

FINALTERM EXAMINATION  
Fall 2009

MTH302- Business Mathematics & Statistics (Session - 2)

Ref No:  
Time: 120 min  
Marks: 80

**Question No: 1 ( Marks: 1 ) - Please choose one**  
Scatter plots are used only for

- ▶ Quantitative variables
- ▶ **multi variable**
- ▶ surplus variable
- ▶ None of these

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

If the CORRELATION function returns the #DIV/0! error value, what is the possible reason of the error?

- ▶ Array1 and Array2 have different number of data points.
- ▶ **Either Array1 or array2 is empty.**
- ▶ Array or reference argument contains text, logical values or empty cells.
- ▶ The arguments are names, arrays, or references that contain numbers.

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

A college has 10 basketball players. A 5-member team and a captain will be selected out of these 10 players. How many different selections can be made?

- ▶ 1260
- ▶ **210**
- ▶  $10C6 * 6!$
- ▶  $10C5 * 6$

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

An insurance company wants to predict sales from the amount of money they spend on advertising. Which would be the independent variable?

- ▶ (i) sales
- ▶ **(ii) advertising**
- ▶ (iii) insufficient information to decide
- ▶ (iv) Both (i) and (ii) are correct.

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

Which of the following graphs is a visual presentation using horizontal or vertical bars to make comparisons or to show relationships on items of similar makeup?

Whi

- ▶ **bar graph**
- ▶ pie graph
- ▶ pictograph
- ▶ line graph

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

Which of the following is a characteristic of a positively skewed distribution?

In a

- ▶ The mean, median, and mode are all equal.
- ▶ **The mean is larger than the median**
- ▶ The median is larger than the mean.
- ▶ The standard deviation must be larger than the mean or the median.

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

Which one of the following is not a component of the multiplicative time series model?

Whi

- ▶ trend
- ▶ irregular variation
- ▶ **regression trend**
- ▶ seasonality
- ▶ cyclicity

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

How many number of times will the digit '7' be written when listing the integers from 1 to 1000?

Ho

- ▶ 271

- ▶ 300
- ▶ 252
- ▶ 304

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

Ho

w many arrangements can be made of the letter BUSINESS

- ▶ 6723
- ▶ 6725
- ▶ **6720**
- ▶ 6721

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

The moving averages represent -----

- ▶ **Time series variations**
- ▶ Co-efficient of variations
- ▶ Statistical Dispersion
- ▶ Absolute deviation

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

The

class frequency is

- ▶ **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: 12 ( Marks: 1 ) - Please choose one**

Twe

Ive randomly-chosen students were asked how many times they had missed class during a certain semester, with this result: 2, 1, 5, 1, 1, 3, 4, 3, 1, 1, 5, 18. For this sample, the standard deviation is approximately

- ▶ **4.75**
- ▶ 4.55
- ▶ 3.03
- ▶ 3.75

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

The experimental region is the range of the previously observed values of the dependent variable.

- ▶ False
- ▶ True

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

Which of the following is **not** a violation of the independence assumption?

- ▶ Negative autocorrelation
- ▶ A pattern of cyclical error terms over time
- ▶ Positive autocorrelation
- ▶ A pattern of alternating error terms overtime
- ▶ **A random pattern of error terms over time**

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

All of the following are assumptions of the error terms in the simple linear regression model except

- ▶ normality.
- ▶ error terms with a mean of zero.
- ▶ constant variance.
- ▶ **variance of one.**

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

If the regression equation is equal to  $23.6 - 54.2X$ , then 23.6 is the \_\_\_\_\_ while -54.2 is the \_\_\_\_\_ of the regression line.

- ▶ slope, intercept
- ▶ **intercept, slope**
- ▶ slope, regression coefficient
- ▶ radius, intercept

**Question No: 17 ( Marks: 1 ) - Please choose one**

If mean scores of midterm and final term of a student is 78% and 80%. Also variances are 106 and 77 then

- ▶ **Midterm has greater variation in marks than Final term**
- ▶ Final term has greater variation in marks than Midterm
- ▶ No variation in midterm and final term marks

- ▶ None of the above.

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

If A

and B are two mutually exclusive events, then

- ▶
- ▶
- ▶
- ▶

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

The

equation for the correlation coefficient is \_\_\_\_\_ where

- ▶
- ▶
- ▶
- ▶

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

After

the merchant buys merchandise, it is sold at a higher price called the \_\_\_\_\_

- ▶ Sale price
- ▶ Revenue discount
- ▶ **Selling price**
- ▶ Cost price

**Question No: 21 ( Marks: 1 ) - Please choose one**

A

reduction of the amount due on an invoice is called a \_\_\_\_\_ .

- ▶ Trade discount
- ▶ **Net discount**
- ▶ Cash discount

- ▶ Unearned discount

**Question No: 22 ( Marks: 1 ) - Please choose one**

If the basic salary of an employee is 13000 what is the amount of allowances he is getting for his conveyance?

- ▶ 325
- ▶ 260
- ▶ 765
- ▶ 500

**Question No: 23 ( Marks: 1 ) - Please choose one**

The minimum value of the correlation coefficient  $r$  can be

- ▶ -infinity
- ▶ 0
- ▶ -1
- ▶ 1

**Question No: 24 ( Marks: 1 ) - Please choose one**

Total Provident Fund added to the employee's fund is ----- of the basic salary.

- ▶ 1 / 11 th
- ▶ 2 / 11 th
- ▶ 9.09 %
- ▶ 9.99%

**Question No: 25 ( Marks: 1 ) - Please choose one**

If  $I$  is an identity matrix then it must also be a

- ▶ rectangular matrix
- ▶ row matrix
- ▶ column matrix
- ▶ scalar matrix

**Question No: 26 ( Marks: 1 ) - Please choose one**

If an asset is purchased at Rs 3000 on the date 6/29/2008 and the first depreciation period ends on 11/29/2008, where salvage value is 300 and period is taken as 1 on

20% interest rate where basis =1, then which of the following function Returns the depreciation for given accounting period

- ▶ =AMORLINC(3000, 6/29/2008, 11/29/2008, 300, 1\*12, 20%, 1)
- ▶ =AMORLINC(3000, 6/29/2008, 11/29/2008, 300, 1, 20% / 12 , 1)
- ▶ =AMORLINC(3000, 6/29/2008, 11/29/2008, 300, 1, 20%, 1)
- ▶ =AMORLINC(3000, 6/29/2008, 11/29/2008, 300, 1\*12 , 20%/12, 1)
- ▶ None of these

**Question No: 27 ( Marks: 1 ) - Please choose one**

is the matrix of dimension and is the identity matrix of dimension . Then which of the following is true

- ▶  $A I = I$
- ▶  $A I = A$
- ▶  $A + I = A$
- ▶  $A + I = I$

**Question No: 28 ( Marks: 1 ) - Please choose one**

the cost & selling price of a pen are Rs.12 & Rs.15 respectively, profit percentage is:

- ▶ 33.33%
- ▶ 25%
- ▶ 20%
- ▶ 10%