

Total No. of Questions : 7]

SEAT No. :

**P1575**

**[5128]-201**

[Total No. of Pages : 2

**M.A./M.Sc.**

**GEOGRAPHY**

**Gg - 201 : Quantitative Techniques in Geography  
(2013 Pattern) (Credit System) (Semester - II)**

*Time : 2½ Hours]*

*[Max. Marks : 38*

*Instructions to the candidates:*

- 1) *Attempt any two quesitons from Q.1 to Q.4.*
- 2) *Questions 5 and 6 are compulsory.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Use of statistical tables and Calculator is allowed*

**Q1) a)** What do you mean by nominal and ordinal scale? **[2]**

b) Calculate mean and standard deviation for the following data. **[4]**

Classes	51-100	101-150	151-200	201-250	251-300
f	4	7	8	6	4

Classes	301-350	351-400	401-450	451-500	501-550
f	12	10	11	2	3

c) Calculate kurtosis for the data provided in Q.1 b. **[4]**

**Q2) a)** State the use of poisson distribution in geography. **[2]**

b) The probability of the mean temperature in summer at a station being less than 35°C and more than 25°C is 0.79584. The probability of temperature being less than 25°C is 0.02275. Assuming the distribution to be normal obtain the values of mean and standard deviation. **[4]**

c) It is observed that 30% plants in a farm are affected by pests. Find the probability that if a sample of 7 plants are selected at random, it will have: **[4]**

- i) No plants affected.
- ii) Less than 3 plants affected.

**P.T.O.**

**Q3) a)** Explain the concept of bivariate regression. [2]

b) Calculate the Pearson product moment correlation coefficient (r) between angle of slope in degrees and depth of soil in m. Interpret the results.[4]

Slope(X)	2	4	6	7	8	10	12	15	18
Depth (Y)	5.1	4.5	4.3	3.5	3	2.6	2.3	1.8	1.3

c) Obtain a simple linear regression equation for the data given in Q.3 b.[4]

**Q4) a)** Explain poisson probability distribution. [2]

b) Calculate standard error of the mean for the variable 'X' given in the following table. [4]

X	3	5	4	3	2
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c) Calculate standard error of the standard deviation for the variable 'X' given in Q.4 b. [4]

**Q5) a)** Apply Chi Square test for the given data to test the hypothesis that there is no relation between landforms and storm intensity. [5]

Landforms	Storm intensity		
	Severe	Moderate	Low
Plains	35	63	29
Plateau	28	29	21
Mountains	58	106	52

b) From the result obtained in Q.5a test the hypothesis at 0.05 and 0.01 level of significance and interpret the same. [4]

**Q6) a)** Calculate 5 years moving average for the annual rainfall data of a station.[5]

Year	1980	1981	1982	1983	1984	1985	1986	1987
R.F.(cm)	109	110	92	82	83	105	121	119

Year	1988	1989	1990	1991	1992	1993	1994	1995
R.F.(cm)	109	112	89	105	87	104	98	120

b) Write a note on students 't' test. [4]

x x x