IB Business Management: Finance Practice Worksheet MARKSCHEME

1. Firms are liquidated when they have run at a loss for some time, or when their liabilities exceed assets, or when the capital of the firm has been eaten up by losses, or when the creditors ask for its liquidation to collect some of their debt. A firm can also go into liquidation if the owners decide to leave that line of business, sell all the assets to the highest bidder and devote their capital to whatever else.

   Clear knowledge of liquidation is shown.

   [4 to 3 marks]

   Knows what liquidation is but all the possibilities are not contemplated.

   [2 to 1 marks]

2. (1) Advantages of leasing the trucks or lorries: not owned by Pan Bam, so whatever happens to the trucks is covered but leasing firm. Vehicles immediately recovered by insurers. No need for collateral security since the firm is not asking for a loan – the vehicles can be Disadvantages: leasing is very expensive.

   (2) Advantages of issuing more shares: No creditors, no collateral, the new shareholders are owners and do not have the right to sue or demand.

   (3) Advantages of medium term loan form a bank: Cheaper than other forms of finance for the machines. Bankers are interested in lending money to firms which are going to invest in machines that will increase revenue.

   The three proposals are properly explained and assessed.

   [6 to 5 marks]

   One of the forms of finance not properly assessed.

   [4 to 3 marks]

   Only one is properly assessed or only the advantages are considered for one or two forms of finance.

   [2 to 1 marks]

5. Joseph has made it clear that financial control is his priority. The Caribbean economies are relatively unstable and inflation and high interest rates a threat. Peter will want to repay any investment as soon as possible and will need a high ARR to pay for the high cost of capital. He may also be aware of Open Views' declining liquidity position.

   Award *[1 mark]* for each relevant point identified up to a maximum of *[2 marks]*.

6. (a) **OPTION 1: Commercial centre**

   Payback: Initial cost = $ 8.4m

   Years 1 – 3: $ 1.6m + $ 2.8m + $ 3.4m = $ 7.8mTo payback, needs another $ 0.6m $\underline{0.6} \times 12$ months = 2 months   3.6

   Payback = *3 years 2 months*

Average Rate of Return

Total return = $ 19.6m   Average annual return: $\frac{\$ 19.6m}{6}$ = $ 3.27m

ARR = $\frac{\$ 3.27m}{\$ 8.4m}$ × 100 = **38.9%**

Net Present Value (NPV):

1.6 × 0.88 =   1.408
2.8 × 0.77 =   2.156
3.4 × 0.68 =   2.312
3.6 × 0.6 =   2.16
4.0 × 0.52 =   2.08
4.0 × 0.46 =
(8.4) × 1 =   (8.4)
NPV =   3.556

[N.B. If the candidate does not round the decimal places]:

1.6 × 0.877 = 1.4032
2.8 × 0.769 = 2.1532
3.4 × 0.675 = 2.295
3.6 × 0.592 = 2.1312
4.0 × 0.519 = 2.076
4.0 × 0.456 =
(8.4) × 1 =   (8.4)
NPV =   3.5738

OPTION 2: New cottages

Payback: Initial cost = $ 4.4m

Years 1 – 3: $ 0.8m + $ 1.4m + $ 2.0m = $ 4.2mTo payback, needs another $
0.2m   0.2 × 12 months = 1 month   2.4

Payback = *3 years 1 month*

Average Rate of Return

Total return = $ 11.5m

Average annual return:

$ 11.5m   = $ 1.92m   6

ARR   = $ 1.92m × 100 = **43.6%** $ 4.4m

Net Present Value (NPV):

0.8 × 0.88 = 0.704
1.4 × 0.77 = 1.078
2.0 × 0.68 = 1.36
2.4 × 0.6 =   1.44
2.3 × 0.52 = 1.196
2.6 × 0.46 = 1.196   6.974
(4.4) × 1   (4.4)**NPV =**   **2.626**

[N.B. If the candidate does not round the decimal places]:

0.8 × 0.877 = 0.7016
1.4 × 0.769 = 1.0766
2.0 × 0.675 = 1.35
2.4 × 0.592 = 1.4208
2.3 × 0.519 = 1.1937
2.6 × 0.456 = 1.1856   6.9283
(4.4) × 1   (4.4)**NPV =**   **2.5283**

Both options satisfy Peter's criteria.

Calculations are accurate and well laid out with full working. The answers are assessed against Peter's criteria. Allow two errors, or some unclear working for *[7 marks]*.

[7 to 8 marks]

Calculations are clearly laid out at the top of the band and predominantly accurate. The answers are assessed against Peter's criteria. Accuracy and layout is noticeably worseat the bottom of the band.

[3 to 6 marks]

A limited response. Working may be unclear or missing, and calculations are either limited or predominantly inaccurate.

[1 to 2 marks]

(b) Other information and issues:
   • potential liquidity and cash flow problems
   • availability of finance for new expansion
   • local community and government objections to expansion
   • diversifying has risks – new customers and markets. Open Views may be diluting its luxury image if it develops the new cottages, but has little experience in the corporate sector
   • positive response by local community to the creation of new jobs.

The decision is a tight one using different types of investment appraisal. The commercial centre has higher initial costs, slightly longer payback and a lower ARR. However, its NPV is higher and it is better regarded by the local community.

Relevant additional financial and non-financial information identified, an expansion option selected and intelligently justified. The closeness of the result is highlighted.
[5 marks]

Some factors identified with an attempt to link them to the selection of an option. The closeness of the result is not highlighted.
[3 to 4 marks]

Limited and/or inaccurate identification of factors, with little or no attempt to incorporate them in the selection of an option.
[1 to 2 marks]

(c) Possible external factors:
   • economic booms or slumps at a regional or international level
   • increasing / decreasing inflation and interest rates
   • additional competition from MNCs or regional competitors
   • fashion may affect demand for certain locations
   • political or social unrest
   • unemployment rates may alter, affecting the cost of labour
   • new legal restrictions, *e.g.* taxation or employment legislation.

There is evidence in the case study that the regional economies are subject to fluctuations, which may affect economic factors such as inflation and interest rates. These changes may significantly affect cash inflows and outflows. The availability and cost of factors of production may alter budgets and profit predictions. Recessions and booms will influence levels of demand.

Relevant external constraints identified and applied in a clear and cogent manner.
[5 marks]

Some external factors identified with an attempt to link them to the figures.
[3 to 4 marks]

Limited and/or inaccurate identification of external factors, with little or no attempt to link them to the figures.
[1 to 2 marks]

7. (a) Working capital = current assets – current liabilities

	2003	**2004**
Working capital ($ 000)	820	1150

Award *[1 mark]* for each correct answer.

(b) With the Internet technological change tends to be faster than it is for companies involved in other areas and so *CU Ltd* must be flexible and prepared to adapt rapidly to changes in technology. This is likely to mean higher spending on research and development than in many other sectors and is also likely to require much shorter lead times for production. Product life cycles are shorter and the firm will need to look carefully at their product portfolio to ensure that they always have enough "stars" coming up to become cash cows to fund R&D.

As world-wide Internet access grows *CU Ltd* should see a rise in demand for their web cameras which are complementary goods. Goods like web cameras will tend to have a high income elasticity of demand and so demand is likely to grow faster than GDP growth. The extent of the growth will also depend on the parts of the world where the increased Internet access is occurring. If it is in developing countries with a less highly developed infrastructure then there may not be such rapid growth in demand for items like web cameras which require rapid, high bandwidth connection. However, they are also likely to see increasing competition and with a number of heavily branded competitors, they will need to work hard to maintain a competitive advantage and build their brand. If they can grow further then they may be able to access greater economies of scale which will help them stay competitive. This will help spread the high fixed costs resulting from the need for R&D.

Candidates may also choose to discuss other effects of the growth on *CU Ltd* and should be credited appropriately.

Not all of the above points/issues are required to be mentioned for *[4 marks]*.

A full assessment of the impact of growing Internet access with appropriate reference to the firm's situation. Business theory and terminology are used appropriately. The answer uses negative and positive points in a balanced manner.

[3 to 4 marks]

Some assessment of the impact of growing Internet access, though this may tend to be a little descriptive and not refer to the situation of *CU Ltd*. Limited use of business theory and terminology.

[1 to 2 marks]

8. (i)

	2002	*2001*	*($m)*	*($m)*
Total current assets	340	360		
Total current liabilities	170	100		
Working capital			170	260

Award *[1 mark]* for each correctly calculated figure.

(ii)   Working capital is required for the day-to-day financial management of the firm. The fall in working capital from $260m to $170m may make it more difficult for them to pay bills, wages and other costs on time. Given the fall in cash and the overdraft emerging in 2002, this problem may be more acute. Increased stock also means that their current assets are less liquid.

However, they still have sufficient net current assets to meet all their commitments and if they can improve their credit control they may be able to increase their working capital further. The balance sheet only represents a snapshot of their financial position and so the situation may have changed since the balance sheet was drawn up.

A full and detailed discussion of the changes identified in working capital and the need for working capital. The discussion is relevant and consistent with the answer to (i).

[5 to 6 marks]

Some discussion of the changes identified in working capital and some recognition of the need for working capital. The discussion may be limited and perhaps not completely consistent with (i).

[3 to 4 marks]

A limited and essentially descriptive answer, perhaps with some tendency to list points.

[1 to 2 marks]

N.B   Do not double penalize accept answer (i).

9.   (a)   Payback on Machine A – 1 year 209 days (7 months)Payback on Machine B – 2 years 166 days ($5_{1}/_{2}$ months)

Average rate of return   =

ARR Machine A annum   = $155 000 – $65 000 = $90 000 over 5 years = $18 000 per
= 18 000/65 000 = **27.69%**

ARR Machine B annum   = $205 000 – $85 000 = $120 000 over 5 years = $24 000 per
= 24 000/85 000 = **28.23%**

Year	MachineA	Present value $	MachineB	Present value $
1	45 000	40 905	25 000	22 725
2	35 000	28 910	35 000	28 910
3	25 000	18 775	55 000	41 305
4	25 000	17 075	55 000	37 565
5	25 000	15 525	35 000	21 735
Total	147 500	**121 190**	205 000	**152 240**
Less investment cost	(65 000)		(85 000)	
Net present value	56 190		67 240	

Present value calculated by multiplying net cash flow by discount factor.

Up to *[2 marks]* for correct answers on payback.

Up to *[2 marks]* for correct answers on ARR.

Up to *[2 marks]* for correct answers on net present value.

Up to *[1 mark]* awarded for each for clear understanding of method, but with minor errors in calculation.

[6 marks]

(b) **Machine A**
- Lowest ARR, just lower than Machine B, rapid payback should lower financing costs, reasonable net present value. Significantly cheaper than Machine B and therefore easier to raise finance – lower capital/interest costs. Net cash flow a little variable and low in year four perhaps indicating high maintenance costs after four years.

Machine B
- High ARR, just higher than Machine A and highest net present value, therefore the best return in the medium term. However, payback period a year longer than Machine A. Also the most expensive machine and therefore the highest capital costs. This combined with the three year payback period may mean relatively high borrowing costs, and perhaps higher gearing.

A full and balanced assessment of a number of advantages and disadvantages of both machines, with reference to all three investment appraisal tools (payback, ARR and NPV).

[5 to 6 marks]

An assessment of some advantages and disadvantages of both machines with reference to at least two investment appraisal tools (payback, APP and NPV), though assessment may not always be consistent with results.

[3 to 4 marks]

A very limited and essentially descriptive answer, with a simple list of unrelated advantages and/or disadvantages.

[1 to 2 marks]

(c) This answer should focus on aspects of the investment decision. These may include:
- the funding requirements – does the firm have the capital required for the investment, will they have to borrow, if so what impact will this have on their gearing ratio
- the functionality of the equipment – how well does it meet the firm's requirements? How productive is it? What extra features does it have that may be of value to the firm?
- the maintenance requirements and costs of each of the machines
- the level of technology used by each machine – how future-proof is each machine
- how much potential for capacity growth does each machine offer?
- what will the scrap value of each machine be?
- what machines are competitors using?
- external environment – possible external shocks
- *any other relevant point*

A full and detailed answer with a number of suggestions of other factors fully discussed. Reference where relevant to the case study material.

[7 to 8 marks]

A reasonable answer with some suggestions of other factors suitably discussed. Some reference to the case study material. The discussion may tend to be relatively descriptive at the lower end of the band.

[4 to 6 marks]

An essentially descriptive answer with some suggestions of factors affecting investment, but these may be either listed or perhaps unrelated to the case study.

[1 to 3 marks]

10. Payback estimates the time it will take to recoup the cash outlay as an investment. Payback is usually preferred by a small business because of its simplicity. Large businesses use it as a screening method. The technique can be used to reject projects where the payback is too long or to rank projects according the speed in which they payback.

Advantages
- simplicity
- quick screening device
- emphasizes early return on investment
- especially useful when liquidity is more important than profitability.

Disadvantages
- focus is on time rather than profit
- ignores the timing of the cash inflows
- ignores the earnings after payback.

A detailed explanation of two advantages and two disadvantages of payback.

[3 to 4 marks]

An attempt to explain advantages and disadvantages, though it may lack depth or number.

[1 to 2 marks]