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**Roll No. \_\_\_\_\_\_\_\_\_\_\_\_**

**BBA-1208**

**BBA (I Semester) Examination, Dec-2018**

**BUSINESS ADMINISTRATION**

**Business Mathmatics**

*Time Allowed: Three Hours] [Maximum Marks: 70*

**Note:** Answer **all** questions.

**Q.1** Attempt any six of the following questions. **5\*6=30**

1. Define the concept of matrix
2. Explain singular and non-singular matrix.
3. What will the amount after 5 years on an investment of Rs 1000 on 12% simple interest rate?
4. What is the concept of time value of money? Explain with example
5. What is Ogives or Cumulative frequency curves? Write its importance
6. What is a Pie Diagram? Give example
7. What is the relation between Mean, Median and Mode?
8. What is Correlation? What is positive and negative correlation?

**Q.2** What do you understand by matrix? Explain its types with the help of suitable example. **10**

**OR**

Describe the following with suitable examples

1. Adjoint of matrix
2. Inverse of matrix

**Q.3** What is compound interest and how it is calculated? Find the amount after 3 years if Rs 1000 is invested on 10% interest rate per year. **10**

**OR**

What is the present value of Rs. 1000 receivable after 6 years if the discount rate is 10%?

**Q.4** Explain briefly the various types of frequency distribution graphs? Describe each with the help of example. **10**

**OR**

Plot a graph to represent the following data in a suitable manner:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year  | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
| Imports  | 400 | 450 | 560 | 620 | 560 | 460 | 500 | 540 |
| Exports | 220 | 235 | 385 | 420 | 420 | 380 | 360 | 400 |

**Q.5** What is the relationship between mean, median and mode? Give the advantages and disadvantages of mean, median and mode. **10**

**OR**

The following table gives the data of industrial production and the unemployed persons. Calculate the coefficient of Correlation:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Production | 100 | 102 | 104 | 107 | 105 | 112 | 103 | 99 |
| Unemployed  | 15 | 12 | 13 | 11 | 12 | 12 | 19 | 26 |