MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA

MATRICULATION CERTIFICATE EXAMINATION
ADVANCED LEVEL
MAY 2012

SUBJECT:	ACCOUNTING
PAPER NUMBER:	I
DATE:	26th April 2012
TIME:	9.00 a.m. to 12.00 noon

Directions to Candidates

Answer **FOUR** questions, choosing **ONE** from **SECTION A** and **THREE** from **SECTION B**.

You must show the working leading up to your answers.

Candidates may only use non-programmable calculators in this examination.

Section A: Answer ONE question from this Section. Each question in this section carries 28 marks.

Question 1

White Lily plc prepared their financial statements for the year ended 31 December 2011. The directors are concerned that the company is operating an overdraft even though it registered a profit for the year. The following information is being provided.

Statement of Financial Position as at 31 December

	Dec-11	**Dec-10**
	€'000	**€'000**
Non-Current Assets		
Tangible non-current assets	38,400	37,200
Development costs	7,500	6,200
Financial assets held for investment	6,500	5,700
Investment	52,400	49,100
Current Assets		
Inventory	12,800	11,500
Trade receivables	14,700	10,600
3 month Treasury bills	-	2,400
Interest receivable accrued	300	200
Cash	-	1,700
	27,800	26,400
Total Assets	**80,200**	**75,500**
Equity and Long Term Liabilities		
Ordinary share capital of €0.50 each	25,000	20,000
Share premium	8,000	7,000
Revaluation reserve	2,600	3,200
Retained earnings	21,200	18,200
	56,800	48,400
6% Debentures	5,000	7,500
	61,800	55,900
Current Liabilities		
Trade payables	13,100	15,500
Income tax	3,900	4,100
Bank	1,400	-
	18,400	19,600
Total Equity and liabilities	**80,200**	**75,500**

Statement of Profit or Loss and Other Comprehensive Income for the year ended 31 December 2011

	€'000	€'000
Revenue		72,200
Cost of sales		(46,930)
Gross profit		25,270
Finance income		270
		25,540
Administrative overheads	(13,840)	
Depreciation and amortisation	(3,200)	
Finance cost	(700)	(17,740)
Profit before tax		7,800
Income tax expense		(2,300)
Profit for the year		**5,500**
Other Comprehensive Income:		
Loss on revaluation of property		(600)
Total Comprehensive Income for the year		**4,900**

The following information is also available:

1. Tangible non-current assets comprise of property and machinery. Company policy states that the Revaluation model of IAS 16 is applied to property while the Cost model is applied to machinery. Independent valuers are appointed to fair value the property at each year end.
2. During the year, old machinery, having a carrying value of €1,200,000, was replaced with newer models costing €3,000,000. This transaction involved the trade in of the old machines and a cash payment of €2,000,000. Losses on disposal and impairment charges are treated as administrative costs.
3. Depreciation charge for the year on tangible non-current assets amounted to €1,700,000.
4. Trade receivables are stated net of impairment allowances. The impairment allowances stood at €5,600 at 31 December 2011 compared to €5,300 at the end of the previous year.
5. The financial assets, which are carried at cost, represent investments in Malta Government Bonds with an average maturity of 5 years.
6. Treasury bills are deemed to be part of cash equivalents.
7. On 30 June, a bonus issue of 1 ordinary share for every 20 held by capitalising share premium, was followed by a new share issue at a premium of 50c, which was fully taken up.
8. Total dividends paid during the year amounted to €2,500,000.

Required:

a. Prepare the Statement of Cash Flows of White Lily plc for the financial year ended 31 December 2011. **(22 marks)**
b. Write up a report to the directors explaining the negative bank balance despite the profit being registered for the year. **(6 marks)**

Question 2

Divers' Paradise plc extracted the following trial balance on 31 December 2011.

	€	€
Ordinary Share Capital of €0.50 per share		800,000
Share Premium		150,000
General Reserve		80,000
Retained Earnings		24,000
Provision for unrealised profit		18,780
8% Debentures		300,000
Debenture interest paid	12,000	
Raw material purchases	480,000	
Direct wages	360,000	
Indirect wages	84,000	
Salaries	66,000	
Factory power	56,000	
Inventories: Raw materials	85,000	
Finished goods	143,980	
Work-in-progress	116,000	
Purchases of loose tools	12,000	
Electricity	105,000	
Royalties	36,000	
Rent	114,000	
Insurance	86,000	
Carriage in	20,400	
Carriage out	44,000	
Sales commission	25,600	
Returns in/returns out	43,200	36,600
General administration expenses	28,400	
Discounts allowed	54,400	
Sales		1,800,000
Accounts receivables/payables	126,400	19,000
Bank		14,500
Cash	14,900	
Machinery at cost/ Machinery depreciation	925,000	152,000
Loose tools at valuation	16,200	
Fixtures and fittings/ Depreciation	220,000	38,000
Office equipment	180,000	21,600
	3,454,480	**3,454,480**

The following additional information is also provided.

1. Inventories at 31 December 2011:

Raw materials	€105,400
Work-in-progress	€128,300
Finished goods	€170,200

2. Annual depreciation is to be provided as follows:

Machinery	10% on cost
Fixtures and fittings	25% on net book value
Office equipment	20% on cost

3. The following costs are to be apportioned as follows:

	Manufacturing	**Profit & Loss**
Electricity	4	3
Insurance	5	4
Rent	60%	40%

4. Salaries still unpaid at the end of the year amounted to €6,000 while insurance was prepaid by €5,000.

5. Wages to factory supervisors, amounting to €14,000 were inadvertently charged to salaries.

6. On 31 December 2011 loose tools were valued at €21,700.

7. Products were transferred from manufacturing to finished goods at a profit of 15%.

8. The interest on debenture is paid in two equal instalments but only one has been paid. The amount due for the last six months of the year has not yet been accounted for.

Required:

a. For the year ended 31 December 2011 for Divers' Paradise plc prepare:
   i. the Provision for Unrealised Profit Account and the Loose Tools Account. (**3 marks)**
   ii. the Manufacturing Account and Income Statement. **(12 marks)**
   iii. a Statement of Financial Position as at the year end. **(7 marks)**

b. Explain why the depreciation of loose tools is calculated differently than other non-current assets. **(6 marks)**

Section B: Answer THREE questions from this Section. Each question in this section carries 24 marks.

Question 3

The following are balances included in the trial balance of **Bunkers plc** for the year ending 31 March 2012.

	Dr	**Cr**
Ordinary shares of €2 each, fully paid		1,200,000
Share Premium Account		200,000
Revaluation Reserve		150,000
General Reserve		380,000
Retained Earnings		80,000
Ordinary Dividend paid	48,000	
8% Preference shares of €1 each, fully paid		300,000
6% debentures (issued 2010)		250,000
Draft Net Profit for the year		320,000
Bank	56,000	
Accounts receivable/Accounts payable	86,000	74,000
Inventories	120,000	
Land	250,000	

The draft financial statements **do not** reflect the following:

1. A bonus issue of one ordinary share for every three held was made earlier on in the year.
2. This was followed by a rights issue of one share for every four held at €2.20 per share. This was fully taken up.
3. The preference shares were purchased at a 10% premium.
4. The preference dividend for the year, debenture interest and directors' remuneration amounting to €34,000 have not been included in the draft accounts.
5. Income tax expense on the year's profit is estimated at €48,000.
6. A transfer of €40,000 was to be made to General Reserve and the directors will be proposing a final ordinary dividend of €0.50 per share.
7. Land was to be written down by €100,000 as a sewage plant was recently built close to the company premises. The Revaluation Reserve had been created years before, following an increase in the value of the land.

Required:

a. Draw up the journal entries required to record the above adjustments. **(6 marks)**
b. Prepare the Statement of Changes in Equity for the year ending 31 March 2012. **(8 marks)**
c. Prepare an extract from the Statement of Financial Position of Bunkers plc on 31 March 2012 showing the working capital after the above changes have been implemented. **(4 marks)**
d. Explain the difference between ordinary shares and preference shares and state how the latter should be disclosed in the financial statements. **(6 marks)**

Question 4

You are the accountant at **Black Thorn Co Ltd** and the following balances have been extracted from their books as at 31 December 2011.

	€
Ordinary share capital (Shares of €1 each)	
Authorised	2,000,000
Issued	1,100,000
Revaluation reserve	360,000
Share premium	330,000
Retained earnings	232,500
Interim ordinary dividend paid	50,000
8% Debentures (unsecured)	200,000
Property	1,770,000
Plant and equipment	659,200
Motor vehicles	184,400
Allowance for depreciation b/f:	
Buildings	123,700
Plant and equipment	237,100
Motor vehicles	63,400
Inventory b/f	145,600
Trade receivables	276,800
Trade payables	300,300
Specific allowance for doubtful debts	27,100
Cash and bank	78,900
Revenue	1,920,000
Purchases	1,306,600
Returns in	6,400
Returns out	15,400
Administration expenses	229,400
Selling and distribution	120,200
Research and development	82,000

The following information is available:

1. On 1 July the directors paid an interim dividend and capitalised the Share Premium by issuing a bonus issue of 1 for every 10 ordinary shares held. They will also be recommending a final dividend of €50,000 at the annual general meeting which will be held in May.
2. The long term borrowings are 10 year unsecured debentures which will mature in 2015. Interest is payable annually in arrears on 31 December.

3. Property includes Land with a book value of €1.1 million. Land is revalued and carried at fair value. The professional valuers appointed by the company estimate its value at €1.3 million at the year end. Other non current assets are depreciated as follows:

Buildings	2%.	Straight line
Plant and Equipment	5%	Straight line
Vehicles	15%	Reducing balance

4. The value of inventory at the year end amounts to €192,000.
5. Bank charges relating to 2011 and amounting to €2,500 were posted in the Cash Book in the first week of January 2012.

6. The specific allowance for doubtful debts set aside the previous year represents the full amount due from a customer who was facing financial difficulties at the time. Following recent talks with his lawyers, the company has accepted their offer of 60c to the €1 in full and final settlement.
7. In an attempt to increase its position in the market, the company embarked on an R&D project. It is estimated that half of the cost incurred relate to the development phase of the project.

Required:

a. A Statement of Comprehensive Income and a Statement of Changes in Equity for year ended 31 December 2011. **(12 marks)**
b. A statement of financial position (Balance Sheet) as at 31 December 2011. **(6 marks)**
c. One of the directors remarked that the specific allowance set aside in the previous year was unnecessary, as in his opinion, the financial statements should only reflect the final settlement when this is eventually reached.
   Explain the difference between a specific and a general allowance and give reasons why you agree or disagree with the statement made by the director. **(6 marks)**

Question 5

The directors of **Yellow Maple Ltd** have concluded their annual meeting where they tried to come up with ideas to improve the overall performance of their business which was adversely affected by the economic crisis. They are seeking your professional advice on their various proposals and have provided you with the following information.

1. **Draft Statement of Financial Position as at 31 March 2013**

	€	€	€
Intangible assets			200,000
Capitalised expenditure			80,000
Property			950,000
Equipment			240,000
			1,470,000
Inventories		138,000	
Accounts receivable		110,000	
Prepayments		5,900	
		53,900	
Accounts payable	25,400		
Other accruals	2,100		
Bank	36,300	213,800)	40,100
			1,510,100
Ordinary Share Capital			700,000
Capital Reserve			200,000
Revaluation Reserve			100,000
Retained Earnings b/f			386,400
Draft Profit for the year			123,700
			1,510,100

2. The intangible asset refers to the additional value which the directors would expect to receive if they had to sell off the entire business as a going concern. In their view, they prudently recognised this potential gain in a Capital Reserve as it is not yet realised.
3. Due to falling demand, the company was considering reducing its work force. However, rather than lay off workers, the directors agreed to engage some of the employees on specific projects. The labour cost incurred in this respect has been classified as Capitalised expenditure. The projects carried out during the year were:
   - €50,000 in building an extension to the company's warehouse
   - €10,000 in carrying out general maintenance work and
   - €20,000 in carrying out market research for new products.
4. Property is carried at fair value and fair value movements are taken to the Revaluation Reserve. The professional valuers have indicated a drop of 5% in the market value of the type of property owned by the company. The directors have opted not to recognise this loss as it is unrealised and they have no intention of selling any property, especially while the market prices remain low.

5. There were no purchases or disposals of tangible non-current assets during the year.

6. The deprecation charge on equipment is €9,000 lower than the previous year as the directors feel that the annual maintenance carried out on the machines should result in extending their original useful life by another year. The draft profit also includes a reversal of the same amount in respect of the depreciation for the previous year

7. Newer models in the market led to a considerable slow down in the sale of certain items. The draft statement still includes these items at the original cost of €38,000 even though the directors are aware that a competitor sold his entire stock at a 50% discount.

8. Although the company beefed up its credit control function, it is still facing some difficulties in collecting amounts due. The draft figures do not include any allowance for debts that may not be recovered. Past trends indicate that 4% of debts which were overdue by six months or more eventually turned out to be bad. The aged debtors list at the year end shows that 30% have been outstanding for six months or more.

9. The directors have started talks to try and negotiate better terms with their major suppliers. Their target is to obtain a 5% discount on credit purchases. These amounted to €300,000. This has been included in the draft results although it will be difficult to achieve in the current economic climate.

Required:

a. Journal entries necessary to adjust the draft figures, explaining why these are necessary, and a Statement of Adjusted Profit. **(16 marks)**
b. A revised Statement of Financial Position as at 31 March 2013. **(8 marks)**

Question 6

The notes to the financial statements of **Mariner plc** for the year ended 31 March 2011 included the following:

1. Extracts from Accounting Policies

i) Non-Current Assets are carried under the cost model of IAS 16 and depreciation is provided as follows:

Buildings	5% on cost
Furniture	20% on written down value
Equipment	33.33% on written down value
Motor vehicles	20% on cost

ii) A full year's depreciation is taken in the year of acquisition and no deprecation is charged in the year of disposal.

2. Note to the Financial Statements - Non-current assets

At cost:	**Premises €'000**	**Furniture €'000**	**Equipment €'000**	**Motor Vehicles €'000**	**TOTAL €'000**
Balance at 1 April 2010	1,500	186	125	95	1,906
Additions	-	24	45	33	102
Disposals	-	(23)	(30)	(18)	(71)
Balance at 31 March 2011	1,500	187	140	110	1,937
Accumulated depreciation:					
Balance at 1 April 2010	300	85	50	65	500
Disposals	-	(16)	(25)	(27)	(68)
Charge for the year	50	30	46	22	148
Balance at 31 March 2011	350	99	71	60	580
Net Book Value 31 March 2011	**1,150**	**88**	**69**	**50**	**1,357**
Net Book Value 31 March 2010	1,200	101	75	30	1,406

During the year ended **31 March 2012** the following took place:

1. Management decided to revise its policies on the retention period of vehicles. As a result cars which were more than three years old were replaced by new ones costing €85,000. The combined original cost of the older cars that were sold was €65,000. These had accumulated depreciation for the past four years except for a saloon, which had cost €15,000 when acquired six years ago.
2. Furniture with a value of €43,000 was purchased for cash in September. Furniture which had been bought 2 years previously for €25,000 was found to have been infested with woodworm and was completely scrapped.
3. New equipment worth €18,000 was acquired in January against a down payment of 50% of the amount payable with the balance payable one year after acquisition.
4. Management considered that in two years time the equipment which was in place at the start of the year would have to be replaced by completely new technology. It is estimated that €1,000 may be recovered when these will be sold as scrap.
5. Land which had cost €500,000 is included in premises and has never been depreciated. The directors have decided to carry land at fair value and professional architects estimate that its value has increased by 15% since its acquisition.

Required:

a. Prepare the Schedule of Non Current Assets as it would appear in the published financial statements of Mariner plc for the year ended 31 March 2012. Calculations and workings are to be shown. **(18 marks)**

b. Why would an entity opt for a revaluation of non-current assets? Give **<u>two</u>** effects of such a decision on the financial statements. **(6 marks)**

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA

MATRICULATION CERTIFICATE EXAMINATION
ADVANCED LEVEL
MAY 2012

SUBJECT:	ACCOUNTING
PAPER NUMBER:	II
DATE:	27th April 2012
TIME:	9.00 a.m. to 12.00 noon

Directions to Candidates

Answer **FOUR** questions, choosing **ONE** from **SECTION A** and **THREE** from **SECTION B**.
You must show the working leading up to your answers.
Candidates may only use non-programmable calculators in this examination.

Section A: Answer ONE question from this Section. Each question in this section carries 28 marks.

Question 1

A student has just finished his business studies, after which he was given a sum of €20,000 by his father to start a manufacturing business. All the necessary preparatory work was carried out and suitable premises have also been found to rent. You have been contacted to prepare a report to the bank for an overdraft to finance working capital requirements.

The following additional information is available:

1. Sales are estimated as follows:

	Units	**€**
January	600	30,000
February	640	32,000
March	720	36,000
April	800	40,000
May	820	41,000
June	800	40,000

   20% of the sales are for cash and attract a 5% discount. 50% of the sales are on 1 month credit, whereas the remaining sales are on 2 months credit.

2. In January production will consist of 100% of the month's sales and 50% of the following month's sales. In the following months, production will consist of 50% of the current month's sales and 50% of the following month's sales.

3. Production costs per unit are as follows:

	€
Materials	14
Wages	12
Production overheads	4

4. It is intended that purchases during each month will cover the requirement of half the production for that month as well as 50% of the materials required for the production of the following month. Payments will be made 60 days after date of purchase of materials.

5. Wages will be paid on the last date of each month.

6. Production overheads will be paid as follows: 60% in the month that they are incurred and the remaining 40% in the following month.

7. Rent amounts to €2,500 per month and it is to be paid in the month that it is incurred.

8. Other expenses amount to €1,200 per month and are to be paid one month after they are incurred.

9. Interest on bank overdraft for €140 covering the period January to April will be incurred and is to be paid in April.

10. Machinery costing €30,000, with an estimated useful life of ten years, will be purchased in the beginning of January. 60% will be paid upon purchase. The remaining balance will be paid in six months' time.

11. Depreciation is to be provided using the straight line method on a monthly pro-rata basis from date of purchase.

12. Cash drawings of €2,000 per month are forecast.

Required:

a. Prepare the following budgets:
   i. a monthly Cash Budget for the **four** months ending 30 April 2012.
   ii. a budgeted Income Statement (Statement of Profit or Loss and Other Comprehensive Income) for the four months ending 30 April 2012.
   iii. a budgeted Statement of Financial Position (Balance Sheet) as at 30 April 2012. **(22 marks)**

b. Prepare a short report to the bank commenting on the cash position and requirements of the business using the results obtained in 'a' above. **(6 marks)**

Question 2

Jonah Jones started his own business two years ago, on 1st April 2010.

Jonah has not prepared any financial reports because he has a problem with the stock valuation. He wishes to use the FIFO basis, but does not know how to deal with production overheads. He has appointed you to make some calculations for him and to give him some advice. He has provided you with the following information:

		12 months to Mar-11	**12 months to Mar-12**
Number of units produced		8,400 units	8,800 units
Number of units sold		8,000 units	6,200 units
		€	**€**
Selling price per unit		95.20	90.00
Cost per unit:	Direct material	25	21
	Direct labour	35	30
	Variable production overheads	8	9
Other fixed costs per annum:	Fixed factory overhead	42,000	52,800
	Selling and admin costs	64,800	71,300

Required:

a. Given that inventory is to be valued using the FIFO basis, prepare profit statements for the two years using:
   i. a marginal costing approach
   ii. an absorption costing approach. **(14 marks)**

b. Explain why the two approaches give a different result. Reconcile the profit reported using absorption costing with the profit reported using marginal costing, for **EACH** year. **(8 marks)**

c. Identify which stock valuation can be used in Jones' financial statements if he is to adhere to the requirements of IAS2. **(6 marks)**

Section B: Answer THREE questions from this Section. Each question in this section carries 24 marks.

Question 3

A large foreign corporation has set up a local operation providing it with the necessary designs and materials. The local company carries out the cutting, molding and finishing required and then ships the completed products to the parent company. Foreign technicians regularly visit the local set up to carry out maintenance work on the machinery and inspection of work being carried out.

At present, the company uses a blanket overhead absorption rate based on total direct labour cost. During a recent review it has been suggested that each department should have its own overhead recovery rate.

The following table gives the production budget details for the coming period:

Section	Direct Labour Cost €	Machine hours	Labour hours	Overheads €
Cutting	43,600	96,745	7,740	154,792
Molding	102,400	77,824	12,800	155,648
Finishing	196,000	16,660	28,000	99,960

In order to cover administration expenses, 20% is added to the production cost. Selling prices include a 25% mark-up on total cost.

The following information is given for Job **XY20**:

Section	Labour Cost €	Machine hours	Labour hours	Material Cost €
Cutting	770	1,800	110	3,200
Molding	1,280	4,000	160	2,100
Finishing	3,360	320	480	1,600

Required:

a. Calculate the current overhead recovery rate and apply this to arrive at the selling price for Job XY20. **(6 marks)**

b. Identify and calculate a suitable overhead recovery rate for each section. Apply the rates calculated to arrive at an adjusted selling price for Job XY20.

(12 marks)

c. Briefly explain the methods you have used for the recovery of overheads, giving reasons for choosing these methods. **(6 marks)**
(Give your answers correct to two decimal places).

Question 4

Stamalta Limited is a firm carrying out manufacturing operations in Malta producing one product of a standard type. As the firm's management accountant, you are responsible for preparing monthly operating statements.

1. The standard costing figures for each unit are set as follows:

Material A - per unit	20 kgs at € 3.00 per kg
Material B - per unit	10 kgs at € 8.00 per kg
Labour costs - per unit	10 hours at € 7.00 per hour

2. Production overheads are absorbed at 150% of labour costs.

3. Budgeted sales and production for the month of March 2012 is of 9,500 units.

4. Actual results for the month of March 2012 were as follows:

Material A per unit	178,000 kgs at € 3.20 per kg
Material B per unit	96,000 kgs at € 7.50 per kg
Labour per unit	90,500 hours at € 7.40 per hour
Production overheads	€ 895,000
Production and sales	9,200 units

Required:

a. Calculate variances for:
   i) materials cost analysed into price and usage, for both material A and material B;
   ii) labour cost analysed into rate and efficiency;
   iii) production overhead analysed into volume and expenditure. **(18 marks)**

b. Prepare a report indicating those items which should be investigated after calculating the variances above. **(6 marks)**

Question 5

Select Limited is a manufacturing company producing and selling three products, namely Aye, Bee and Cee. The company's directors have been presented with the following budgeted figures for next year:

	Aye	**Bee**	**Cee**	**Total**
Sales - units	7,500 units	6,000 units	3,000 units	
	€	**€**	**€**	**€**
Sales – €	150,000	144,000	48,000	342,000
Variable cost of sales	90,000	84,000	36,000	129,000
Share of general fixed costs	45,000	40,500	15,000	95,500
Profit/(Loss)	15,000	19,500	(3,000)	31,500

The production manager has been informed that the supply for next year of a material used in the manufacture of each of the company's products will be limited to 120,000 kg. The estimated use of this material per product is as follows:

Product Aye	12 kg per unit
Product Bee	6 kg per unit
Product Cee	1.5 kg per unit

Required:

a. Calculate the optimum quantities of products Aye, Bee and Cee which should be produced in order to maximise profits. **(9 marks)**

b. Assuming that the problem of shortage of materials is solved, you have been approached as the company's management accountant to advise on the following alternative courses of action:
   i. Discontinue the production of product Cee. Determine how the company's profits will be affected, clearly indicating any assumptions made in your workings. **(3 marks)**
   ii. Increase advertising for product Bee by €12,000. Calculate the minimum extra sales in units of product Bee required to cover this additional advertising cost. **(3 marks)**
   iii. Reduce the selling price of product Aye by 10%. Calculate increase in sales in units of product Aye required to compensate for the reduction in selling price. **(3 marks)**

c. Briefly explain the importance of contribution analysis in the decision-making process**. (6 points)**

Question 6

Smart Attire Co. Ltd is expanding its product portfolio and two possible alternatives have been shortlisted by its R&D team. The company can only manufacture one of these products due to capacity constraints. You have been asked to advise the company which product to pursue and the following information has been made available:

1. The initial capital outlay is €50,000 for Pin and €140,000 for Stripe. After five years, equipment used for Pin is expected to realise €20,000 when sold for spare parts, while that used for Stripe will be sold as scrap for €5,000.
2. Projected sales are as follows:

	PIN		**STRIPE**	
Year	**Selling price per unit - € Pin**	**Sales Units Pin**	**Selling price per unit - € Stripe**	**Sales Units Stripe**
2013	50.0	750	60.0	2,700
2014	65.0	900	60.0	2,500
2015	65.0	1,100	70.0	2,000
2016	70.0	1,300	75.0	1,500
2017	70.0	1,400	75.0	1,100

3. The following table gives the estimated costs for each product:

	PIN		STRIPE	
Year	**Variable cost per unit - €**	**Total fixed costs excluding depreciation - €**	**Variable cost per unit - €**	**Total fixed costs excluding depreciation - €**
2013	25.0	5,000	30.0	2,500
2014	30.0	5,000	30.0	3,000
2015	30.0	6,000	40.0	3,000
2016	32.0	6,000	40.0	4,000
2017	34.0	7,000	45.0	4,000

4. Production is made to order and all units produced are immediately sold with no inventory unsold at year-end.

5. Costs and revenues are assumed to occur at the end of each year.

6. The company's cost of capital is 11% and the following discount rates apply:

Year	**1**	**2**	**3**	**4**	**5**
Discount Factor	0.9009	0.8116	0.7312	0.6587	0.5935

Required:

a. For each project, calculate:
   i. the annual cash flows
   ii. the payback period
   iii. the net present value **(18 marks)**

b. Write a brief report to the directors stating which project you propose should be undertaken and giving reasons for your recommendation **(6 marks)**