



**SCHOOL OF PLANNING AND ARCHITECTURE, VIJAYAWADA**  
**SEMESTER END EXAMINATIONS (ADDITIONAL SUPPLEMENTARY) JULY - 2017**  
**B.PLANNING I YEAR I SEMESTER**

**QUANTITATIVE METHODS FOR PLANNING (BPLN105)**

**Maximum Marks – 50**

**Time – 2.00 Hours**

- a) Answer any Two questions out of 1 to 4 questions.  
b) Question No.5 is compulsory and answer any four out of six sub-questions.  
c) Scientific calculator is allowed.

- Q1. Calculate the mean, median, mode and standard deviation, co-efficient of variation for frequency distribution of 200 poor families as given below: (15M)

Expenditure (in Rupees)	Number of families (f)
0-40	13
40-80	17
80-100	28
100-120	27
120-140	12
140-160	25
160-180	29
180-200	49

- Q2. In a slum in Vijayawada, ten families monthly income and expenditure pattern on transport, education and entertainment are given below: (15M)

Monthly Income (in Rs.)	Expenditure for Transport (in Rs.)	Expenditure for Education (in Rs.)	Expenditure Entertainment (in Rs.)
4500	160	950	500
5000	170	1050	600
5300	180	1070	700
5400	190	1100	800
5500	200	1200	900
5600	210	1300	1000
5800	220	1400	1100
6300	230	1500	1200
6500	240	1600	1300
6600	245	1700	1400

Calculate the regression equations for the following:

- i. Monthly Income on Expenditure for transport
- ii. Monthly Income on Expenditure for education
- iii. Monthly Income on Expenditure for entertainment
- iv. If monthly Income is Rs.7,000, find the expenditure for transport, education and entertainment.

Q3. a) Explain different types of sampling methods with relevant examples (10M)

b) Explain types of frequency distribution with examples. (5M)

Q4. Calculate the Spearman Rank correlation for the brothers and sisters monthly Income in an apartment complex of 10 families as given below: (15M)

Brothers Monthly Income	Sisters Monthly Income
7000	5500
5500	4000
6000	4500
5000	3500
5000	3500
4000	3000
3000	2500
2500	2000
2000	1500
2000	1500

Q5. Write short notes on any FOUR of the following: (4X5=20M)

- i. Bivariate frequency Distribution
- ii. Methods of Collection of Primary Data
- iii. Types of Class intervals
- iv. Classification of Tabulation of data
- v. Types of Correlation
- vi. Cumulative Frequency Curve

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