FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF NATURAL AND APPLIED SCIENCES
DEPARTMENT OF GEOGRAPHY

FIRST SEMESTER 2015/2016 SESSION UNDERGRADUATE EXAMINATION

COURSE CODE: **GRY 313** **2units**
COURSE TITLE: **Advanced Statistics for Geographers**
INSTRUCTION: **Answer Any Three Questions**
TIME ALLOWED: **2hrs**

1. A surveyor came up with the following measurements after a field survey of an observed spatial distribution patterns for an area of $36cm^2$

3.41	3.41	0.60	0.61
10.23	0.23	0.30	0.70
4.34	1.72	3.52	1.82
2.12	3.14	2.71	0.62

Using the nearest neighbor analysis technique

a. Calculated Rn using the above data
b. Explain the interpretation of the distribution pattern.

2. Write short notes on the following:

a. Parametric and non parametric test
b. Population and Sampling.
c. Concave and Convex Slopes.

3. The table below shows the approved quarterly budget (₦ Millions) of Maizube farms Nig. Ltd from 2008-2011

Years	Quarters			
	1	2	3	4
2008	14	22	10	32
2009	16	18	8	20
2010	10	20	14	22
2011	8	14	16	6

Prepare the seasonal variation (s) component of time series analysis using the multiplicative model procedures

4. The table below shows the association between students' hours of studying and the corresponding results in their continuous

Courses/hours	<3hours	3 – 5hours	6 – 7hours	>7 hours
Gry111	32	25	30	36
Gry222	24	34	20	33
Gry333	27	10	18	30
Gry444	16	18	25	27

Construct a position that dictates the level of relationship between the students' hours of reading And the results, using chi-square. Alpha 0.05,(df) 9=63.15

5. The farmers in a hypothetical region have a choice between two crops that are significantly influenced by seasonal variability of rainfall. The table below reflects the yield of the crops in wet and dry years

Environmental conditions

Farmers' choice	Wet	Dry
Rice	63	43
Guinea corn	28	58

a. Determine the average yield
b. Percentage of each of the crops to be grown.
c. Comment on the validity of the Games theory in farmers' location game choice and crop combination.