



**PROGRAM** : NATIONAL DIPLOMA  
*ENGINEERING : INDUSTRIAL*

**SUBJECT** : **INDUSTRIAL ACCOUNTING 3**

**CODE** : **BBB 341**

**DATE** : SUMMER SSA EXAMINATION 2015  
8 DECEMBER 2015

**DURATION** : (SESSION 1) 08:00 - 11:00

**WEIGHT** : 40 : 60

**TOTAL MARKS** : 100

---

**ASSESSOR** : MR P. DUBE

**MODERATOR** : MR S. TARUVINGA

**NUMBER OF PAGES** : 4 PAGES

---

2275

**INSTRUCTIONS TO STUDENTS**

PLEASE ANSWER ALL QUESTIONS.  
OPEN BOOK EXAMINATION  
ANSWER THE QUESTIONS IN SEQUENCE

**REQUIREMENTS**

ONLY ONE POCKET CALCULATOR PER CANDIDATE MAY BE USED.  
GRAPH PAPER

---

**Question 1**

The following information should be used for questions 1.1 through 1.3

	<u>2009</u>
Cost of goods sold	R3 210
Interest	215
Dividends	160
Depreciation	375
Change in retained profits	360
Tax rate	35%

- 1.1.1 What is the net profit after tax income for 2009? 2
- 1.1.2 What is the operating cash flow for 2009? 4
- 1.1.3 What are the sales for 2009? 3
- 1.2 You are considering a stock investment in one of two firms (Lots of Debt, Inc. and Lots of Equity, Inc.), both of which operate in the same industry. Lots of Debt, Inc. finances its R25 million in assets with R24 million in debt and R1 million in equity. Lots of Equity, Inc. finances its R25 million in assets with R1 million in debt and R24 million in equity. Calculate the debt ratio, equity multiplier, and debt-to-equity ratio for the two firms. 6
- 1.3 Tater and Pepper Corp. reported sales for 2008 of R23 million. Tater and Pepper listed R5.6 million of inventory on its balance sheet. Calculate Tater and Pepper's 2008 EBIT. Using a 365 day year, how many days did Tater and Pepper's inventory stay on the premises? How many times per year did Tater and Pepper's inventory turnover? 6
- 1.4 Maggie's Skunk Removal, Corp.'s 2008 income statement listed net sales = R12.5 million, EBIT = R5.6 million, net income available to common stockholders = R3.2 million, and common stock dividends = R1.2 million. The 2008 year-end balance sheet listed total assets = R52.5 million, and common stockholder's equity = R21 million with 2 million shares outstanding. Calculate the profit margin, ROA, and ROE. 6
- 27**

**Question 2**

- 2.1 You want to have R10,000 saved ten years from now. How much less do you have to deposit today to reach this goal if you can earn 6 per cent rather than 5 per cent on your savings? 5
- 2.2 Thomas invests R100 in an account that pays 5 per cent simple interest. How much money will Thomas have at the end of five years? 2
- 2.3 Beatrice invests R1,000 in an account that pays 4 per cent simple interest. How much more could she have earned over a five-year period if the interest had compounded annually? 5
- 2.4 You own a classic automobile that is currently valued at R39,500. If the value increases by 6 per cent annually, how much will the auto be worth ten years from now? 3

**15**

**Question 3**

3.1 You are the beneficiary of a life insurance policy. The insurance company informs you that you have two options for receiving the insurance proceeds. You can receive a lump sum of R50,000 today or receive payments of R641 a month for ten years. You can earn 6.5 per cent on your money. Which option should you take and why? 4

3.2 The Ajax Co. just decided to save R1,500 a month for the next five years as a safety net for recessionary periods. The money will be set aside in a separate savings account which pays 3.25 per cent interest compounded monthly. They deposit the first R1,500 today. If the company had wanted to deposit an equivalent lump sum today, how much would they have had to deposit? 5

3.3 Today, you turn 21. Your birthday wish is that you will be a millionaire by your 40<sup>th</sup> birthday. In an attempt to reach this goal, you decide to save R25 a day, every day until you turn 40. You open an investment account and deposit your first R25 today. What rate of return must you earn to achieve your goal? 5

3.4 You are considering a job offer. The job offers an annual salary of R52,000, R55,000, and R60,000 a year for the next three years, respectively. The offer also includes a starting bonus of R2,000 payable immediately. What is this offer worth to you today at a discount rate of 6 per cent? 6

20

**Question 4**

4.1 Buti's Co. offers a zero coupon bond with an 11.3 per cent yield to maturity. The bond matures in 16 years. What is the current price of a R1,000 face value bond? 3

4.2 Mandla's Motor Corp. Bonds offer a 6 per cent coupon at a current market price of R989. The bonds have a face value of R1,000 and a call price of R1,020. What is the current yield on these bonds? 3

6

**Question 5**

The shares of Eddie's Engines, Inc. sells for R25.71 a share. The shares are expected to pay R1.80 per share next month when the annual dividend is distributed. Eddie's has established a pattern of increasing their dividends by 4 per cent annually and expects to continue doing so. What is the market rate of return on these shares? 3

NUYU announced today that they will begin paying annual dividends. The first dividend will be paid next year in the amount of R0.25 a share. The following dividends will be R0.40, R0.60, and R0.75 a share annually for the following three years, respectively. After that, dividends are projected to increase by 3.5 per cent per year. How much are you willing to pay to buy one share if your desired rate of return is 12 per cent? 6

9

**Question 6**

6.1 You are considering two independent projects both of which have been assigned a discount rate of 8 per cent. Based on the profitability index, what is your recommendation concerning these projects?

6

Project A		Project B	
<u>Year</u>	<u>Cash Flow</u>	<u>Year</u>	<u>Cash Flow</u>
0	-R38,500	0	-R42,000
1	R20,000	1	R10,000
2	R24,000	2	R40,000

6.2 A project has an initial cost of R8,500 and produces cash inflows of R2,600, R4,900, and R1,500 over the next three years, respectively. What is the discounted payback period if the required rate of return is 7 per cent?

4

6.3 A project has an initial cost of R38,000 and a four-year life. The company uses straight-line depreciation to a book value of zero over the life of the project. The projected net profit after tax from the project is R1,000, R1,200, R1,500, and R1,700 a year for the next four years, respectively. What is the average accounting return?

4

6.4 You are considering the following two mutually exclusive projects. Both projects will be depreciated using straight-line depreciation to a zero book value over the life of the project. Neither project has any salvage value. Based on the net present value method of analysis and given the information in the problem, which project should be accepted?

9

**23**

	Project A		Project B	
	<u>Year</u>	<u>Cash Flow</u>	<u>Year</u>	<u>Cash Flow</u>
	0	-R75 000	0	-R70 000
	1	R19 000	1	R10 000
	2	R48 000	2	R16 000
	3	R12 000	3	R72 000
Required rate of return	10 per cent		13 per cent	
Required payback period	2,0 years		2,0 years	
Required accounting return	8 per cent		11 per cent	

---END---