

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 86**  
**(For Candidates admitted during the academic year 2008 – 2009 & thereafter)**

**SUBJECT CODE: EC/AC/SE14**

**B.A. DEGREE EXAMINATION NOVEMBER 2009**  
**BRANCH IV – ECONOMICS**  
**FIRST SEMESTER**

**COURSE : ALLIED - CORE**  
**PAPER : STATISTICS FOR ECONOMICS - I**  
**TIME : 3 HOURS**

**MAX.MARKS : 100**

**SECTION – A**

**ANSWER ALL QUESTIONS. EACH ANSWER NOT TO EXCEED 50 WORDS**

**(10 X 3 = 30)**

1. State the functions and limitations of Statistics.
2. What are the points you would consider in drafting a questionnaire?
3. What are the essentials of sampling?
4. Draw a specimen table indicating various parts of it.
5. Point out the significance of diagrams and graphs.
6. What characteristics should a good average possess?
7. State the merits and limitations of Geometric mean.
8. Write down the formula for mean deviation and standard deviation in a discrete series.
9. How does 'skewness' differ from dispersion?
10. What is the need for deflating index numbers?

**SECTION – B**

**ANSWER ANY FIVE QUESTIONS. EACH ANSWER NOT TO EXCEED 300 WORDS**

**(5 X 6 = 30)**

11. Write briefly the methods of collecting primary data.
12. Briefly explain the non-probability sampling methods.
13. Draw 'less than' and 'more than' ogive from the data given below:

Profits (Rs. Lakhs)	10- 20	20- 30	30- 40	40- 50	50- 60	60- 70	70- 80	80- 90	90- 100
No. of Cos.	6	8	12	18	25	16	8	5	2

14. Find the missing frequency from the following data:

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	5	15	20	-	20	10

The arithmetic mean is 34 marks.

15. X Ltd is actively considering the following two mutually exclusive projects for adoption.

Year	Project X Cost Profit (Rs. Lakhs)	Project Y Cost Profit (Rs. Lakhs)
1	10	5
2	5	25
3	20	45
4	40	30
5	60	30

Which is the most risky project? (Use coefficient of variation)

16. A frequency distribution gives the following results:  
 (i) C.V = 5 (ii) Standard deviation = 2 (iii) Karl Pearson's Coefficient of SK= 0.5  
 Find the mean and mode of the distribution.

17. Compute consumer price index number from the following:

Group	Base year price (Rs.)	Current year price (Rs.)	Weight (%)
Food	400	550	35
Rent	250	300	25
Clothing	500	600	15
Fuel	200	350	20
Entertainment	150	225	5

### SECTION – C

**ANSWER ANY TWO QUESTIONS. EACH ANSWER NOT TO EXCEED 1200 WORDS**

**(2 X 20 = 40)**

18. Calculate median and mode of the data given below. Using them find arithmetic mean.

Marks	10	20	30	40	50	60
No. of students	8	23	45	65	75	80

19. In a small town, a survey was conducted in respect of profits made by retail shops. The following results were obtained:

Profit or loss in '000 Rs.	No. of shops
-4 to -3	4
-3 to -2	10
-2 to -1	22
-1 to 0	28
0 to 1	38
1 to 2	56
2 to 3	40
3 to 4	24
4 to 5	18
5 to 6	10

- Calculate
- (i) The average profit made by a retail shop
  - (ii) The coefficient of variation of earnings
  - (iii) Total profit by all shops

20. By using the quartiles find a measure of skewness for the following distribution.

Annual sales (Rs. '000)	No. of firms
Less than 20	30
Less than 30	225
Less than 40	465
Less than 50	580
Less than 60	634
Less than 70	644
Less than 80	650
Less than 90	665
Less than 100	680

21. a) State and explain Fisher's formula for index numbers. Show how it satisfies the time reversal and the factor reversal tests.

b) Calculate the index of real wages for the following data with 1998 as base year:

Year	1998	1999	2000	2001	2002	2003
Weekly wages (Rs.)	109.5	112.2	116.4	125.8	135.4	138.1
Consumer price index	112	119	127	138	143	150

\*\*\*\*\*