



STA301- Statistics and Probability
Solved MCQS
From Midterm Papers

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PSMD01

MIDTERM EXAMINATION (Spring 2011)
STA301- Statistics and Probability

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

A five number summary consist of :

- ▶ $X_0, Q_1, \text{Median}, Q_3, \text{and } X_m$ (Page 97)
- ▶ $X_m, Q_1, \text{Mean}, Q_3, \text{and } X_0$
- ▶ $X_m, Q_1, \text{Mode}, Q_3, \text{and } X_0$
- ▶ $X_0, Q_1, \text{Median}, Q_2, \text{and } X_m$

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 $P(A \text{ or } B)$ equals:

- ▶ $P(A) + P(B) - P(A \text{ and } B)$
- ▶ $P(A) * P(B)$
- ▶ $P(A) + P(B)$ (Page 155)
- ▶ $P(A|B) + P(B|A)$

دنیا میں سب سے مشکل کام اپنی اصلاح اور سب سے آسان کام دوسروں پر نکتہ چینی کرنا ہے

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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

خدا کے سوا کسی سے امید مت رکھو

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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

بری صحبت سے تنہائی بہتر ہے اور تنہائی سے نیک صحبت بہتر ہے

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

اللہ کا خوف سب سے بڑی دانائی ہے

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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

$10! = \dots\dots\dots$

- ▶ 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**

ایماندار کو غصہ دیر سے آتا ہے اور جلدی دور ہو جاتا ہے

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

زندگی میں کامیابی کا یہی راز ہے کہ پریشانیوں سے پریشان مت بنو

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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

دنیا کی سب سے بڑی فتح نفس پر قابو رکھنا ہے

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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)**

جھوٹ انسان اور ایمان دونوں کا دشمن ہے

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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 EXAMINATION (Spring 2010)
STA301- Statistics and Probability

Question No: 1 (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** rep

عقل مند کہتا ہے میں کچھ نہیں جانتا جبکہ بے وقوف کہتا ہے کہ میں سب کچھ جانتا ہوں

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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 $a \neq 0$
- ▶ Slope $b = 0$
- ▶ Slope $b \neq 0$

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

خود کو تمہیں سے بڑھ کر کوئی اچھا مشورہ نہیں دے سکتا

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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

جو شخص ناکامیوں سے ڈر کر بھاگتا ہے کامیابی اس سے ڈر کر بھاگتی ہے

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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

جو لوگوں کے سامنے فخر کرتا ہے وہ لوگوں کی نظروں سے گر جاتا ہے

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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

عقل مند اپنے عیب خود دیکھتا ہے اور بے وقوفوں کے عیب دنیا دیکھتی ہے

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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
- ▶ 5

(Page 121)

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

$$\begin{aligned} P(B|A) &= \frac{P(A \cap B)}{P(A)} \\ &= P(A) = \frac{P(A \cap B)}{P(B|A)} \\ &= \frac{0.20}{0.25} = 0.80 \end{aligned}$$

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

بد صورت چہرہ بد صورت دماغ سے بہتر ہے

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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 $\text{Var}(X-Y)$ is equal to:

- ▶ **$\text{Var}(X) - \text{Var}(Y)$**
- ▶ $\text{Var}(X) + \text{Var}(Y)$
- ▶ $\text{Var}(X + Y)$
- ▶ 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

عقل مند آدمی اس وقت تک نہیں بولتا جب تک خاموشی نہیں ہو جاتی

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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)**

انسان دکھ نہیں دیتے بلکہ انسانوں سے وابستہ امیدیں دکھ دیتی ہیں

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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:

- ▶ X_0 and X_m
- ▶ **Q_1 and Q_3** (Page 97)
- ▶ X_0 and Q_1
- ▶ X_m and Q_3

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
- ☐ \bar{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 in the sample space is:

- ▶ 3
- ▶ 8
- ▶ **6** (Page 145)
- ▶ 4

بہترین تجربہ وہ ہے جس سے نصیحت حاصل ہو

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**
- ▶ 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

[Click here for detail](#)

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

خوبصورتی علم و ادب سے ہوتی ہے لباس و حسن سے نہیں

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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

تم اچھا کرو زمانہ تم کو برا سمجھے یہ اس سے بہتر ہے کہ تم برا کرو اور زمانہ تم کو اچھا سمجھے

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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** (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

انسان کے لئے بری صحبت سے بڑھ کر بری کوئی چیز نہیں

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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 $Y = a + bX + \epsilon$ 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)

- $x_0 - x_m$
- $\frac{x_m - x_0}{2}$
- $\frac{x_m + x_0}{2}$

خاموشی غصے کا بہترین علاج ہے

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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 ∞

جھوٹ رزق کو کھا جاتا ہے

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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

افضل انسان وہ ہے جو اپنی اصلاح کی کوشش کرتا ہے

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

If A and B are mutually exclusive events then $P(A \text{ or } B)$ equals:

- ▶ $P(A) + P(B) - P(A \text{ and } B)$
- ▶ $P(A) * P(B)$
- ▶ $P(A) + P(B)$ (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 = Q_2)

اطمینان قلب چاہتے ہو تو حسد سے دور رہو

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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

اس سے پہلے کہ تمہیں شہوت فتنے میں ڈالے نکاح کرلو

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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

5C_5 Equals :

- **1**
- 5
- 10
- 25

ہر چیز کی ایک پہچان ہوتی ہے اور عقلمند کی پہچان غور و فکر کرنا ہے اور غور و فکر کی پہچان خاموشی ہے

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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:

► **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

اپنی مرضی اور اللہ کی مرضی میں فرق کا نام غم ہے

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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

وہ لوگ مبارک ہیں جو الفاظ سے نصیحت نہیں کرتے بلکہ عمل سے کرتے ہیں