

**INSTITUTE OF BANKERS IN MALAWI**

**DIPLOMA IN BANKING EXAMINATION**

**SUBJECT: FINANCIAL CONCEPTS A (IOBM – D206)**

**Date: Monday, 23rd November 2020**

**Time Allocated: 3 Hours (08:00am – 11:00 am)**

**INSTRUCTIONS TO CANDIDATES**

1 This paper consists of **TWO** Sections, A and B.

2 Section A consists of 4 questions; each question carries 15 marks.

Answer **ALL** questions.

3 Section B consists of 4 questions; each question carries 20 marks. Answer **ANY TWO** questions.

4 You will be allowed **10 minutes** to go through the paper before the start of the examination, you may write on this paper but not in the answer book.

5 Begin each answer on a new page.

6 **Please write your examination number on each answer book used. Answer books without examination numbers will not be marked.**

7 All persons writing examinations without payment will risk expulsion from the Institute.

8 If you are caught cheating, you will be automatically disqualified in all subjects seated this semester.

9 DO NOT open this question paper until instructed to do so.

**SECTION A (60 MARKS)**

Answer **ALL** questions from this section.

**QUESTION 1 COMPULSORY**

Massa has been presented with K100,000 investment options as per below.

1. 5 years at the interest rate of 5% per year.
2. 7 years at the interest rate of 3% per year.
3. 4 years at the interest rate of 9% per year.
4. 2 years at the interest rate of 6% per year.

**Required:**

**Advise** Massa which investment option from above; will be characterized by the **highest** monetary return at the end of the investment horizon? *Assume annual compounding and show your working/calculations*.

**(Total 15 marks)**

**QUESTION 2**

1. If Treasury Bills are currently paying 5.25% and the inflation rate is 1.80%, what is the exactreal rate of interest? *(2 marks)*
2. An investment offers a 7% total return over the coming year. Kalisto Prediction thinks the total return on this investment will be 5.5%. Based on his thinking, what will be the inflation rate by the end of next year? *(2 marks)*
3. Suppose that a principal of K100 is invested at the beginning of the year in the Treasury Bill referred to in (a) above, i.e. the interest on this Treasury Bill is accumulated at nominal annual rate of 5.25%, compounded monthly.
4. Calculate the accumulated amount at the end of the year. *(3 marks)*
5. Calculate the annual effective rate of interest. *(3 marks)*
6. Now assume the Treasury Bill with a face value of K100 is sold on 19 August 2015 and matures 16 September 2015 (28 days term). The bill is sold for K98.94. What is the annual discount rate of the investment, assuming simple discount? Round to 3 digits. *(5 marks)*

**(Total 15 marks)**

**QUESTION 3**

It is always advantageous to use cash flows rather than accounting profits in

evaluating investment projects”

**Expand** the above statement by highlighting **five** advantages of using cash flows in favor of accounting profits. Give examples to emphasize your point.

**(Total 15 marks)**

**QUESTION 4**

1. **Contrast** the following;
   1. **Compound Interest** *versus* **Simple Interest** *(2 marks)*
   2. **Effective annual rate** *versus* **Annual Percentage rate** *(3 marks)*
2. Suppose that K1, 000,000 is deposited into a bank account which earns interest at the nominal rate of 12%, compounded quarterly, what is the value of the investment after 1year? *(5 marks)*
3. Suppose that a T-Bill with face value of K100 is issued on 8th September 2013 and matures on 15th December 2013. Given that the price of the T-Bill is K99.27076, **find** the annual rate of interest. Assume simple interest.

*(5 marks)*

**(Total 15 marks)**

**SECTION B (40 MARKS)**

Answer **ANY** two questions from this section

**QUESTION 5**

Discuss the advantages and disadvantages of the payback period method as a capital budgeting technique.  **(Total 20 marks)**

**QUESTION 6**

1. [Define the timing of payments on a Deferred Annuities due](http://www.investopedia.com/terms/o/ordinaryannuity.asp) **.**  *(4 marks)*

1. Mack Industries just paid a dividend of $1.00 per share (D0 =$1.00). Analysts expect the company’s dividend to grow 20% this year (D1 =$1.20) and 15% next year. After two years the dividend is expected to grow at a constant rate of 5%. The required rate of return on the company’s stock is 12%. What should the company’s current share price? *(8 marks)*
2. A company’s $100 par perpetual preference share has a dividend rate of 7% and a required rate of return of 11%. The company’s earnings are expected to grow at a constant rate of 3% per year. If the market price per share for the preference share is $75, is the preference share overvalued or undervalued and by how much? *(8 marks)*

**(Total 20 marks)**

**QUESTION 7**

When a **single** investment with **conventional** cash flows is being evaluated there is no conflict between the Net Present Value and Internal Rate of Return. However, the present value method may be preferred in the some situations. **Elaborate** this statement in the following which situations:

1. Where mutually exclusive projects /investments are being compared.
2. Where the cash flows of a project are not conventional;
3. Where the discount rate changes during the life of a project.
4. Where the Reinvestment assumption is based on an equal rate to cost of capital.

**(Total 20 marks)**

**QUESTION 8**

A company with a cost capital of 10% has non-postponable opportunities with the estimated cash flows shown below;

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **PROJECT A**  **K000** | **PROJECT B**  **K000** | **PROJECT C**  **K000** | **PROJECT D**  **K000** | **PROJECT E**  **K000** |
| **0** | (1,000) | (800) | (750) | (500) | (800) |
| **1** |  | 200 | 300 | 150 |  |
| **2** |  | 300 | 300 | 150 | 350 |
| **3** |  | 400 | 300 | 150 | 350 |
| 4 |  | 400 | 300 | 150 | 350 |
| 5 |  | 300 | 300 | 150 | 350 |
| 6 |  | 200 |  | 150 | 350 |
| 7 |  | (100) |  | 150 | 350 |
| 8 | 3,000 |  |  |  |  |

**Required:**

Decide which projects should be accepted in the following circumstances;

1. The company is not in a capital rationing position; *(8 marks*)
2. The company is in a capital rationing position, the projects are divisible and only K2, 500,000 is available. *(6 marks)*
3. The company is in a capital rationing position, the projects are not divisible and only K2, 500,000 is available. *(6 marks)*

**(Total 20 marks)**

**END OF EXAMINATION PAPER**