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Semester-II
Business Mathematics and Statistics

Questions for 1 marks

Chapter 1st Matrices and Determinants

1. Transpose of rectangular matrix is a **Rectangular matrix**
2. Two matrices A and B are multiplied to get AB if **no of columns of A is equal to rows of B.**
3. A matrix having m rows and n columns with m ≠ n is said to be a **Rectangular matrix.**
4. Two matrices A and B are added if both have **same order.**
5. According to determinant properties, when two rows are interchanged then signs of determinants **must changes.**
6. In matrices, determinant of a matrix is denoted by **| D |**
7. According to determinant properties, determinants equal to zero if row is **multiplied to row.**
8. The term Determinants and Matrix have the same meaning**- false**
9. When you multiply matrix A by the Identity matrix I, you will obtain A1**- false**
10. One can always find the determinants of a matrix**- false**
11. One can only add matrices if they are both the same size**- true.**
12. A square matrix with zero diagonal entries is never invertible**- false**
13. Matrix multiplication is only possible if the number of columns is the first matrix equals the number of rows in the second matrix**- true.**
14. The inverse of a matrix is a unique matrix of the same dimension which, when multiplies by the original matrix produces the transpose of that matrix**- false**
15. It is not possible to associate a scalar to each nxn matrix whose value will tell us whether or not the matrix is singular**- false**

Chapter 2nd Linear Programming Problems

1. Linear programming model which involves funds allocation of limited investment is classified as **capital budgeting models**.
2. In transportation models designed in linear programming, points of demand are classified as **destination.**
3. In linear programming, lack of points for a solution set is said to **have a feasible solution**.
4. In linear programming, oil companies used to implement resources available is classified as **transportation models.**
5. Which of the following is not a type of cell in a linear programming spreadsheet model- **input cell**
6. Which of the following is a property of all linear programming problem **alternate course of action to choose from.**
7.The first step in formulating an LP problem is **understand the managerial problem being faced.**
8. The theory states than the optimal solution to any problem will lie at **a corner point of the feasible reason.**
9. Adding a constraints to a linear programming problem increases the size of the feasible region-**False**
10. The following constraints is linear A x B +2 x A≤ 20- **False**
11. All linear programs must seek to maximize some quantity- **False**
12. The first step in formulating a LPP should be to identify the objective and constraints- **False**
13. Any LPP can be solved using the graphical solution. - **False**
14. A constraints is mathematical expression in linear programming that maximizes or minimizes some quantity. – **False**
15.The value of one additional unit of a resource in a LP model is the shadow price- **True**

Chapter 3rd Correlation and Regression

1. The correlation coefficient is used to determine **the strength of the relationship between the x and y variables.**
2. In regression analysis, the variable that is being predicted is the **response or dependent, variable**
3. The coefficient of correlation is **the square root of the coefficient of determination.**
4. If spearman's co efficient of rank correlation is equal to one, then **the rankings of the two variables totally agree.**
5. If the Pearson correlation coefficient R is equal to 1 then **there is a perfect positive relationship between the two variables.**
6. Regression analysis **establishes cause and effect**.
7. In simple linear regression the numbers of unknown constraints are **two.**
8. If the value of any regression coefficient is zero, then two variables are **Independent.**
9. Correlation measures the strength of the association between two variables- **True**
10. In simple linear regression model, a negative slope term always indicate negative correlation- **True**
11. Predicting values of Y from a given X within the date range is known as extrapolation- **False**
12. A strong linear relationship between X and Y indicates that X causes Y- **False**
13. Regression defines the relationship between the two variables. - **False**
14. Person's product moment correlation coefficient can only be calculated for numerical data- **True**
15. Spearman's rank correlation coefficient is used for nominal data- **False**

Chapter 4thIndex Numbers

1. Number is called a simple index when it is computed from **Single variable.**
2. Index numbers are expressed in **Percentages.**
3. Index numbers can be used for **forecasting.**
4. An index number is used **to measure changes in a variable over time.**
5. The ratio of a new price to the base year price is called the **Price relative.**
6. A simple aggregate quantity index is used to **measure the overall change in price of a range of products.**
7. The price relative is a price index that is determined by **(Price in period/ base period price)(100).**
8. A composite price index based on the prices of a group of items is known as the **aggregate price index.**
9.A index that is designated to measure changes in quantities over time is known as the **quantity index.**
10. Any year can be taken as the base year in index number-**False**
11. There are no limitations of index number- **False**
12. Index number is an economic barometer. - **True**
13. An index number is a percent that measures the change in price, quantity, value or some other item of interest from one time to another.- **True**
14. The base number for most indexes is 1- **True**
15. Two methods of computing a weighted price index are the Laspeyres method and Paasche's method. - **True**
16. The concept of real income is sometimes called deflated income or income expressed in constant dollars and the CPI is called the deflator.- **True**