



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikiwe Express Way, Jabi-Abuja
Faculty of Management Sciences, Department of Financial Studies
October/November Examination 2016

Course Code: MBF839

Course Title: Quantitative Techniques for Banking and Finance

Credit unit: 3

Time Allowed: 2 hours 30 minutes.

Instructions:

- 1. Attempt Question 1 and any other three (3) Questions.**
- 2. Question 1 is compulsory and carries 25 marks while the other 3 Questions carry 15 marks each.**
- 3. Show all your calculations for appropriate marks.**

Question

1a. Define variation and discuss two kinds of variation that are most common.

5marks

1b. A firm is faced with two alternative investment plans; Plan 1 will cost #750 and plan 2 #950. Both plans involve the purchase of equipment the life of which is four years, and the current rate of return on capital is expected to be 20%. The estimated cash flows resulting from the projects are:

Years	1	2	3	4
Plan 1	#300	#400	#300	#200
Plan 2	#500	#400	#300	#300

Compute the net present value of these expected returns assuming a rate of return on capital of 20% and state your preferred project based on your computation. **20marks**

Question

2a. Define Arithmetic and Geometric progression.

8marks

2b. Suppose #1,000 is invested at 7% per annum compound interest. Find the value of the investment at the end of the tenth year. **7marks**

Question

3a. Define Capital budgeting **5marks**

3b. An equipment 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 #400 a year. The rate of return expected from capital of this type is 15%. Is the investment worthwhile? **10marks**

Question

4a. Explain the following;

i. Bond with maturity **3marks**

ii. Pure Discount Bonds **3marks**

iii. Perpetual Bonds **3marks**

4b. Describe the objective functions and the constraints of L.P. **6marks**

Question

5a. Differentiate the four costs associated with inventory. **5marks**

5b. The following data relate to a particular stock item

Normal Usage	110 per day
Minimum Usage	50 per day
Maximum Usage	140 per day
Lead time	25-20 days
EOQ	5000

Using this data, calculate the various control levels. **10marks**

6a. Discuss five advantages of quantitative skills for managers. **7marks**

6b. What are the four (4) advantages and disadvantages of the periodic review system of inventory control. **1mark each @ each point = 8marks**