MIDTERM EXAMINATION (Spring 2011)
STA301- Statistics and Probability

Question No: 1 (Marks: 1) - Please choose one
A five number summery consist of :

► $X_0, Q_1, Median, Q_3, and X_m$ (Page 97)

► $X_m, Q_1, Mean, Q_3, and\ X_0$

► $X_m, Q_1, Mode, Q_3, and\ X_0$

► $X_0, Q_1, Median, Q_2, and X_m$

Question No: 3 (Marks: 1) - Please choose one
in a multiplication theorem $P(A \cap B)$ equals:

►P(A) P(B)
►P(A) + P(B)
►P(A) * P(B|A) (Page 159)
►P(B\A) * P(B)

Question No: 4 (Marks: 1) - Please choose one
The probability of drawing 'White' ball from a bag containing 4 red , 8 black and 3 white ball is

►0
►3/15
►1/12
►1/2

Question No: 6 (Marks: 1) - Please choose one
If *A* and *B* are mutually exclusive events then *P*(*A* or *B*) equals:

►*P*(*A*) + *P*(*B*) - *P*(*A* and *B*)
►*P*(*A*) * *P*(*B*)
►*P*(*A*) + *P*(*B*) (Page 155)
►*P*(*A*|*B*) + *P*(*B*|*A*)

Question No: 7 (Marks: 1) - Please choose one
The simultaneous occurrence of two events is called
►Prior probability
►Subjective probability not confirmed
►Conditional probability
►Joint probability click here for detail

Question No: 8 (Marks: 1) - Please choose one
First moment about origin is always equals to:
►Mean (Page 119)
►Variance
►Standard Deviation
►Zero

Question No: 9 (Marks: 1) - Please choose one
Which one of the following measurement does ***not*** divide a set of observations into equal parts?

► Quartiles
► Deciles
► Percentiles
► Standard deviations

Question No: 10 (Marks: 1) - Please choose one
if first and third quartile are 21.16 and 56.36 respectively, then the quartile deviation is:
►17.1 (Page 84)
►34.2
►51.3
►50.5

Question No: 11 (Marks: 1) - Please choose one
The height of student is 60 inch. This is an example of……?
►Continues data
►Qualitative data
►Categorical data
►Discrete data

Question No: 12 (Marks: 1) - Please choose one
Which of the statement is true regarding a sample?
►It is a part of population (Page 13)
►It must contain at least five observations
►It refers to descriptive statistics
►It produces true value

Question No: 13 (Marks: 1) - Please choose one
Which one of the following graphs is used for a time series data?

► Histogram
► Historigram
► Frequency curve
► **Frequency polygon** Click here for detail

Question No: 14 (Marks: 1) - Please choose one
Which of the following comes first to make frequency distribution

►No. of groups
►Class intervals
►**Rang** **(Page 28)**
►Tally marks

Question No: 15 (Marks: 1) - Please choose one
The average which is defines as reciprocal of arithmetic mean of the reciprocals of the values is called

►Geometric Mean
►**Harmonic mean** **(Page 77)**
►Mode
►Median

Question No: 16 (Marks: 1) - Please choose one
If a car is running at the rate of 15km/hr during first 30km, at 20km/hr during the second 30, which type of average will be used to find the average speed/hr:

►**Weighted mean** **(Not sure)**
►Harmonic mean
►Arithmetic mean
►Geometric mean

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

MIDTERM EXAMINATION (Spring 2011)
STA301- Statistics and Probability

Question No: 1 (Marks: 1) - Please choose one
The probability of drawing a 'jack card 'from 52 playing cards is:

- ► $\frac{1}{52}$
- ► $\frac{4}{52}$
- ► $\frac{13}{52}$
- ► $\frac{26}{52}$

Question No: 2 (Marks: 1) - Please choose one
If all the values fall on the same straight line and the line has a positive slope then what will be the value of the correlation coefficient '**r**':

- ► $0 \leq r \leq 1$
- ► $r \geq 0$
- ► **r = +1**
- ► r=-1

Question No: 3 (Marks: 1) - Please choose one
If a curve has a longer tail to the right, it is called:

- ► **Positively skewed (Page 39)**
- ► Negatively skewed
- ► J-shaped
- ► Symmetric

Question No: 04 (Marks: 1) - Please choose one
Which one of the following is not included in measures of central tendency?

- ► **Quartile deviation (Page 82)**
- ► Harmonic mean
- ► Geometric mean
- ► Arithmetic mean

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

Question No: 05 (Marks: 1) - Please choose one
Which of the following is not based on all the observations?

► Arithmetic Mean
► Geometric Mean
► Harmonic mean
► **Mode**

Question No: 06 (Marks: 1) - Please choose one
What is the Standard Deviation of 7, 7, 7, 7, 7, 7, 7

►49
►1
►**0** **Standard deviation will always be zero if all the values in data are same**
►7

MIDTERM EXAMINATION (Spring 2010)
STA301- Statistics and Probability (Session - 4)

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

► 362880
► **3628800**
► 362280
► 362800

Question No: 2 (Marks: 1) - Please choose one
If a player well shuffles the pack of 52 playing cards, then the probability of a black card from 52 playing cards is:

►1/52
► **13/52**
►4/52
►**26/52**

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

Question No: 3 (Marks: 1) - Please choose one
The probability of drawing a 'jack card 'from 52 playing cards is:

►1/52
►4/52
►13/52
►26/52

Question No: 4 (Marks: 1) - Please choose one
Which dispersion is used to compare variation of two series?

► C.V. (Page 93)
► Q.D.
► M.D.
► S.D.

Question No: 5 (Marks: 1) - Please choose one
If all the values fall on the same straight line and the line has a positive slope then what will be the value of the correlation coefficient '**r**':

► $0 \leq r \leq 1$
► $r \geq 0$
► r = +1 (Page 129)
► r=-1

Question No: 6 (Marks: 1) - Please choose one
In a regression line Y= a + bX, the value of the correlation coefficient will be zero if:

►Intercept a = 0
► Intercept $a \neq 0$
►Slope b = 0
►Slope $b \neq 0$

Question No: 7 (Marks: 1) - Please choose one
When two coins are tossed the probability of at least one head is:

► 1/4
► 3/4 (HH, HT, TH, TT)
► 2/4
► 4/4

Question No: 8 (Marks: 1) - Please choose one
Which one of the following measurement does ***not*** divide a set of observations into equal parts?

- ► Quartiles
- ► Deciles
- ► Percentiles
- ► **Standard deviations rep**

Question No: 9 (Marks: 1) - Please choose one
In the model Y = mX + a, Y is also known as the:

- ► Predictor variable
- ► Independent variable
- ► **Predicted (dependent) variable (Page 121)**
- ► Explanatory variable

Question No: 10 (Marks: 1) - Please choose one
According to empirical rule approximately 95% of the measurements will fall under which interval?

- ► $\bar{X} \pm S$
- ► $\bar{X} \pm 2S$ **correct**
- ► $\bar{X} \pm 3S$
- ► $\bar{X} \pm 4S$

Question No: 11 (Marks: 1) - Please choose one
Which one of the following is written at the top of the table?

- ► Source note
- ► Foot note
- ► Prefatory note
- ► **Title** **Click here for detail**

Question No: 12 (Marks: 1) - Please choose one
If a curve has a longer tail to the right, it is called:

- ► **Positively skewed rep**
- ► Negatively skewed
- ► J-shaped
- ► Symmetric

Question No: 13 (Marks: 1) - Please choose one
Which one 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: 14 (Marks: 1) - Please choose one
If X is a discrete random variable, then the function $f(x)$ is

- A probability function
- A probability density function
- A density function
- **A distribution function (Page 173)**

Question No: 15 (Marks: 1) - Please choose one
Which one of the following graphs is used for a time series data?

- **Histogram**
- Historigram
- Frequency curve
- **Frequency polygon**

Question No: 16 (Marks: 1) - Please choose one
If you connect the mid-points of rectangles in a histogram by a series of lines that also touches the x-axis from both ends, what will you get?

- Ogive
- Frequency polygon
- **Frequency curve (Page 38)**
- Historigram

Question No: 17 (Marks: 1) - Please choose one
If mean of the two observations is 10.5, then median of these two observations will be:

- 7.5
- 8.5
- 9.5
- **10.5 (Page 68)**

Question No: 18 (Marks: 1) - Please choose one
Which one is the formula of mid range?

- ► $x_m - x_0$
- ► $x_0 - x_m$
- ► $\frac{x_0 - x_m}{2}$
- ► $\frac{x_0 + x_m}{2}$ **(Page 80)**

Question No: 19 (Marks: 1) - Please choose one
Which one of the following is not included in measures of central tendency?

- ► **Quartile deviation (page 82)**
- ► Harmonic mean
- ► Geometric mean
- ► Arithmetic mean

Question No: 20 (Marks: 1) - Please choose one
For the given data 2, 3, 7, 0, -8 G. M will be:

- ► Negative
- ► Positive
- ► **Zero (Page 75)**
- ► Undefined

MIDTERM

Question No: 2 (Marks: 1) - Please choose one
The probability of drawing a 'jack card 'from 52 playing cards is:

►1/52
►13/52
►4/52 rep
►26/52

Question No: 3 (Marks: 1) - Please choose one
In a regression line Y= a + bX, the value of the correlation coefficient will be zero if:

► Intercept a = 0 rep
► Intercept a ≠ 0
► Slope b = 0
► Slope b ≠ 0

Question No: 4 (Marks: 1) - Please choose one
Which one of the following measurement does ***not*** divide a set of observations into equal parts?

► Quartiles
► Deciles
► Percentiles
► Standard deviations rep

Question No: 5 (Marks: 1) - Please choose one
Which one of the following graphs is used for a time series data?

► Histogram
► Historigram
► Frequency curve
► Frequency polygon rep

Question No: 6 (Marks: 1) - Please choose one
If you connect the mid-points of rectangles in a histogram by a series of lines that also touches the x-axis from both ends, what will you get?

► Ogive
► Frequency polygon
► Frequency curve (Page 38) rep
► Historigram

Question No:7 (Marks: 1) - Please choose one
Which one is equal to explained variation divided by total variation?

►Sum of square due to regression
► **Coefficient of determinant** Click here for detail
►Standard error estimate
► Coefficient of correlation

Question No: 8 (Marks: 1) - Please choose one
in the given series 1,2,1,1,2,2,2,3,4,5,3,2,3,1,4,2,3 mode of given is
► 4
► 3
►1
► **2**

Question No: 9 (Marks: 1) - Please choose one
True for the population,
► it must be large number of values
► It must refer to people
► **It is collection of individual objects or measurement** **(Page 12)**
► It is the small part of whole

Question No:10 (Marks: 1) - Please choose one
Data arrangement in ascending or descending order
► **Array data** **(Page 47)**
► Group data
► Ungroup data
► Raw data

Question No: 11 (Marks: 1) - Please choose one
What is the main objective of Descriptive statistics?
► To test population properties
► To describe the data we collected
► To infer something about the population
► **Making estimate** **Click here for detail**

Question No: 12 (Marks: 1) - Please choose one
Which measure of central tendency?
► Variation of distribution
► **Average of distribution** **(Page 51)**
► Scattering of distribution
► Dispersion of distribution

Question No: 13 (Marks: 1) - Please choose one
If a=4 b=2 estimate line (i.e y=a+bx) and independent variable has value 3 the value of dependent variable
► 6
► 9
► **10** **4+2(3)=10**
► 11

Question No: 14 (Marks: 1) - Please choose one
The number of ways in which 4 books can be arranged
► 4
► 6
► 12
► **24 (Page 142)**

Question No: 15 (Marks: 1) - Please choose one
If we plot paired observed (x,y)=1…….n on graph is called,
► Polygon
► Freasito diagram
► Scatter diagram
► Cumulative frequency diagram

Question No: 16 (Marks: 1) - Please choose one
The simultaneous occurrence of two events is called
► Descriptive probability
► Subjective probability
► Conditional probability
► **Joint probability**

Question No: 17 (Marks: 1) - Please choose one
Which one is the not measure of dispersion.
► The range
► **50th percentile**
► Inter quartile range
► Variance

Question No: 18 (Marks: 1) - Please choose one
In positively skew cure which relation is
► The mean, median and mode are equal
► **Mean is greater then median** **Click here for detail**
► Median is greater then mean
► Standard deviation must be greater then mean or median

Question No: 19 (Marks: 1) - Please choose one
When coin tossed we get only
►**1 outcome**
►2 outcomes
►3 outcomes
►4 outcomes

Question No: 20 (Marks: 1) - Please choose one
When mean is 25 and S.D is 5 then CV is

► 100%
► 25%
► **20%**
► 10%

MIDTERM EXAMINATION
Spring 2009
STA301- Statistics and Probability (Session - 1)

Question No: 1 (Marks: 1) - Please choose one
For a positively skewed distribution m_3 will be:
► **Positive** **(Page 119)**
► Negative
► Zero
► 1

Question No: 2 (Marks: 1) - Please choose one
When data is labeled to identify an attribute of element, the measurement scale is:
► **Ordinal** **(Page 9)**
► Interval
► Nominal
► Ratio

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

Suppose the estimated equation is $\hat{Y} = 5 - 2X$ has been calculated for a set of data. What is slop of the line:

- ► 0
- ► 2
- ► **-2 (Page 121)**
- ► 5

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

If P(B|A) = 0.25 and $P(A \cap B) = 0.20$, then P(A) is:

- ► 0.05
- ► **0.80 (Page 159)**
- ► 0.95
- ► 0.75

$$P(B \mid A) = \frac{P(A \cap B)}{P(A)}$$

$$= P(A) = \frac{P(A \cap B)}{P(B \mid A)}$$

$$= \frac{0.20}{0.25} = 0.80$$

Question No: 5 (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 (Page 61)**
- ► Inferential statistics

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

In a sample of 800 students in a university, 160, or 20%, are Business majors. Based on the above information, the school's paper reported that "20% of all the students at the university are Business majors." This report is an example of :

- ► A sample
- ► A population
- ► Statistical inference
- ► **Descriptive statistics**

Question No: 7 (Marks: 1) - Please choose one
A set that contains all possible outcomes of a system is known as

- Finite Set
- Infinite Set
- **Universal Set (Page 134)**
- No of these

Question No: 8 (Marks: 1) - Please choose one
If X and Y are independent, then Var(X-Y) is equal to:

- $Var(X)-Var(Y)$
- $Var(X)+Var(Y)$
- $Var(X+Y)$
- Zero

Question No: 9 (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: 10 (Marks: 1) - Please choose one
How to construct the class interval:

- Divide the class frequencies in half
- Divide the class frequency by the number of observations
- **Find the difference between consecutive lower class limits**
- Count the number of observations in the class

Question No: 11 (Marks: 1) - Please choose one
Data in the Population Census Report is:

- **Ungrouped data (Page 11)**
- Secondary data
- Primary data
- Arrayed data

Question No: 12 (Marks: 1) - Please choose one
What is the range of -2,-3,-5,-10 :

► **-12 (Page 28)**
► 8
► -8
► 2

Question No: 13 (Marks: 1) - Please choose one
The algebraic sum of deviations from mean is:
► Maximum
► Minimum
► **Zero (Page 86)**
► Undefined

Question No: 14 (Marks: 1) - Please choose one
The sum of squares of deviations from mean is:

► Undefined
► Zero
► **Maximum**
► Minimum

Question No: 15 (Marks: 1) - Please choose one
Statistic is a numerical quantity, which is calculated from:

► Population
► **Sample (Page 7)**
► Data
► Observations

Question No: 16 (Marks: 1) - Please choose one
Which of the following is not based on all the observations?
► Arithmetic Mean
► Geometric Mean
► Harmonic mean
► **Mode (rep)**

MIDTERM EXAMINATION
Spring 2009
STA301- Statistics and Probability (Session - 1)

Question No: 1 (Marks: 1) - Please choose one
If any value in the data is zero, then it is not possible to have:
►Harmonic Mean
►Arithmetic Mean
►Median
►**Mode (rep)**

Question No: 2 (Marks: 1) - Please choose one
For a symmetrical distribution……is equidistance from median:
►X0 and Xm
►**Q1 and Q3 (Page 97)**
►X0 and Q1
►Xm and Q3

Question No: 3 (Marks: 1) - Please choose one
Which one of the following measure is not used in 'five number summery':
X_0
Q_3
$\overline{X}$ (*Page* 97)
Q_1

Question No: 4 (Marks: 1) - Please choose one
If Mean = 25 & S.D is 5 then C.V is
►100%
►25%
►**20% (Page 93)**
►10%

Question No: 5 (Marks: 1) - Please choose one
A coin is tossed 3 times then, the number of sample points ii the sample space is:
►3
►8
►**6 (Page 145)**
►4

Question No: 6 (Marks: 1) - Please choose one
What is the difference between a permutation and a combination:
►**In a permutation order is important and in a combination it is not** Click here for detail
►In a permutation order is not important and in a combination it is important
►A combination is based on the classical definition of probability
►A permutation is based on the classical definition of probability

Question No: 7 (Marks: 1) - Please choose one
What we consider in simple correlation analysis:
►Several independent variables
►**Strength of the association between two variables (Page 128)**
►Intercept with the X-axis
►Intercept with the *Y*-axis

Question No: 8 (Marks: 1) - Please choose one
If all the values fall on the same straight line and the line has a positive slope then what will be the value of the correlation coefficient 'r':
►0 = r = 1
►r = 0
►**r = +1 (rep)**
►r=-1

Question No: 9 (Marks: 1) - Please choose one
Which of the following measure of dispersion is least affected by extreme values of observations in a data:
►**Range Page 82)**
►Quartile deviation
►Mean absolute deviation
►Standard deviation

Question No: 10 (Marks: 1) - Please choose one
The approximate number of observations in a set of data covered by the interval, $Median \pm Q.D$ are:
►**50 per cent (Page 84)**
►68.5 per cent
►95.4 per cent
►99 per cent

Question No: 11 (Marks: 1) - Please choose one
The dispersion which is calculated from all observed values is:
►**Standard deviation (Page 87)**
►Quartile deviation
►Rang
►Coefficient of Rang

Question No: 12 (Marks: 1) - Please choose one
In a set of 20 values all the values are 2, what is the value of Geometric Mean:
►**2** **(Page 75)**
►5
►10
►20

Question No: 13 (Marks: 1) - Please choose one
In a set of 10 values all the values are 5, what is the value of 5th Decile:

►2
►**5**
►10
►20

Question No: 14 (Marks: 1) - Please choose one
If a car is running at the rate of 15km/hr during first 30km, at 20km/hr during the second 30, which type of average will be used to find the average speed/hr:

►**W.M**
►H.M
►A.M
►G.M

Question No: 15 (Marks: 1) - Please choose one
In stem and leaf plot, data is measured on:

►Ratio Scale
►Interval Scale
►Ordinal scale
►**Nominal Scale**

Question No: 16 (Marks: 1) - Please choose one
In statistics, we deal with:

►Individuals
►Isolated items
►**Aggregates of facts** **(Page 7)**
►Qualitative data

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 …….1, at least 1 – 1/k2 of the data-values fall within k standard deviations of the mean:
►Greater than 1 (Page 97)
►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% (Page 93)rep
►10%

Question No: 4 (Marks: 1) - Please choose one When E is an impossible event,then P(E) is:
►0 (Page 146)
►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 (Page 43)
►A relative frequency distribution
►A frequency distribution
►A joint frequency distribution

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

Question No: 6 (Marks: 1) - Please choose one
Which of the following statements is true regarding a sample:

►**It is a part of population (Page 13) rep**
►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 Page 122)**
►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** Click here for detail
►Independent variable
►Dependent variable
►Correlation variable

Question No: 10 (Marks: 1) - Please choose one
Which is the formula of range:
► $x_m - x_0$ (*Page* 28)
► $x_0 - x_m$
► $\frac{x_m - x_0}{2}$
► $\frac{x_m + x_0}{2}$

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

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
►Inter quartile 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 (rep)
►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 (Page 12)

Question No: 14 (Marks: 1) - Please choose one
First moment about origin is always equals to:
►Mean Click here for detail
►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 (6*6=36)

Question No: 16 (Marks: 1) - Please choose one
The correlation of coefficient lies between :
►0 to 1
► 0 *to* ∞
►- 1 to +1 (Page 128)
► +1 *to* ∞

Muhammad Moaaz Siddiq – MCS(4th)
Moaaz.pk@gmail.com
Campus:- Institute of E-Learning & Moderen Studies (IEMS) Samundari

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

Question No: 1 (Marks: 1) - Please choose one
Median can be found only when:
►Data is Discrete
►Data is Attributed Data is continuous
►Data is continuous Data is attributed
►Data is arranged (Page 52)

Question No: 2 (Marks: 1) - Please choose one
From the following observations 2,3,4,5,4,6,4, the mode is:
►2
►3
►4
►5

Question No: 3 (Marks: 1) - Please choose one
How to construct the class interval:
►Divide the class frequencies in half
►Divide the class frequency by the number of observations
►Find the difference between consecutive lower class limits
►Count the number of observations in the class

Question No: 4 (Marks: 1) - Please choose one
How many elements are in the sample space of rolling one die:
►6
►12
►24
►36

Question No: 5 (Marks: 1) - Please choose one
When two coins are tossed the probability of at most one head is:
►1/4
►2/4
►3/4
►4/4

Question No: 6 (Marks: 1) - Please choose one
If *A* and *B* are mutually exclusive events then *P*(*A* or *B*) equals:
►*P*(*A*) + *P*(*B*) - *P*(*A* and *B*)
►*P*(*A*) * *P*(*B*)
►*P*(*A*) + *P*(*B*) (Page 155)
►*P*(*A*|*B*) + *P*(*B*|*A*)

Question No: 7 (Marks: 1) - Please choose one
In scatter diagram the variable plotted along Y-axis is:
►Independent variable
►Dependent variable
►Any one
►Undefined

Question No: 8 (Marks: 1) - Please choose one
Positive square root of variance of a distribution is:
►Rang
►Quartile deviation
►Standard deviation (Page 91)
►only (a) &(c)

Question No: 9 (Marks: 1) - Please choose one
When more values are lying at the start of the distribution, it is a:
►Symmetrical distribution
►Positively skewed
►Negatively skewed
►U shape figure

Question No: 10 (Marks: 1) - Please choose one
What is ‘ f_m ’ in the formula of mode:
►First frequency
►Last frequency
►Maximum frequency (Page 54)
►Minimum frequency

Question No: 11 (Marks: 1) - Please choose one
If median = 7 and Mean = 5, what is the value of Q_2 :
►1
►3
►5
►7 (because median = Q2)

Question No: 12 (Marks: 1) - Please choose one
The probability of drawing a king of spade from a pack of 52 cards is:

►1/4
►1/13
►1/26
►1/52

Question No: 13 (Marks: 1) - Please choose one
When referring to a curve whose longer tail is to the left, you would call it:

►U shape
►Skewed to the left (Page 39)
►Skewed to the right
►Symmetrical

Question No: 14 (Marks: 1) - Please choose one
In statistics,we deal with:

►Individuals
►Isolated items
►Aggregates of facts (Page 7) rep
►Qualitative data

Question No: 15 (Marks: 1) - Please choose one
When data is labeled to identify an attribute of element, the measurement scale is:

►Ordinal (Page 9)
►Interval
►Nominal
►Ratio

Question No: 16 (Marks: 1) - Please choose one
The distribution is mesokurtic if the Moment Coefficient of kurtosis b_2 is:

►Equal to 0
►Equal to 3
►Less than 3
►Greater than 3

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 (Page 32)**
►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 (Page 47)**
►Pearson

Question No: 3 (Marks: 1) - Please choose one
For positively skewed distribution
Mean…….Median…….Mode:
►=
►<
►> **Click here for detail**
►≠

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** Click here for detail

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 (Page 39)**
►negatively skewed
►J-shaped
►Symmetric

Question No: 7 (Marks: 1) - Please choose one
In measures of relative dispersion unit of measurement is:
►Changed
►**Vanish (Page 82)**
►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 (Page 11)**
►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** Click here for detail
►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% (Page 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 (greater than 2 = 3,4,5,6 = 4 numbers , 4/6=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 (Page 38)

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