

## MIDTERM EXAMINATION

Spring 2009

STA301- Statistics and Probability (Session - 1)

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

---

Which of the following is a systematic arrangement of data into rows and columns:

- ▶ Component bar chart
- ▶ Classification
- ▶ Tabulation
- ▶ Bar chart

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

---

For any number  $k \dots\dots\dots 1$ , at least  $1 - 1/k^2$  of the data-values fall within  $k$  standard deviations of the mean:

- ▶ Greater than 1
- ▶ Less than 1
- ▶ Greater or equal to 1
- ▶ Less or equal to 1

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

---

If Mean = 25 & S.D is 5 then C.V is

- ▶ 100%
- ▶ 25%
- ▶ 20%
- ▶ 10%

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

---

When E is an impossible event, then  $P(E)$  is:

- ▶ 0
- ▶ 0.5
- ▶ 1
- ▶ 2

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

---

The data for an ogive is found in which distribution:

- ▶ A cumulative frequency distribution
- ▶ A relative frequency distribution
- ▶ A frequency distribution
- ▶ A joint frequency distribution

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

---

Which of the following statements is true regarding a sample:

- ▶ It is a part of population
- ▶ It must contain at least five observations
- ▶ It refers to descriptive statistics
- ▶ It produces True value

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

---

Which level of measurement is required for the median:

- ▶ Nominal
- ▶ Ordinal
- ▶ Interval
- ▶ Ratio

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

---

In a the regression line  $Y = a + bX$  the variable which is non-random is:

- ▶ X
- ▶ Y
- ▶ Both X and Y
- ▶ Neither X nor Y

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

---

The variable plotted on the horizontal or X-axis in a scatter diagram is called the:

- ▶ Scatter variable
- ▶ Independent variable
- ▶ Dependent variable
- ▶ Correlation variable

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

---

Which is the formula of range:

- ▶  $x_m - x_0$

►  $x_0 - x_m$

►  $\frac{x_0 - x_m}{2}$

►  $\frac{x_0 + x_m}{2}$

►

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

---

The descriptive measure of dispersion that is based on the concept of a deviation about the mean is:

- Range
- Interquartile range
- Quartile deviation
- Standard deviation

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

---

Which branch of statistics deals with the techniques that are used to organize, summarize, and present the data:

- Advance statistics
- Probability statistics
- Descriptive statistics
- Inferential statistics

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

---

A population that can be defined as the aggregate of all the conceivable ways in which a specified event can happen is known as:

- ▶ Infinite population
- ▶ Finite population
- ▶ Concrete population
- ▶ Hypothetical population

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

---

First moment about origin is always equals to:

- ▶ Mean
- ▶ Variance
- ▶ Standard Deviation
- ▶ Zero

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

---

When two dice are rolled, the numbers of possible sample points are:

- ▶ 6
- ▶ 12
- ▶ 24
- ▶ 36

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

---

The correlation of coefficient lies between :

- ▶ 0 to 1

► 0 to  $\infty$

► - 1 to +1

► +1 to  $\infty$

---

**Question No: 17 ( Marks: 1 )**

What is a sample?

---

**Question No: 18 ( Marks: 1 )**

What do you mean by real data?

---

**Question No: 19 ( Marks: 2 )**

Explain the concept of an average:

---

**Question No: 20 ( Marks: 3 )**

What is an average? Why it is called a “measure of central tendency” and a “measure of location”?

---

**Question No: 21 ( Marks: 5 )**

If distribution has mean 1403 and mode 1487, what can you say about the skewness?

---

**Question No: 22 ( Marks: 10 )**

First four moments of a certain distribution about  $Y = 17.5$  are 0.3, 74, 45, and 12125 respectively. Find out whether the distribution is Leptokurtic or Platykurtic.