KALYANI MAHAVIDYALAYA
TEST EXAMINATION-2014
B.COM 2ND YEAR (General)
SUB : BUSINESS MATHEMATICS & STATISTICS

TIME: 1.30 Hours **F.M=50**

GROUP - A (BUSINESS STATISTICS)

1. Answer any five questions. 2x5=10

   a. What is variable ? Give two examples.

   b. What is cumulative frequency?

   c. What are the different measures of central tendency?

   d. Define correlation.

   e. What is a scatter diagram?

   f. What is Rank Correlation?

   g. What is skewness?

   h. What are the different types of distribution?

2. Answer any three questions. 5x3=15

   a. The A.M. calculated from the following frequency distribution is known to be 72.5. Find the value of x :

Marks obtained :	30 – 39	40 – 49	50 – 59	60 – 69	70 – 79	80 – 89	90 – 99
No. of Students :	2	3	11	20	x	25	7

   b. Draw a pie chart to represent the following data relating to the production cost of a manufacturer:

Cost of material	Rs. 9,600
Cost of labour	Rs. 7,680
Direct expenses	Rs. 2,880
Factory overhead	Rs. 3,840

c. Calculate Standard Deviation of the following distribution :

Height (inch.) :	62 – 64	64 – 66	66 – 68	68 – 70	70 – 72
No. of boys :	3	4	5	4	4

d. Which of the following two distributions is more symmetric?

Distribution I : mean 22, median 24 and S.D. 10;

Distribution II : mean 22, median 25 and S.D. 12 .

e. Find Pearson's co-efficient of correlation from the following data :

n =50, $\sum X=75$, $\sum y=80$, $\sum x^2=130$, $\sum y^2=140$ and $\sum XY=120$.

f. Write a shortnote on **Kurtosis.**

GROUP B - (BUSINESS MATHEMATICS)

3. Answer any two questions.
1X2=2

i)If a:b=4:5 then find $a^2 : b^2$

ii)If a=√ 3+ √2 then show that-

$1/a = \sqrt{3} - \sqrt{2}$

iii)Find the G.M of 3and 12

4. Answer any five questions.

1X5=5

i)1,3,5…… are in A.P find the 10^{th} term.

ii)If A varies directly as B and B=2 when A=6.Find the relation between A and b.⅓⅓

III)Show that 5 <4

iv)If 1,4,16..... are in G.P then find the sum of the series upto 5^{th} term using formula s= a(r-1) where a 1^{st} term, r common ratio and s the sum upto nth term.

v)Find the distance between the points(a,b)and(b,a) where a=3,b=4

vi)If the point(3,k) lies on a circle x+y=25 then find the value of k.

vii) Find the co-ordinate of the vertex and focus of the parabola 5x=16y

5. Answer any three questions.

4X2=8

i)If x+y+z=0 then show that (x+y+z)=27xyz

ii)If and be the roots of ax+bx+c=0 then find the value of

(a +b) (a +b)

iii)If c =45 then find the value of n and also c .

iv) Find the value of k for which the lines kx+y+6=0,x+y+4=0,and 2x+3y+10=0 may concurrent.

v)Find the equation of parabola whose focus is the point(5,1) and directrix is 3x-4y+5=0 also find the lenth of the latus rectum.

6. Answer anY one question.

10x1=10

a)(i) If ratio of the sums of two A.P series upto pth terms is(2p+1):(2p-1) find the ratio of 8^{th} terms of those two series.

ii) Ifa,b,c are in G.P and a=b=c then show that x,y.z are in A.P

b)(i) Solve: x+y=xy,y+z=5yz,z+x=2zx (x=0,y=0,z=0)

ii) Find the numbers of different odd numbers of 5 digit that can be formed with digits 1,2,3,4,5,6 witrhout repitition.

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c)(i) Find the equation of the line passing through the point(-3,2) and perpendicular to the line

2x-3y+5=0.

ii)Find the co-ordinates of the points equidistant from the axes and lying on the circle

x +y +-6x-2y+6=0

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