ELIZADE UNIVERSITY, ILARA-MOKIN, ONDO STATE

FACULTY: Humanities Social and Management Sciences
DEPARTMENT: ACCOUNTING AND FINANCE
SECOND SEMESTER EXAMINATIONS
2013/2014 ACADEMIC SESSION

COURSE CODE: BST 202

COURSE TITLE: BUSINESS STATISTICS

DURATION: 2 hours 15 mins

2/7/14

HOD's SIGNATURE

General Instructions:
1. Answer question 1 and any other three (3) questions
2. Write your matriculation number in the space provided
3. Credit will be given for good English, legibility and calculations
4. All the six questions carry 15 marks each

MATRICULATION NO: _____

1. With the aid of good illustrative examples, distinguish clearly between the following pairs of statistical concepts

    a. Descriptive and Inferential statistics

    b. Type 1 error and Type 2 error

    c. Sample space and An event

    d. Ratio scale and Interval scale

    e. Parametric estimate and Statistical estimate

    f. Qualitative data and Quantitative data

    g. Primary data and Secondary data

    h. Statistics and Probability

    i. Correlation and Regression

    j. Population and Sample

2a   Define with examples and algebra: Variance, Analysis of Variance, continuous probability.

b   Outline the salient characteristics of Chi-square Distribution?

c.   Explain how contingency tables are derived for Chi-square estimation.

3a   Distinguish between the binomial and Poisson distribution.

b   Find the probability that in 5 throws of a fair die a 3 appears at:
        i) no time
        ii) once
        iii) 3 times
        iv) 5   times

c)   Ten percent of the tools produced in a certain manufacturing company   were   defective. In a sample of 10 tools chosen randomly, find the probability that   exactly two is defective.

4   A survey of individuals use computer software to file their tax returns.
        The table below records are the time spent in finding their tax returns.

6.2	4.8	8.9	5.6	6.5
11.5	8.6	6.2	8.5	5.2
2.7	14.9	11.2	6.9	7.9
4.8	9.5	12.4	9.7	10.7
8.0	11.8	7.4	9.1	4.9
9.1	6.4	9.5	7.6	6.7
2.6	3.5	6.4	4.3	7.9
3.3	10.3	3.2	11.5	1.7
10.4	8.5	10.8	6.9	5.3
4.9	4.4	9.4	5.6	7.0

a   Calculate the mean of the sample and the standard deviation

b   Suppose the mean of the population is 8.5.
        Is the mean of the sample significantly different from the mean of the population.

5   A cellular phone company conducts a survey to determine the ownership of cellular phones
        in different age groups. The results for 1000 households as observed are shown in table
        below. Test the hypothesis that the proportions owning cellular phones are the same for
        the different age groups.

Cellular phone	18-24	25-54	55-64	65 & above	Total
Yes	50	80	70	50	250
No	200	170	180	200	750
Total	250	250	250	250	1000

6   The following table gives the data on daily income (x) and food expenditure
        (y) of ten clerical workers in the UK.

Income	x	55	83	38	61	33	49	67
Food expenditure	y	14	24	13	16	9	15	17

a. Draw a scatter diagram of the data and visually impose a line of best fit

b. Calculate the Pearson Product Moment Correlation for the data

c. Interprete your result in b above.