2nd Sem. / I.P.M

Subject : Business Mathematics & Statistics

Time : 3 Hrs.   M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any
15 parts.   (15x2=30)

Q.1   a)   Define Median.

b)   Define Harmonic Mean

c)   Meaning of Dispersion.

d)   Formula of coefficient of variation.

e)   Meaning of Mean Deviation.

f)   Non Probability sampling.

g)   Solution of a quadratic=n.

h)   Meaning of Regression.

i)   Seasonal variations.

SECTION-C

Note: Long answer type questions. Attempt any three
questions.   3x10=30

Q.3

X	10	20	30	40	50
Y	8	5	12	18	15

Find two Regression Equations

Q.4

x	0-10	10-20	20-30	30-40	40- 50
f	6	9	5	3	2

Calculate coefficient of variation

Q.5   Calculate 5 yearly moving average

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Prod	60	30	90	80	70	75	45	90	70

Q.6   Define Time series. What are its uses and disadvantages?

Q.7   Discuss in detail the absolute and relative measures of dispersion.

j)   Irregular variations.

k)   If bxy = 0.6 by x = -0.8 what does it mean.

l)   Explain Addictive theorem

m)   Explain Baye's Theorem

n)   What do you mean by line of best fit.

o)   Inclusive continuous series.

p)   Linear and Non linear correlation.

q)   Formula of Spearman's coefficient of correlation.

r) $2x + 5y = 25$

$5x - 2y = 19$ Solve for $x + y$

SECTION-B

Note: Short answer type questions. Attempt any ten parts   10x4=40

Q.2 i)   Disadvantages of Average.

ii)   Demerits of Median.

iii) Explain stratified sampling.

iv) Dependent events.

v)   Mutually Exclusive Exhaustive Events.

vi) Properties of Geometeric mean.

vii) Properties of standard deviation.

viii) Give three applications of equations in business.

ix) How mean deviation is calculated from median.

x)   If covariance of x + y=15, Variance of x=256 variance of y = 121 find r.

xi) Define Covariance.

xii) If $2x^2-8x=10$ find x.

xiii) Relative measure of Dispersion.

xiv) Relationship between correlation and regression.

xv) If r = –0.3 $\sigma^2 x=9$ $\sigma^2 y=16$ find bxy, byx