MIDTERM EXAMINATION
Spring 2009
STA301- Statistics and Probability (Session - 2)

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

A histogram consists of a set of adjacent rectangles whose bases are marked off by:

- ► Class boundaries
- ► Class limits
- ► Class marks
- ► Class frequency

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

Stem and leaf was introduced by:

- ► Francis Galton
- ► Friedman
- ► John Tukey
- ► Pearson

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

For positively skewed distribution
Mean…….Median…….Mode:

- ► =
- ► <
- ► >
- ► ≠

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

For a positively skewed distribution:

- ► Mean<Mode<Median
- ► Mdian<Mode>Mean
- ► Mode>Mean>Median
- ► Mean>Median>Mode

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

${}^{5}C_{5}$ *equals* :

- ► 1
- ► 5
- ► 10
- ► 25

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

If a curve has a longer tail to the right, it is called :

- ► Positively skewed
- ► negatively skewed
- ► J-shaped
- ► symmetric

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

In measures of relative dispersion unit of measurement is:

► Changed

► Vanish

► Does not changed

► Dependent

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

Data used by an agency which is originally collected by them is :

► Primary data

► Raw data

► Secondary data

► Grouped data

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

When we toss a coin , we get only:

► 1 outcome

► 2 outcomes

► 3 outcomes

► 4 outcomes

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

Which of the following is the class frequency

- ► The number of observations in each class
- ► The difference between consecutive lower class limits
- ► Always contains at least 5 observations
- ► Usually a multiple of the lower limit of the first class

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

Standard deviation is affected by the change of_____:

- ► Origin & scale
- ► Origin only
- ► Scale only
- ► Not origin & scale

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

For a moderately skewed distributions, the approximate percentage of case included between $\bar{X} - 2S$ and $\bar{X} + 2S$ is :

- ► 99.7%
- ► 68%
- ► 95%
- ► 50%

Question No: 13 (Marks: 1) - Please choose one

A die is rolled. What is the probability that the number rolled is greater than 2 and even:

► 1/2

► 1/3

► 2/3

► 5/6

Question No: 14 (Marks: 1) - Please choose one

The probability of drawing any one spade card is:

► 1/52

► 4/52

► 13/52

► 52/52

Question No: 15 (Marks: 1) - Please choose one

Which of the following is not the type of frequency curves?

► The symmetrical frequency curve

► The extremely skewed frequency curve

► The U-shaped frequency curve

► Frequency polygon

Question No: 16 (Marks: 1) - Please choose one

If the third moment about mean is zero $(m_3 = 0)$, then the distribution is:

► Symmetrical

- ► Negatively skewed
- ► Positively skewed
- ► Mesokurtic

Question No: 17 (Marks: 1)

Illustrate the use of relative frequency:

Question No: 18 (Marks: 1)

Elaborate the word dispersion.

Question No: 19 (Marks: 2)

Give an example for each of the discrete and continuous variables.

Question No: 20 (Marks: 3)

Give an example each of primary and secondary data.

Question No: 21 (Marks: 5)

Find out the cumulative relative frequency distribution from the following data:

Y	6	7	8	9	10	11	12	13
f	24	66	80	48	28	14	4	1

Where Y denotes the number of hours worked in a day by workmen in a factory.

Question No: 22 (Marks: 10)

A random variable X has the following probability distribution:

X	-2	-1	0	1	2	3
P(x)	0.1	K	0.2	2k	0.3	3k

Find the value of K.