Q.34 Discuss the characteristics of range as a measure of dispersion, in short.

Q.35 Mention some tools of statistics which are useful in business management.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions.   (2x10=20)

Q.36 Ram has invested 10,000 in a FD account that offers an annual interest rate of 10%, compounded quarterly. How much money will he have after 5 years?

Q.37 What are the limitations of using measures of central tendency and dispersion in statistical analysis?

Q.38 What do you understand about business mathematics and how it is different from general mathematics? Explain why is it important in modern-day business?

1st Sem./Branch : DBM, DBM (IPM)
Subject:- Business Mathematics

Time : 3Hrs.   M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory   (10x1=10)

Q.1 Business mathematics helps in
a) Problem solving   b) Data analysis
c) Decision making   d) All of these

Q.2 The scope of business mathematics does not covers
a) Accounting
b) Economics
c) Statistics
d) Organization structure

Q.3 What is the formula for calculating simple interest?
a) $P(1+rt)$ b) $Prt/100$
c) $P(1+r)t$ d) $P(1-rt)/100$

Q.4 EMI stands for
a) Equated monthly interest
b) Equal monthly interest
c) Equated monthly installment
d) None of these

Q.5 Matrix where all entries are zero
a) Square Matrix   b) Zero Matrix
c) Rectangular Matrix d) Diagonal Matrix

Q.6 Matrices are used in
a) Mathematics   b) Engineering
c) Computer   d) All of these

Q.7 Statistics includes

a) Data collection   b) Data Analysis
c) Data Presentation   d) All of these

Q.8 Sampling bias occurs
  a) Sample is small and not representing universe
  b) Sample is not including all groups of universe
  c) Both a and b are right
  d) Both a and b are wrong

Q.9 Mean = $\Sigma X/$.............
  a) K   b) M
  c) N   d) L

Q.10 This is not a measure of dispersion
  a) Range   b) Variance
  c) Standard deviation   d) Mean

SECTION-B

Note: Objective type questions. All questions are compulsory.   (10x1=10)

Q.11 Business mathematics is an important field that applies mathematical concepts to solve business problems. (T/F)

Q.12 Simple interest and compound interest are two different concepts that are used in business and finance. (T/F)

Q.13 Compound interest is calculated only on the principal amount, without including the interest earned over time. (T/F)

Q.14 A matrix is a rectangular array of numbers that can be used to represent data in a concise and organized manner. (T/F)

Q.15 Matrices are useful in business mathematics because they can be used to solve complex problems involving multiple variables. (T/F)

Q.16 Statistics is the study of collecting, analyzing and interpreting data to make informed decisions.(T/F)

Q.17 Measures of central tendency are used to describe the typical value of a set of data. (T/F)

Q.18 The mode is the most commonly occurring value in a set of data. (T/F)

Q.19 Measures of dispersion are used to describe the mid value of a set of data. (T/F)

Q.20 The standard deviation is a measure of dispersion that is calculated by taking the square root of the variance. (T/F)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions.   (12x5=60)

Q.21 What is the scope of business mathematics ?

Q.22 Why is business mathematics important for business decision making?

Q.23 What is simple interest and write its formula?

Q.24 What is the compound interest and write its formula.

Q.25 Explain matrices in short.

Q.26 What is the scope of matrices in business mathematics?

Q.27 What are the limitations of statistics?

Q.28 Define statistics. Explain its utilities in simple business operations.

Q.29 Why is business mathematics important in business?

Q.30 What are the measures of central tendency?

Q.31 What are the measures of dispersion?

Q.32 Why is central tendency so useful in business decision making?

Q.33 Define dispersion and its importance in statistics?