



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESS WAY, JABI – ABUJA
FACULTY OF MANAGEMENT SCIENCES
DEPARTMENT OF FINANCIAL STUDIES
2021 EXAMINATION

COURSE CODE: MBF839

CREDIT UNIT: 3

COURSE TITLE: QUANTITATIVE TECHNIQUES FOR BANKING & FINANCE

TIME ALLOWED: 2^{1/2}HRS

INSTRUCTIONS:

- 1. Attempt Question One (1) and any other three (3) questions**
 - 2. Question 1 carries 25 marks, while the other questions carry 15 marks each.**
 - 3. Present all points in coherent and orderly manner**
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1a. Jide was a staff of Musa Plc for fifteen good years, Jide began with an annual salary of fifteen thousand naira (N15,000) with an initial increment of N1,000. As the 11th year begins at Musa Plc there was an annual salary raise of N5,000 in response to the general economic improvement in the country. Calculate the Cumulative Salary earning of Jide for the 15 years period at Musa plc. **15 marks**

b. The second term of an A.P is 15 and the 5th term is 21.

(i) Calculate Common Difference

5 marks

(ii) Find the first term and sum of the first 10th term.

5 marks

2. A pure water nylon costing #1,000 has an expected life of 5years. It is estimated that the cash flow resulting from the use of the machine will be #300 a year. The rate of return expected from capital of the type is 15%. Is the investment worthwhile? **15marks**

3a. Discuss linkage between earnings per share and dividends per share? **10marks**

b. In a firm of 1,250 employees, 575 are male. Find the percentage of female employees. **5marks**

4a. Consider the following table showing how 10 students were ranked according to their performance in their class work and their final examinations.

Student	Ranking Based on Class Works	Ranking Based on Exam Marks
A	2	1
B	5	6
C	6	4
D	1	2
E	4	3
F	10	7
G	7	8
H	9	10
I	3	5
J	8	9

Calculate the rank correlation and indicate the level of their relationship

9 Marks

b. Differentiate between rank and partial correlation

6 marks

5a. Compute the future value of twenty thousand naira (N20, 000) paid into a savings account by Emeka for 3 years at an interest rate of 24% yearly:

(i) Yearly

2 marks

(ii) Every Six months

2 marks

(iii) Every three months

2 marks

(iv) Every Month

2 marks

b. Johnson paid in five thousand naira (N5000.00) into a savings account that earns interest at 17½ yearly for 4 months. Compute the simple interest on Johnson's savings for the 4 months periods. **2 marks**

c. Enumerate five (5) dissimilarities between the computation of Simple and Compound Interest

5 marks