

CAPITAL BUDGETING

PRACTICE TEST #1

ACCOUNTING AND FINANCE – UNIT 3



ATAR Survival Guide: Answer Key

© Christian Bien

This paper has been made complimentary of the ATAR Survival Guide. You can freely share and distribute this paper as long as it is not modified. More details about how you can use this paper can be found under

atarsurvivalguide.com/terms-of-use

Answer Key

Section 1: Multiple Choice

Question 1: A

Question 2: B

Question 3: A

Question 4: D

Section 2: Practical

Question 5: Amart Ltd is interested in investing a new self-service checkout system costing \$1 million. The system will have a working life of 5 years and have the following effect on the business's financials:

- Eliminate the cost of 5 self-service cashiers with each an annual salary of \$52,900.
- The system will save space in the store to help display more merchandise. An accountant suggests that this will contribute to an additional \$5000 per year in sales.
- Increase electricity consumption by approximately \$5200 per year
- System will require a casual maintenance worker to perform regular checks, costing approximately \$10,800 per year
- Depreciated using the straight-line method over the 5 years
- System is expected to be upgraded with a newer model at the end of the 5 years. System is expected to have a resell value of \$50,000.
- Do not consider company tax implications

Calculate the following:

i) The Payback period of the investment in years and months.

Annual Cash Inflows		
Cashier Cost Savings	\$264,500	
Additional sales	\$5,000	
Total Cash Inflows	\$264,500	✓ ✓
Annual Cash Outflows		
Electricity	\$5,200	
Maintenance Wages	\$10,800	
Total Cash Outflows	\$16,000	✓ ✓
Net Cash Flows	\$248,500	✓

$$\text{Payback Period} = \frac{1,000,000}{248,500}$$

$$\text{Payback Period} = 4.024 \text{ years}$$

$$0.024 * 12 = 0.288 \text{ months}$$

$$= 1 \text{ month (Rounded up)}$$

$$\text{Payback Period} = 4 \text{ years } 1 \text{ month } \checkmark \checkmark$$

- ii) **The company expects the investment to be paid within 4 years. Based on a quantitative analysis, state whether the investment should be accepted. (1 mark)**

- Investment should not be accepted as the payback period exceeds the business's required payback period of 4 years

- iii) **Calculate the Net Present Value of the Investment. (5 marks)**

Years	Net Cash Flows	Present Value of \$1	Discounted Cash Flows	
1-4	\$248,500	3.3121	\$823,057	✓
5	\$298,500	0.6806	\$203,159	✓
Present Value of Total Cash Flows			\$1,026,216	✓

$$NPV = \$1,026,216 - \$1,000,000$$

$$NPV = \$26,216 \quad \checkmark \quad \checkmark$$

- iv) **Based on a Net Present Value analysis, state whether the investment should be accepted. (1 mark)**

- Investment should be accepted as the NPV is positive, hence it will bring economic benefits to the business

Question 6: Samson Electronics Ltd is considering purchasing new machinery to make it's production line processes more efficient. The machinery costing \$250,000 is expected to have a useful life of 8 years will have the following effects:

- Increase sales by \$105,000 p.a
- Increase electricity costs by \$10,000 p.a
- Increase factory wages by \$25,000 p.a
- Require regular maintenance of \$5,000 p.a
- Require additional insurance premiums of \$250 per year
- Depreciation is through the straight line method
- Scrap value is estimated at \$10,000 after the end of its useful life
- Tax rate is 30%

i) Calculate the net annual after tax cash flows.

$$\text{Depreciation} = \frac{250,000 - 50,000}{8}$$

$$\text{Depreciation} = \$25,000 \text{ p. a}$$

Revenue		\$105,000	
Less Expenses			
Electricity	\$10,000		
Factory Wages	\$25,000		
Maintenance	\$5,000		
Insurance	\$250		
Cash Expenses	\$5,000		
Depreciation	\$25,000	\$70,250	
Before Tax Profit		\$34,750	
Less Income Tax		(\$10,425)	✓ ✓
After Tax Profit		\$24,325	

Annual Cash Inflows

Sales	\$105,000	
Total Cash Inflows	\$105,000	✓

Annual Cash Outflows

Electricity	\$10,000	
Factory Wages	\$25,000	
Maintenance	\$5,000	
Insurance	\$250	
Other Cash Expenses	\$5,000	
Income Tax	\$10,425	
Total Cash Outflows	\$55,675	✓ ✓ ✓
Net Annual Cash Flows	\$49,325	✓ ✓

ii) Calculate the payback period for the investment. (2 marks)

$$\text{Payback Period} = \frac{250,000}{49,325}$$

$$\text{Payback Period} = 5.068 \text{ years}$$

$$0.68 * 12 = 0.816 \text{ months}$$

$$= 1 \text{ month}$$

$$\text{Payback Period} = 5 \text{ years and 1 month } \checkmark \checkmark$$

iii) The acceptable payback period for the business is 6 years. Based on the payback period calculation, advise whether you would accept the investment? (1 mark)

- Yes, should be accepted as the payback period of 5 years and 1 month is within the acceptable 6 year payback period required by the business.

iv) Calculate the Net Present Value.

Years	Net Cash Flows	Present Value of \$1	Discounted Cash Flows
1-7	\$49,325	4.8684	\$240,134 ✓
8	\$99,325	0.4665	\$46,335 ✓
Present Value of Total Cash Flows			\$286,469 ✓

$$NPV = 286,469 - 250,000$$

$$NPV = 36,469 \checkmark \checkmark$$

v) Based on the NPV calculation, would you recommend the investment? (1 mark)

- Yes, as the NPV is positive and hence will bring economic benefits to the business.

Boost Your ATAR

Find Out How Christian and the ATAR Survival Guide Can Help You Achieve ATAR Success

Full Access to WACE Notes

Private tuition students can access the ATAR Survival Guide's full library of WACE Notes based on the syllabus points.



Full Access to Practice Papers

Private tuition students can assess the ATAR Survival Guide's library of practice papers to test your knowledge on syllabus topics.



Dedicated Online Support

Need help on demand? Private tuition students can get their questions answered via email, messenger and live chat. (Live chat is subject to availability.)



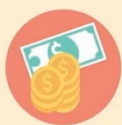
Personalised, Expert Tuition

Get personalised help in the comfort of your own home from Christian Bien, one of WACE's top graduates with an ATAR of 99.15. Tutoring provides a hands on approach to strengthening your weaknesses, helping you achieve ATAR success.

Everything You Need for ATAR Success Under One Price:

Find out more why Christian is the best tutor for you by visiting atarsurvivalguide.com/benefits

Our Tuition Subjects...



Accounting
& Finance



Economics



Applied
Info Tech.



Maths
Methods



ATAR Survival Guide
Private Tuition
With Student Access

Email: christian.bien@atarsurvivalguide.com
Phone: 04 1663 1512 ABN: 87 574 760 103

Copyright Notice

The contents of this paper are protected by copyright. You must not redistribute or share this paper outside the terms of your license.

Redistribution and Sharing practices include:

- Printing this paper to other individuals who are not the purchaser of this paper without the consent of ATAR Survival Guide
- Uploading this paper to social media website, cloud storage provider or any other website where access is formidable by unlicensed users.

You can freely share practice tests that are a 'public version' if Christian Bien and the ATAR Survival Guide's moral rights are not infringed.

For exceptional use of this paper that is not included in any volume license, you must contact Christian Bien from ATAR Survival Guide to request consent.

I thank you for your understanding of these terms.

For more information, visit AtarSurvivalGuide.com/terms-of-use

Error Requests

All papers have been checked and edited for quality and assurance purposes. If you believe you have spotted an error, please send a request.

To send an error request, visit AtarSurvivalGuide.com/contact

Quality Declaration Statement

All papers have been checked and edited for quality and assurance purposes. These tests are based off syllabus and based off student experience. The ATAR Survival Guide offers papers to meet the revision needs of students. The ATAR Survival Guide is an unofficial supplier of practice papers, tests and exams and does not guarantee that materials will reflect actual course work.