***List five different types of capital expenditure items.***

* Establishing a new store;
* Purchasing new machinery;
* Acquiring new technology;
* starting the production of a new product;
* taking over an existing business; or
* investing in a financial institutions investment fund.

***Question 2***

***Describe the characteristics of capital expenditure items.***

* Usually involve large sums of money relative to the size of the business operation. The purchase of a delivery vehicle for a small business may be a large outlay but the acquisition of one delivery vehicle for a supermarket chain would not be that significant. However, if the supermarket chain were to replace all of its delivery vehicles at one time, then it would be a large outlay. Due to the large cost of the investment, businesses will often have to raise finance in addition to their own funds.
* The expenditure is usually for the long term. The acquisition of non-current assets means that the impact of the decision will be felt by the business for a long period of time. There is an expectation that the assets will generate cash flow and profit over time and that they will be sufficient to repay the debt finance, if required, also over a long period.
* The decision cannot be easily reversed. The decisions are difficult to change as the outlay has been made and to make any change would be costly to the business. For example, if, one year after the purchase of a particular type of delivery vehicle, the decision turns out to be the wrong one because a more advanced vehicle is now in the market, the cost of selling the now unsuitable vehicle will involve a considerable loss because of its substantially reduced market value.
* They have a high risk attached to them. The combination of the three previous characteristics mentioned above means that the assets must generate cash flow and profits well into the future so that lenders can be repaid and investors receive a reward. The long term is uncertain as it can be difficult to predict, for example:

1. the rate of technological change;
2. economic circumstances;
3. customer preferences; and
4. what your competitors will do.

***Question 3***

***Explain why capital investment decisions are important.***

Capital expenditures take time to mature but are vital to the long-term effectiveness and efficiency of the business. Investors, lenders, employees and customers are all interested in the capital investment decision as it will affect them in some way. Capital expenditures have a large impact on a business and it is expected that they will:

* Earn a reasonable rate of return;
* Improve productivity;
* Enable the growth of the business; and
* Advance product or service quality.

***Question 4***

***What factors affect capital investment decisions?***

The capital investment decision-making process should involve both an analysis of the quantitative (ie. accounting and finance techniques) and qualitative aspects of the alternative projects or options that are available for consideration.

When management makes a capital investment decision it must consider the qualitative aspects of the decision. These impacts are difficult to quantify but are about the business trying to gain a strategic advantage in the market, as a result of the investment project or asset acquisition.

***Question 5***

***What is meant by the ‘cost of capital’?***

The minimum rate of return, or profit, a company must earn before generating value. It's calculated by a business's accounting department to determine financial risk and whether an investment is justified.

***Question 6***

***Explain the importance of ‘qualitative factors’ in capital investment decisions. Give examples to support your answer.***

Capital investment decisions require consideration of qualitative aspects, such as improvements in product quality, business image and competitiveness; reductions in environmental impacts; and the morale of employees.

Examples of qualitative impacts of capital investment decisions include:

* employee morale;
* effect on other parts of the business;
* environmental impact;
* effect on future business opportunities;
* effect on the business’s image; and
* changes to the quality of product.

***Question 7***

***Explain how customer preferences, competitors and government regulation can affect capital investment decisions. Give examples to support your answer.***

Customer Preferences – critical in the marketing process is the fact that the customer and their demand for a product or service is influenced by their perceptions of the business. The customer’s preferences will alter according to such influences as:

* changing fashion;
* habits; and
* social values.

For example, customers and investors are looking more and more for businesses to make socially and environmentally responsible investments and they may boycott those businesses that do not operate accordingly.

Competitors – in any industry, competition is intense and a business must keep up with or get ahead of its competitors. It must analyse all parts of the business operation, such as:

* marketing approach;
* Productivity;
* Technology;
* Resources;
* financial investments; and
* environmental impact.

It is essential to look for innovation, keep costs to a minimum and maximise revenue-earning potential. These aspects will affect the decisions that managers make and they may consider that these factors will outweigh any unacceptable quantitative results, such as a negative net present value.

Government Regulation – a business must consider the attitude of regulators, such as governments, when considering the acquisition or replacement of assets, or an investment in a project. Corporate social responsibility is influenced by government policy and regulation. For example, businesses must:

* adhere to government demands to reduce environmental impacts
* meet regulations regarding occupational health and safety
* comply with government requirements concerning native title

At the local government level, businesses must operate under the by-laws relating to such aspects as:

* health and safety;
* business zoning; and
* building construction.

***Question 8***

***Define the payback period.***

Is the period of time it takes for the cash flows from an investment to exceed the initial cost of the investment. The shorter the payback period, the better. Therefore, if there are two or more options available, the one with the smallest payback is the project that should be preferred.

***Question 9***

***Describe the advantages and disadvantages of the payback period.***

Advantages

* it is a simple technique;
* it is easily understood by business managers as they appreciate the importance of cash outlays being recouped; and
* it gives the manager some appraisal of the financial risk attached to a project.

Disadvantages

* it does not consider the time value of money. Each period’s cash inflow is considered to have the same value as the next and, this is not necessarily true;
* cash received after the payback period is not considered. Some projects may take a number of periods to generate good cash inflows and they may, in the long term, be better than those with short payback periods.

***Question 11***

***Explain the concept of the ‘time value of money’.***

Is a concept that states money today does not have the same value in the future and this is due to the impact of inflation and interest rates.

***Question 12***

***What do you understand about by the present value of an item?***

Cash flows over time have different values. Therefore, if we wish to add them all together and make valid comparisons over time, we must ensure that they are all the same equivalent value – usually their current value (present value). This practice of converting future cash flows to their present value is called the discounted cash flow technique.

When we calculate the present value of an item we use what is called the discount rate. The connection between a future value and a present value is that the discount rate and the interest rate (or rate of return) are in fact the same.

***Question 13***

***Describe the advantages and disadvantages of the net present value method.***

Advantages\

* it takes into consideration the time value of money; and
* The cash flows from the project, over its entire lifetime are taken into consideration.

Disadvantages

* it can be difficult to determine an appropriate discount rate/cost of capital;
* It does not take into account of risk; and
* It is more complex and can be difficult to explain.

***Question 14***

***Which capital investment technique is the recommended method of evaluating capital expenditure items and why?***

Cash inflows and outflows are considered a better determinant of the success of a capital investment project as they are what truly determines the value of an investment. It is possible to measure the time value of money. The net present value method (NPV) technique considers the time value of money, taking into account the importance of cash flows rather than profit. It is therefore considered the best method of evaluating capital expenditure items.

| **Constant Net Cash Flows** |
| --- |

| **Payback Period =** | **Initial Cost of Investment** |
| --- | --- |
| **Net Cash Flows** |

| **Payback Period =** | $38 000 |
| --- | --- |
| $ 8 000 |

| **Payback Period =** | 4.75 |
| --- | --- |

| **Payback Period =** | 0.75 x 12 = 9 |
| --- | --- |

| **Payback Period =** | **4 Years and 9 Months** |
| --- | --- |

| **Differing Net Cash Flows** |
| --- |

| **Accumulated Cash Flows** | | |
| --- | --- | --- |
| **Year** | **Net Cash Flows** | **Accumulated Cash Flows** |
| 1 | $30 000 | $30 000 |
| 2 | $35 000 | $65 000 |
| 3 | $33 000 | $98 000 |
| 4 | $28 000 | **$126 000** |
| 5 | **$27 000** | **$153 000** |
| 6 | $22 000 | $175 000 |
| 7 | $19 000 | $194 000 |
| 8 | $14 000 | $208 000 |
| 9 | $13 000 | $221 000 |

| **Step 1** | Calculate the cumulative cash flows for each year. | At the end of **Year 4** we have accumulated **$126 000** and at the end of **Year 5** we have accumulated **$153 000**. The initial investment is recovered after **Year 4** but before the completion of **Year 5**. |
| --- | --- | --- |

| **Step 2** | Determine the amount still to be recovered after **Year 4**. | $150 000 - $126 000 | = $24 000 |
| --- | --- | --- | --- |

| **Step 3** | Calculate the proportion of the amount to be recovered is of the total to be recovered in **Year 5**. | $24 000  $27 000 | = 0.888 |
| --- | --- | --- | --- |

| This proportion can be expressed in months as follows: |
| --- |

| **Payback Period =** | 0.888 x 12 months = 10.656 |
| --- | --- |

| **Payback Period =** | **4 Years and 11 Months** |
| --- | --- |

**Section Two (45 marks)**

Write your answers in the spaces provided.

**Question 6**

*Big Boys Toys* is evaluating the purchase of three machines capable of performing certain operations that are currently performed manually. Information pertaining to each of the machines is given below:

**Option A**

This machine costs $650,000. It will be fully paid for on the date of purchase. Depreciation will be applied to this non-current asset over its useful life of five years, by the end of which it should have a scrap value of $50,000. It is expected that the purchase of this machine will result in an increase in cash sales revenue of $120,000 for the first two years and $125,000 in the next three years. In addition, the business can expect to reduce cash outflows by saving $40,000 in wages each year.

**Option B**

This machine will cost $840,000 and have a useful life of eight years. A deposit of $700,000 will initially be paid on delivery and a further $140,000 will be paid at the end of Year 1. Depreciation will be applied to this non-current asset over its useful life, by the end of which it should have a scrap value of $20,000. It is expected that the purchase of this machine will result in cash inflows of $400,000 each year and cash outflows of $240,000 each year.

**Option C**

This machine will cost $950,000 and have a useful life of eight years. A deposit of $450,000 will initially be paid on delivery and the remainder will be paid in two equal instalments at the end of Year 1 and Year 2. Depreciation will be applied to this non-current asset over its useful life, by the end of which it should have a scrap value of $140,000. It is expected that the purchase of this machine will result in cash inflows of $440,000 and cash outflows of $240,000 during years 1 through 5, and cash inflows of $460,000 and cash outflows of $280,000 during years 6 through 8.

*Additional Information:*

The company has set an acceptable predetermined payback period of 5 years and the cost of capital is 12%.

**Required:**

**Part A**

Calculate the payback period in years and months for each of the machines. (17 marks)

| **Option A** | | | |
| --- | --- | --- | --- |
| **Year** | **Net Cash Flows** | **Accumulated Cash Flows** | **Marks** |
| 1 | $120 000 + $40 000 = $160 000 | $160 000 | **½** |
| 2 | $120 000 + $40 000 = $160 000 | $320 000 | **½** |
| 3 | $125 000 + $40 000 = $165 000 | $485 000 | **½** |
| 4 | $125 000 + $40 000 = $165 000 | $650 000 | **½** |
| 5 | $125 000 + $40 000 = $165 000 | $815 000 | **½** |

| **Step 1** | Calculate the cumulative cash flows for each year. | At the end of **Year 4** we have accumulated **$650 000**. | **½** |
| --- | --- | --- | --- |

| **Payback Period =** | **4 Years** | **1** |
| --- | --- | --- |

| **Option B** |
| --- |

| **Net Cash Flow =** | **Cash Inflows -** | **Cash Outflows** |
| --- | --- | --- |

| **Net Cash Flow =** | $400 000 - | $240 000 | **1** |
| --- | --- | --- | --- |

| **Net Cash Flow =** | **$160 000** | **½** |
| --- | --- | --- |

| **Payback Period =** | **Initial Cost of Investment** |
| --- | --- |
| **Net Cash Flows** |

| **Payback Period =** | $840 000 | **1** |
| --- | --- | --- |
| $160 000 |

| **Payback Period =** | 5.25 | **½** |
| --- | --- | --- |

| **Payback Period =** | 0.25 x 12 = 3 | **½** |
| --- | --- | --- |

| **Payback Period =** | **5 Years and 3 Months** | **1** |
| --- | --- | --- |

| **Option C** | | | |
| --- | --- | --- | --- |
| **Year** | **Net Cash Flows** | **Accumulated Cash Flows** | **Marks** |
| 1 | $440 000 - $240 000 = $200 000 | $200 000 | **½** |
| 2 | $440 000 - $240 000 = $200 000 | $400 000 | **½** |
| 3 | $440 000 - $240 000 = $200 000 | $600 000 | **½** |
| 4 | $440 000 - $240 000 = $200 000 | $800 000 | **½** |
| 5 | $440 000 - $240 000 = $200 000 | $1 000 000 | **½** |
| 6 | $460 000 - $280 000 = $180 000 | $1 180 000 | **½** |
| 7 | $460 000 - $280 000 = $180 000 | $1 360 000 | **½** |
| 8 | $460 000 - $280 000 = $180 000 | $1 540 000 | **½** |

| **Step 1** | Calculate the cumulative cash flows for each year. | At the end of **Year 4** we have accumulated **$800 000** and at the end of **Year 5** we accumulated **$1 000 000**. The initial investment is recovered after **Year 4** but before the completion of **Year 5**. | **1** |
| --- | --- | --- | --- |

| **Step 2** | Determine the amount still to be recovered after **Year 4**. | $950 000 - $800 000 | = $150 000 | **1** |
| --- | --- | --- | --- | --- |

| **Step 3** | Calculate the proportion of the amount to be recovered is of the total to be recovered in **Year 5**. | $150 000  $200 000 | = 0.75 | **1** |
| --- | --- | --- | --- | --- |

| This proportion can be expressed in months as follows: |
| --- |

| **Payback Period =** | 0.75 x 12 months = 9 | **½** |
| --- | --- | --- |

| **Payback Period =** | **4 Years and 9 Months** | **1** |
| --- | --- | --- |

| **Payback Period** | | |
| --- | --- | --- |
| **Option A** | **Option B** | **Option C** |
| **4 Years** | **5 Years and 3 Months** | **4 Years and 9 Months** |
| **4** | **4½** | **8½** |

**Part B**

Identify which investment has a better payback period, and state whether it is a suitable investment. (3 marks)

| **Description** | **Marks** |
| --- | --- |
| Identifies the correct investment and states, in detail, if it is a suitable investment | **3** |
| Identifies the correct investment and states, in general detail, if it is a suitable investment | **2** |
| Identifies the correct investment | **1** |
| **Answer could include, but is not limited to, the following points:** | |
| · Identifies Option A as the investment with a better payback period (or the option that had the lowest in their calculation).  · It is a suitable investment as it comes under company’s acceptable predetermined payback period of 5 years. | |
| **Total Marks** | **3** |

**Part C**

*Big Boys Toys* has decided to scrap Option B. Calculate the net present value for each of the other two machines. (14 marks)

| **Option A** |
| --- |

| **Net Cash Flow (Years 1 – 2) =** | $160 000 |
| --- | --- |

| **Net Cash Flow (Years 3 – 4) =** | $165 000 |
| --- | --- |

| **Net Cash Flow (Year 5) =** | $165 000 + | $50 000  Scrap value | **½** |
| --- | --- | --- | --- |

| **Net Cash Flow (Year 5) =** | $215 000 |
| --- | --- |

| **PV =** | **NCF x PVF(i, n)** |
| --- | --- |

| **PV (Years 1 – 2) =** | $160 000 x PVF(12%, 2) |
| --- | --- |

| **PV (Years 1 – 2) =** | $160 000 x 1.6901 |
| --- | --- |

| **PV (Years 1 – 2) =** | **$270 416** | **1** |
| --- | --- | --- |

| **PV (Year 3) =** | $165 000 x PVF(12%, 3) |
| --- | --- |

| **PV (Year 3) =** | $165 000 x 0.7118 |
| --- | --- |

| **PV (Year 3) =** | **$117 447** | **1** |
| --- | --- | --- |

| **PV (Year 4) =** | $165 000 x PVF(12%, 4) |
| --- | --- |

| **PV (Year 4) =** | $165 000 x 0.6355 |
| --- | --- |

| **PV (Year 4) =** | **$104 858** | **1** |
| --- | --- | --- |

| **PV (Year 5) =** | $215 000 x PVF(12%, 5) |
| --- | --- |

| **PV (Year 5) =** | $215 000 x 0.5674 |
| --- | --- |

| **PV (Year 5) =** | **$121 991** | **1** |
| --- | --- | --- |

| **NPV =** | **PV Net Cash Flows -** | **PV Of The Cost Of The Investment** | **1** |
| --- | --- | --- | --- |

| **NPV =** | ($270 416 + $117 447 + $104 858 + 121 991) - | $650 000 |
| --- | --- | --- |

| **NPV =** | $614 712 - | $650 000 |
| --- | --- | --- |

| **NPV =** | **(-ve) $35 288** | **½** |
| --- | --- | --- |

| **Option C** |
| --- |

| **Net Cash Flow (Years 1 – 5) =** | $200 000 |
| --- | --- |

| **Net Cash Flow (Years 6 – 7) =** | $180 000 |
| --- | --- |

| **Net Cash Flow (Year 8) =** | $180 000 + | $140 000 | **½** |
| --- | --- | --- | --- |

| **Net Cash Flow (Year 8) =** | $320 000 |
| --- | --- |

| **PV =** | **NCF x PVF(i, n)** |
| --- | --- |

| **PV (Years 1 – 5) =** | $200 000 x PVF(12%, 5) |
| --- | --- |

| **PV (Years 1 – 5) =** | $200 000 x 3.6048 |
| --- | --- |

| **PV (Years 1 – 5) =** | **$720 960** | **1** |
| --- | --- | --- |

| **PV (Year 6) =** | $180 000 x PVF(12%, 6) |
| --- | --- |

| **PV (Year 6) =** | $180 000 x 0.5066 |
| --- | --- |

| **PV (Year 6) =** | **$91 188** | **1** |
| --- | --- | --- |

| **PV (Year 7) =** | $180 000 x PVF(12%, 7) |
| --- | --- |

| **PV (Year 7) =** | $180 000 x 0.4523 |
| --- | --- |

| **PV (Year 7) =** | **$81 414** | **1** |
| --- | --- | --- |

| **PV (Year 8) =** | $320 000 x PVF(12%, 8) |
| --- | --- |

| **PV (Year 8) =** | $320 000 x 0.4039 |
| --- | --- |

| **PV (Year 8) =** | **$129 248** | **1** |
| --- | --- | --- |

| **PV (Cost Of The Investment =** | **NCF x PVF(i, n)** |
| --- | --- |

| **PV (Cost Of The Investment (Year 1) =** | $250 000 x PVF(12%, 1) |
| --- | --- |

| **PV (Cost Of The Investment (Year 1) =** | $250 000 x 0.8929 |
| --- | --- |

| **PV (Cost Of The Investment (Year 1) =** | **$223 225** | **1** |
| --- | --- | --- |

| **PV (Cost Of The Investment (Year 2) =** | $250 000 x PVF(12%, 2) |
| --- | --- |

| **PV (Cost Of The Investment (Year 2) =** | $250 000 x 0.7972 |
| --- | --- |

| **PV (Cost Of The Investment (Year 2) =** | **$199 300** | **1** |
| --- | --- | --- |

| **NPV =** | **PV Net Cash Flows -** | **PV Of The Cost Of The Investment** |
| --- | --- | --- |

| **NPV =** | ($720 960 + 91 188 + 81 414 +  $129 248) - | ($450 000 + $223 225 +  $199 300) | 1 |
| --- | --- | --- | --- |

| **NPV =** | $1 022 810 - | $872 525 |
| --- | --- | --- |

| **NPV =** | **(+ve) $150 285** | **½** |
| --- | --- | --- |

| **Net Present Value** | |
| --- | --- |
| **Option A** | **Option C** |
| **(-ve) $35 288** | **(+ve) $150 285** |
| **6** | **8** |

**Question 7**

*Big Boys Toys* has taken your advice on board and will now investigate the *qualitative* factors that may further influence their decision.

Identify and explain three (3) such factors. (6 marks)

| **Description** | **Marks** |
| --- | --- |
| Identifies and explains correctly, and in detail, three (3) qualitative factors | **6** |
| Identifies and explains correctly, and in detail, two (2) qualitative factors, and in some detail, one (1) qualitative factor | **5** |
| Identifies and explains correctly, and in detail, two (2) qualitative factors | **4** |
| Identifies and explains correctly, and in detail, one (1) qualitative factor, and in some detail, one (1) qualitative factor | **3** |
| Identifies and explains correctly, and in detail, one (1) qualitative factor | **2** |
| Identifies and explains correctly, and in some detail, one (1) qualitative factor | **1** |
| **Answer could include, but is not limited to, the following points:** | |
| · **Employee Morale** – will adopting either Option A or C affect employee morale in a positive or negative way. If it’s in a negative way, the decision might have to be re-thought.  · **Affect on Other Parts of the Business** - will adopting either Option A or C affect other parts of the business in a positive or negative way. If it’s in a negative way, the decision might have to be re-thought.  · **Environmental Impact** - will adopting either Option A or C impact the environment in a positive or negative way. If it’s in a negative way, the decision might have to be re-thought.  · **Effect on Future Business Opportunities**  · **Effect on the Business’s Image**  · **Changes to the Quality of Product** | |
| **Total Marks** | **6** |

**Question 8**

*Big Boys Toys* will need to investigate how they will finance their business expansion.

**Part A**

Briefly describe two (2) methods of business finance available to them. (2 marks)

| **Description** | **Marks** |
| --- | --- |
| Describes two (2) methods of business finance in detail | **2** |
| Describes one (1) method of business finance in detail | **1** |
| **Answer could include, but is not limited to, the following points:** | |
| · **Equity Financing** – money contributed by the owner/s. An example of this is through a share issue.  · **Debt Financing** – borrowings or money provided for a limited term by somebody else. An example of this is a long-term loan from a bank. | |
| **Total Marks** | **2** |

**Part B**

What is the meaning and significance of ‘gearing’ in relation to business finance? (3 marks)

| **Description** | **Marks** |
| --- | --- |
| Discusses the meaning and significance of ‘gearing’ in relation to business finance in detail | **3** |
| Discusses the meaning and significance of ‘gearing’ in relation to business finance in some detail | **2** |
| Discusses the meaning and significance of ‘gearing’ in relation to business finance in limited detail | **1** |
| **Answer could include, but is not limited to, the following points:** | |
| · It is the relationship between the two forms of financing.  · A firm that has a relatively high proportion of equity in its financial structure is said to be lowly geared.  · One that has a relatively high proportion of borrowings is said to be highly geared and at a higher ‘financial risk’. | |
| **Total Marks** | **3** |