NATIONAL OPEN UNIVERSITY OF NIGERIA
91, Cadastral Zone, NnamdiAzikiwe Express Way, Jabi-Abuja
FACULTY OF MANAGEMENT SCIENCES
JANUARY/FEBRUARY 2018 EXAMINATION

Course Code: **Bus 722**
Course Title: **Business Statistics**

Credit Unit: **2**

Instructions: **1. Attempt Question 1 and any other two (2) questions**
2. Question 1 is compulsory and carries 30marks while the other 2 questions carry 20marks each
3. Present all your points in coherent and orderly manner
Time Allowed: 2 Hours

1a. Write notes on the following methods of collecting data

i. Interviewing
ii. Questionnaire
iii. Observation
iv. Survey 8marks

1b. Given the following set of numbers

5, 3, 8, 7, 1, 4, 5, 8, 9, 3, 4,2 7, 1, 5, 7, 6, 4, 8, 5, 6, 5, 3. 2, 8, 1, 7, 5, 5 4, 7, 1, 2, 5, 6, 4, 2, 7,4, 2

i. Construct a frequency distribution 4marks
ii. Calculate the mean and median 4marks

1ci Distinguish between Histogram and Simple bar chart. 2maks

cii Suppose the monthly sales of a firm for six consecutive months are given as follows:

Months	Sales (In Million of Naira)
January	7.5

February	2.0
March	4.5
April	6.5
May	4.0
June	8.0

Construct a simple bar chart and Histogram 12maks

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2a. Outline the steps involves in research process 8marks

2b. Write notes on the following types of research

i. Pure research
ii. Specific research
iii. General applied research 6marks

c. What are the importance of research to an organizational concern? 12marks

3a. What is the geometric mean of 3, 4, 7 and 8. 6 marks

3b. Suppose the rate of growth in the sale of a product over a period of 5years are 5%, 4%, 8%, 15% and 22%. If the sales in year 0 is #50000,

.i. what is the sales at the end of the fifth year? 4marks

ii calculate the mean rate of growth and true growth rate. 4marks

3c. A motorist moves from Y to Z, a distance of X kilometers with a speed of 120Km/hour and returns to point Y with a speed of 90Km/hour. What is the average speed. 6 marks

4a. Given the following set of class intervals

Class intervals	F
5-9	3
10-14	4
15-19	7
20-24	5
25-29	4
30-34	6
35-39	3
40-44	3

Calculate the mean deviation, variance and standard deviation. 10maks

4b. The annual sales recorded by a firm in a year are recorded below and analysed in descending order. The unit is in naira. 800, 675, 620, 585, 540, 520, 420, 400, 350, 340, 290 and 250.

Calculate the interquartile range and quartile deviation of the distribution of the distribution.

10 marks

5. There are three factories V, W, and X , supplying goods to warehouses A, B, C and D, the amount of supplies from the factories to the warehouses are shown below, obtain the followings (i) V A (ii) W D (iii) C X from the table below

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6 marks

Warehouse / Factory	A	B	C	D	Total
V	62	20	25	65	172
W	48	19	20	35	122
X	50	35	28	40	153
Total	160	74	73	140	447

5b. Suppose there are 80 students in a class with students offering at least one of the subjects Chemistry, Physics and Biology, 22 students offer physics, 32 students offer chemistry and 45 students offer Biology. 15 students offer both physics and chemistry, 10 offer Physics and Biology and 12 offer Biology and Chemistry. Represent the data on a Venn diagram and find the number that offer

i. All Students
ii. Biology only
iii. A student only
iv. Two subjects only 12 marks