B.COM. PART 1

CORE CONCEPT OF BUSINESS MATHMATICS & STATISTICS

MEASUREMENT OF TREND

The following are the four important method which are used in estimating the trend-

1) Free hand curve method
2) Semi-average method
3) Moving average method
4) Method of Least square

1) **Free hand curve method-** This method is also called as curve fitting by inspection. The procedure for knowing the trend by this method is as follows-

   a) First of all the original value of a time series are plotted on a graph paper and a historigram is obtained by joining these points.

   b) After this a smooth curve is drawn through these points keeping in view the direction of fluctuations is such a way that the curve represent the general tendency of the data.

2) **Semi-average method-** The procedure of finding out trend by semi-average method is as follows-

a) Division of time series in to two equal parts.

b) Calculation of average in both the part.

c) Plotting of original data on the graph.

d) Plotting of both semi averages.

e) Trend line- It is a straight line is drawn by joining the two points of semi-averages and this line represent the trend of data.

Example-15- Find out trend of the following data by semi average method.

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Production	9	12	13	14	17	18	20	22	24

BUSINESS MATHMATICS & STATISTICS

Solution-15:

Year	Prod.	total	Avg (Total/4)
2001	9		
2002	12	48	12
2003	13		
2004	14		
2005	17		
2006	18		
2007	20	84	21
2008	22		
2009	24		