**NATIONAL OPEN UNIVERSITY OF NIGERIA**
**91, CADASTRAL ZONE, NNAMDI AZIKWE EXPRESS WAY, JABI – ABUJA**
**FACULTY OF MANAGEMENT SCIENCES**
**JULY 2017 EXAMINATION QUESTIONS**

**Course Code: MBF 839** **Credit Unit: 3.**
**Course Title: Quantitative Techniques for Banking and Finance**
**Time Allowed: 2½ Hours.**
**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.** Simplify $15 + 3 + 2^3$ x 1- 4 x 2 (3 + I)    **(10marks)**

**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 on capital is expected to be 20%. The estimated cash flows resulting from the projects are:

| Years | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Plan 1 | #500 | #200 | #400 | #250 |
| Plan 2 | #700 | #600 | #400 | #350 |

Required: Compute for the present value of the expected returns assuming a rate of return on capital of 20% and state your preferred project based on your computation.    (**15marks)**

**Question**

**2a.** Define Investment decisions and Annuity.    (**8marks)**

**2b.** Suppose that N1,000 are placed in the savings account of a bank at 5 percent interest rate. How much shall it grow at the end of three years?        (**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 the 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)**