gages a) Name.....

Reg. No.....

SECOND YEAR B.Sc. DEGREE EXAMINATION, MAY 2010

Part III – Statistics (Subsidiary)

Paper III Practical

(For Regular Students 2004 Admission onwards)

Time : Three Hours **Maximum : 60 Marks**

Answer any six questions.
Each question carries **10** *marks.*
Maximum marks that can be scored is **60.**
Use of calculators and statistical tables allowed.

1. **Calculate the mean, standard deviation and coefficient of variation of the following data on daily wages of 230 workers :**

	Wages (in Rs.)	*No. of workers*
less than ...	100	12
less than ..	200	30
less than ...	300	65
less than ...	400	107
less than ...	500	157
less than ...	600	202
less than ...	700	222
less than ...	800	230

2. **Using moments obtain the coefficients of skewness and Kurtosis of the following data**

Marks ...	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
No. of students ...	8	11	18	9	4

3. **Obtain the two lines of regression and hence the correlation coefficient of the following data**

X ...	1	2	3	4	5	6	7
Y ...	9	8	10	12	11	13	14

Also estimate Y when X = 9.

Turn over

4. The following is the distribution of students according to their height and weight. Find correlation between height and weight.

Height cm / Weight kg	90 – 100	100 – 110	110 – 120	120 – 130
50 – 55	4	7	5	2
55 – 60	6	10	7	4
60 – 65	6	12	10	
65 – 70	3	8	6	3

5. The distribution of printing mistakes per page in a book of 400 pages is given below. Fit an appropriate distribution to the data and find out the expected frequencies :

No. of mistakes per page	...	0	1	2	3	4	5
No. of pages		142	156	69	27	5	1

6. The mean and SD of the marks of 1000 college students was 78% and 11% respectively. Assuming the distribution of marks to be normal find :

   (i) the limits within which the middle 90% lie

   (ii) Highest mark of lowest 10 students

   (iii) Inter quartile range.

7. (a) A random sample of 17 items from a normal population has mean 4.7 and variance 5.76. Find 90% confidence interval for the mean of the population.

   (b) Two samples of sizes 10 and 14 drawn from two normal populations have SDS 3.5 and 3 respectively. Examine whether the populations have equal variances.

8. To compare the prices in towns of a certain commodity, ten shops were selected at random in each town and the following prices were obtained :

Town A		***Town B***
61	...	55
63	...	54
56	...	47
63	...	59
56	...	51
63	...	61
59	...	57
56	...	54
44	...	64
61	...	58

Test whether average price can be said to be same in both towns.

9. An automobile company gave the following data on the age group and the liking of a particular model of car :

	Age group			
	below 20	20 – 40	40 – 60	above 60
No. of persons liked	140	80	40	20
Disliked ..	60	50	30	80

On the basis of the data can it be concluded that the liking of the model is independent of the age group.