NATIONAL OPEN UNIVERSITY OF NIGERIA
91, Cadastral Zone, Nnamdi Azikiwe Express Way, Jabi-Abuja
FACULTY OF MANAGEMENT SCIENCES
2020_2 EXAMINATION

## Course Code: BUS722

## Course Title: Business Statistics

## Credit Unit: 2

## Instructions: 1. Indicate your Matriculation Number clearly

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

## Time Allowed: 2 Hours

(Question 1)

A sample of 12 auto mechanics was ranked by the supervisor regarding their mechanical ability and their social compatibility. The results are as follows:

| Worker | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Mechanical <br> Ability | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Social <br> compatibility | 4 | 3 | 2 | 6 | 1 | 5 | 8 | 12 | 11 | 9 | 7 | 10 |

i. Compute the coefficient of rank correlation. Can we conclude that there is a positive association in the population between the ranks of mechanical ability and social compatibility? Use the 0.05 significance level. (25 Marks)
ii. Comment on your result (Decision)

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(Question 2)
Q. Write short note on any five (5) of the following
(4 Marks each)
i. Entity ii. Variable iii. Random Variable iv. Quantitative Variable v. Qualitative

Variable vi. Discrete Variable vii. Continuous Variable viii. Population ix.
Sample x. Random Sample
(Question 3)
i. For the distribution below computer the mode.

| I Class | $22-26.9$ | $27-31.9$ | $32-36.9$ | $37-41.9$ | $42-46.9$ | $47-51.9$ | $52-56.9$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Frequency | 5 | 8 | 14 | 23 | 19 | 7 | 4 |

## (Question 4)

i. Suppose there are 10 different items to be stocked in the store and we have 6 bins for the storage, what are the possible arrangements?
ii. There are 6 positions available to be tilled by 6 persons from 3 tribes in Nigeria on equal basis. How many distinguishable arrangements are possible based on tribes?
iii. A food-processing firm has 8 brands of seasoning agents from which it wishes to prepare a gift package containing 5 seasoning agents. How many combinations of seasoning agents are available? (20 Marks)
(Question 5)
i. What is Probability
ii. What is brain storming and list four steps in brain storming
iii. What are the advantages and disadvantages of mode?
(10 Marks)
(6 Marks)

