and S is the selling price of a certain item then the formula for its markup is given by

► (S-C)/S *100%

► (S-C)/C *100%

► (C-S)/S *100%

► (C-S)/C *100%

Question No: 7   (Marks: 1)   - Please choose one

There is an investment of _____ of basic salary on behalf of the employee in Provident Fund

► $1/11^{th}$

► $2/11^{th}$

► $3/11^{th}$

► $5/11^{th}$

Question No: 8   (Marks: 1)   - Please choose one

VDB returns the depreciation of an asset for

► Zero period

► One period

► Two period

►<mark>Any arbitrary period</mark>

Question No: 9   (Marks: 1)   - Please choose one

Solve x – 16 = 12 for x.

► 4
►<mark>28</mark>
► –4
► –28

Question No: 10   (Marks: 1)   - Please choose one

Syntax for the Poisson distribution is

►<mark>POISSON(x, mean, cumulative)</mark>

► POISSON(x, mode, cumulative)

► POISSON(x, median, cumulative)

► POISSON(x, y, mean, cumulative)

Question No: 11   (Marks: 1)   - Please choose one

Men tend to marry women who are slightly younger than themselves.
Suppose that every man married a woman who was exactly .5 of a year
younger than themselves. Which of the following is CORRECT?

► The correlation is –.5.
► The correlation is .5.
►<mark>The correlation is 1.</mark>
► The correlation is –1.
► The correlation is 0

Question No: 12   (Marks: 1)   - Please choose one

If high or low numbers have a significant effect on a list of numbers, the ----------- may
be better than the mean.

► mode
► median
► range
► quartile

Question No: 13   (Marks: 1)   - Please choose one
If you invest some amount at an interest rate of 8%, then at the end of 9 years.
What will be the value of Accumulation Factor?
► 12.736
► 12.487
► 12.965
► 12.856

Question No: 14   (Marks: 1)   - Please choose one
Which of the following is not a measure of central tendency
► Percentile
► quartile
► standard deviation
► mode

Question No: 15   (Marks: 1)   - Please choose one
If the dependent variable increases with the independent variable then the coefficient of
correlation is
► 0 to -1

► 0 to – 0.5

► 0 to -2

► 0 to 1

Question No: 16   (Marks: 1)   - Please choose one
There are 5 Rock songs, 6 Carnatic songs and 3 Indian pop songs. How many different
albums can be formed using the above repertoire if the albums should contain at least 1
Rock song and 1 Carnatic song?
► 15624
► 16384
► 6144
► 240

Question No: 17   (Marks: 1)   - Please choose one
In given Qrtly, data the first step in computing seasonal index is calculating

► <mark>4 qtr moving average</mark>

► Discard highest and lowest values

► 4 qtr. Moving total

► 2 qtr. Moving total

Question No: 18   (Marks: 1)   - Please choose one

The variance is
 ► Found by dividing by *N* by the mean.
 ► In the same units as the original data.
 ► <mark>Found by squaring the standard deviation</mark>
 ► Calculate by dividing the S.D. with mean

Question No: 19   (Marks: 1)   - Please choose one

 If many data points are close to the mean, then the standard deviation is -----------.
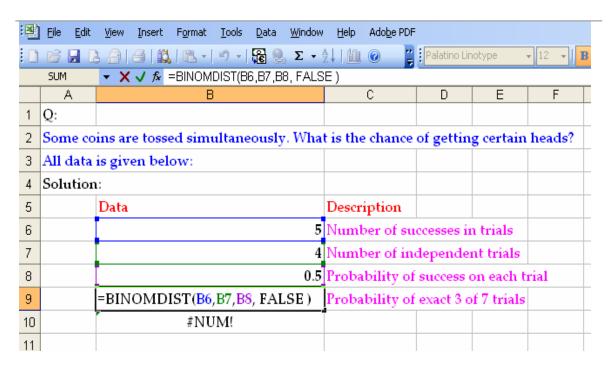
 ► 0
 ► <mark>Small</mark>
 ► Large
 ► Middle value

Question No: 20   (Marks: 1)   - Please choose one

 In a linear regression of y on x, y = a + bx,
 ► the variance of x is constant for all values of y
 ► a fitted straight line goes through (0, 0)
 ► Both variables have the same variance
 ► <mark>x is the explanatory variable</mark>

Question No: 21   (Marks: 2)

	A	B	C	D	E	F
		=BINOMDIST(B6,B7,B8, FALSE)				
1	Q:					
2	Some coins are tossed simultaneously. What is the chance of getting certain heads?					
3	All data is given below:					
4	Solution:					
5		Data	Description			
6			5 Number of successes in trials			
7			4 Number of independent trials			
8			0.5 Probability of success on each trial			
9		=BINOMDIST(B6,B7,B8, FALSE)	Probability of exact 3 of 7 trials			
10		#NUM!				
11						

The answer of BINIMDIST is #NUM. Give the reason of this error message.

Solution:

5 > 4

Success are greater than total..... Not possible

Question No: 22   (Marks: 2)

If Y = a + 2 X, find the value of a when Y = 7 and x = 2.

Solution:

Y=a+2X

7=a+2(2)

7=x+4

7-4=a

a=3

Question No: 23   (Marks: 2)

What is the mode of the following data?

Solution:

Mode = Most Repeated Value in Data.

Mode= 3.5 and 5.9

Question No: 24   (Marks: 3)

Explain negative binomial distribution.

It returns the probability that there will be number failures before the number_s-th success, when the constant probability of a success is probabilities. This function is similar to the binomial distribution, except that the number of successes is fixed, and the number of trials is variable. Like the binomial, trials are assumed independent.

Question No: 25   (Marks: 3)

 Construct a sample space S, if you toss a coin THREE times and observe the sequence of heads (H) and tails (T) those appears.

When we toss a coin then head or tail is come
So we have three tries and possibilities are as follows.

(HHT),(HTT),(HHH),(THH),(TTH),(TTT)

Question No: 26   (Marks: 3)

 Eleven subjects carried out the same task using a pocket calculator. The times (in seconds) taken were: 69, 75, 83, 58, 95, 72, 86, 88, 77, 79, 90. Find the range & median .

58	69	72	75	77	79	83	86	88	90	95

$$Median = \frac{n+1}{2}$$

$$Median = \frac{11+1}{2}$$

$$Median = \frac{12}{2}$$

$$Median = 6^{th} Value$$

$$Median = 79$$

$$Range = L\arg est - Smallest$$

$$Range = 95 - 58$$

$$Range = 37$$

Question No: 27   (Marks: 5)

The length of life for a washing machine approximately normally distributed, with a mean of 4 years and a S.D of 1.5 years. If this type of washing machine is guaranteed for 12 months. What percentage of the sale will require replacement?

Don't Understand…..

Question No: 28   (Marks: 5)

If Sample space S = {1,2,3,..........,9}, event A ={2, 4, 6, 8} and event B ={1, 3, 5}
Find the probability of A or B happening.

:-s

Question No: 29   (Marks: 5)

Find the mean, median, mode, and range for the following list of values:
1, 2, 4, 7

Solution:

Mean=1+2+4+7/4
Mean=14/4
Mean=3.5

Median=n+1/2
Median= 4+1/2
Median = 5/2
Median = 2.5

Median = 2+0.5(4-2)
Median = 2+0.5(2)
Median = 2+1
Median = 3

Mode = Most Repeated Value
Mode = Null

Range = Largest – Smallest
Range = 7 – 1
Range = 6

Question No: 30   (Marks: 10)

Find the Median , Midhinge , Midrange for the following data values:
10, 13, 14, 12, 13, 19, 22,23,24

Solution:

10	12	13	13	14	19	22	23	24

$$Median = \frac{n+1}{2}$$

$$Median = \frac{9+1}{2}$$

$$Median = \frac{10}{2}$$

$$Median = 5$$

$$Midhing = Q_1 + Q_3$$

$$Q_1 = \frac{n+1}{4}$$

$$Q_1 = \frac{9+1}{4}$$

$$Q_1 = \frac{10}{4}$$

$$Q_1 = 2.5$$

$$Q_3 = \frac{3(n+1)}{4}$$

$$Q_3 = \frac{3(9+1)}{4}$$

$$Q_3 = \frac{3(10)}{4}$$

$$Q_3 = \frac{30}{4}$$

$$Q_3 = 7.5$$

$$Midhing = Q_1 + Q_3$$

$$Midhing = 2.5 + 7.5$$

$$Midhing = 10$$

$$Mid - Range = \frac{Larg\,est - Smallest}{2}$$

$$Mid - Range = \frac{24 - 10}{2}$$

$$Mid - Range = \frac{14}{2}$$

$$Mid - Range = 7$$

Question No: 31   (Marks: 10)

Calculate the mean deviation of the following series.

Size	:	4	6	8	10	12	14	16
Frequency	:	2	4	5	3	2	1	4

Solution:

Size	Frequency	FX	$(X - \bar{X})$	$(X - \bar{X})^2$	$F(X - \bar{X})^2$
4	2	8	-4.5	20.25	40.5
6	4	24	-2.5	6.25	25
8	5	40	-0.5	0.25	1.25
10	3	30	1.5	2.25	6.75
12	2	24	3.5	12.25	24.5
14	1	14	5.5	30.25	30.25
16	4	64	7.5	56.25	225
Sum=61	Sum=24	Sum=204		Sum=127.75	Sum=353.25

$$Mean = \frac{\sum fx}{\sum f}$$

$$Mean = \frac{204}{24}$$

$$Mean = 8.5$$

$$S.D = \sqrt{\frac{\sum f(X - \bar{X})^2}{\sum f}}$$

$$S.D = \sqrt{\frac{353.25}{204}}$$

$$S.D = \sqrt{1.7316}$$

$$S.D = 1.316$$