

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI - 600 086
(For candidates admitted from the academic year 2004- 05 & thereafter)

SUBJECT CODE : MT/MO/PS24

B. Sc. DEGREE EXAMINATION, APRIL 2007
BRANCH I – MATHEMATICS
SECOND SEMESTER

COURSE : MAJOR OPTIONAL
PAPER : PRACTICAL STATISTICS
TIME : 3 HOURS

MAX. MARKS : 100

SECTION – A

ANSWER ALL QUESTIONS :

(10 X 2 = 20)

1. Distinguish between primary and secondary data.
2. What are different Bar diagrams ?
3. Define Ogives. How will you obtain median using Ogives ?
4. Write down the empirical formula for obtaining mode from mean and median.
5. What is the difference between mean and weighted men ?
6. Give the formulas for Quartile deviation and coefficient of quartile deviation.
7. Define Kurtosis. Write down the formula for a measure of Kurtosis in terms of moments.
8. Define Pearson's correlation coefficient.
9. Write down the relations between raw and central moments upto four moment.
10. Why are there two regression lines ?

SECTION – B

ANSWER ANY FIVE QUESTIONS

5X8=40

11. Explain Classification and Tabulation.

12. Draw Lorenz curves for the following data

Marks in Maths		10	20	30	40	60	70	80	90
Number of Students in B.Com..	Batch A	1	2	3	4	6	7	8	9
	Batch B	15	10	5	4	6	5	3	2

13. Obtain Harmonic mean for the following data.

Marks	10	20	25	40	50
No. of Students	10	15	25	10	5

14. Which measure of central tendency is best ? Why ? Give any three reasons.

15. The following are the runs stored by two batsmen A & B in ten innings.

A	101	27	0	36	82	45	7	13	65	14
B	97	12	40	96	13	8	85	8	56	15

Who is the more consistent batsman ?

16. For the following data obtain mean deviation from mean

Age	15-24	25-24	35-44	45-54	55-64
No. of persons	4000	16000	28000	33000	28000

17. Fit a straight line trend for the following data and also obtain the trend values.

Year	1950	1951	1952	1953	1954	1955	1956
Production in tones	12	10	14	11	13	15	16

SECTION – C

ANSWER ANY TWO QUESTIONS

2X20=40

18. a) Obtain mode for the following data by applying group table

Wage	3	3	6	7	9	10	12	13	15
Workers	2	3	2	6	10	11	12	5	1

- b) From the following data obtain Bowley's coefficient of skewness

Size	5-7	8-10	11-13	14-16	17-19
Frequency	14	24	38	20	4

19. a) Obtain the measure of Kurtosis using moments for the following table and comment on the distribution.

Class interval	0-10	10-20	20-30	30-40
Frequency	1	3	4	2

- b) Obtain combined standard deviation for the following data

	Number	Mean	S.D.
Group A	113	159	22.4
Group B	121	149	20.0

20. a) Obtain Rank correlation for the following data

Student	1	2	3	4	5	6	7	8	9	10	11	12
Marks in Maths	65	40	35	75	65	80	35	20	85	65	55	33
Marks in Statistics	30	55	68	28	76	25	80	85	20	35	45	65

- b) Using the following table obtain the income of a person who put in 12 years of service.

Years of Service	11	7	9	5	8	6	10
Income in (1000 of Rs.)	7	5	3	2	6	4	8

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