ΥΠΟΥΡΓΕΙΟ ΠΑΙΔΕΙΑΣ ΚΑΙ ΠΟΛΙΤΙΣΜΟΥ

ΔΙΕΥΘΥΝΣΗ ΑΝΩΤΕΡΗΣ ΚΑΙ ΑΝΩΤΑΤΗΣ ΕΚΠΑΙΔΕΥΣΗΣ

ΥΠΗΡΕΣΙΑ ΕΞΕΤΑΣΕΩΝ

ΠΑΓΚΥΠΡΙΕΣ ΕΞΕΤΑΣΕΙΣ 2019

Μάθημα: ΛΟΓΙΣΤΙΚΗ (25)

Ημερομηνία και ώρα εξέτασης: Πέμπτη, 23 Μαΐου 2019

08:00 - 11:00

ΠΡΟΤΕΙΝΟΜΕΝΕΣ ΛΥΣΕΙΣ ΔΕΚΑΠΕΝΤΕ (15) ΣΕΛΙΔΕΣ

ANSWER TO QUESTION 1

Part (A)

Workings

Per bottle of wine	€	€	*Fixed costs (per year)*	€
Selling price		**4,15**	Rent of land	865
Grape juice & ingredients	1,07		Depn (5.500 - 300) : 8	650
Direct labour	0,55		Insurance	720
Glass & cork	0,78	**(2,4)**	Water bill (120 x12)	1.440
Contribution per bottle of wine		1,75		3.675

(i) Contribution per bottle of wine = *Selling price – variable costs*

Contribution per bottle of wine = €4,15 - €2,4 = **<u>€1,75</u>**

$$Break\ even = \frac{Total\ fixed\ costs*}{Contribution\ per\ unit} = \frac{€3.675}{€1,75} = \mathbf{2\ 100\ bottles\ of\ wine}$$ **(Marks 6)**

(ii) Profit for the year = (5 500 x 1,75) – 3.675 = **<u>€5.950</u>** **(Marks 1)**

(iii) No of bottles for target profit: $\frac{\mathbf{Fixed\ costs + Required\ profit}}{\mathbf{Contribution\ per\ unit}} = \frac{€3.675 + €10.325}{€1,75}$

= **<u>8 000 bottles</u>** **(Mark 1)**

(iv) Margin of safety = 5 500 - 2 100 **= <u>3 400 bottles</u>** **(Mark 1)**

(Κεφ. 8.2-8.4 σελ.161-166)

(b) **Characteristics of a limited company *(Any Two)***

- Περιορισμένη ευθύνη *(Limited Liability)*
- Διαχωρισμός μεταξύ ιδιοκτησίας και διεύθυνσης *(ownership separate from management)*
- Διακριτή νομική οντότητα *(separate legal entity)* **(Mark 1)**

(Κεφ. 4.1 σελ. 66)

Part (B)

(a) (i) AVCO (Perpetual Inventory System)

Date	Details	Units	Price per unit	Balance
January 1	Opening inventory	100	9	900
January 8	Purchases	120	10	1.200
February 12	Purchases	100	11	1.100
		320	**10***	**3.200**
March 9	Cost of Sales	(180)	10	(1.800)
		140	10	1400
June 15	Purchases	100	13	1300
		240	**11,25****	**2.700**
July 14	Cost of Sales	(140)	11,25	(1.575)
		100	11,25	1.125
August 28	Purchases	180	14	2520
		280	**13,02*****	**3.645**
December 25	Cost of Sales	(100)	13,02	(1.302)
		180	**13,02**	**2.343,6**

***3.200:320 **2.700:240 ***3.645:280** **(Marks 7)**

(ii) LIFO method (Periodic Inventory System)

LIFO (Periodic): **€1.700** **(Marks 2)**

Working:

Units of closing inventory:	**Units**
Opening inventory	100
Purchases (120+100+100+180)	500
	600
Sales (180+140+100)	(420)
Closing inventory	180

Therefore 100X€9= €900
80X€10= €800
€1.700

(Κεφ. 2.4 - 2.5 σελ. 23-24, 28)

(b) Οι δύο διαφορετικοί μέθοδοι αποτίμησης του τελικού αποθέματος (LIFO, AVCO) επιδρούν στα μικτά κέρδη (Gross profit), τα οποία θα επηρεάσουν στον ίδιο βαθμό τα Καθαρά κέρδη (Net profit). Το τελικό απόθεμα με τη μέθοδο LIFO είναι **€1.700** και είναι χαμηλότερο από το τελικό απόθεμα με τη μέθοδο AVCO **€2.343,6.**
Αυτό έχει σαν αποτέλεσμα η μέθοδος LIFO **να δείχνει χαμηλότερα κέρδη κατά €643,6** (2.343,6 -1.700) από την μέθοδο AVCO επειδή το κόστος πωλήσεων είναι μεγαλύτερο.

*(The two different inventory valuation methods affect both the Gross and the Net profit. Under the LIFO method above, the closing inventory is valued at €1.700 and under AVCO it is valued at €2.343.6. Therefore under the LIFO method both the Gross and the Net Profit will be lower by **€643.6** (2.343.6 -1.700) because it results at a higher cost of sales)* **(Mark 1)**
(Κεφ. 2.6 σελ. 29) **(Total Marks 20)**

ANSWER TO QUESTION 2

(a) (i) Columbus Products Ltd
Statement of Profit or Loss for the year ended 31 December 2018

	€	€
Revenue **(W1)**		2.690.000
Cost of sales (W2)		(1.581.000)
Gross profit		1.109.000
Administrative expenses (W3)	330.000	
Distribution costs (W4)	212.000	(542.000)
Profit from operations		567.000
Finance costs (W5)		(8.000)
Profit for the year before tax		559.000
Income tax expense		(125.000)
Net Profit for the year		434.000

(Marks 15)

Workings:

W1	**€**
Revenue	2.696.000
Less sales returns	(6.000)
	2.690.000
W2 Cost of sales	
Opening inventory	88.100
Purchases	1.600.000
Closing inventory 108.500-18.000+16.600*	(107.100)
*NRV=21.400-4.800	1.581.000
W3 Administrative expenses	**€**
General Administrative expenses 122.000-(12.000x1/3)	118.000
Irrecoverable debts (20.200+2.600)	22.800
Directors remuneration (56.000-26.000)	30.000
Wages and salaries (121.500x4/5)	97.200
Allowance for doubtful debts adjustment (17.000-18.000*)	1.000
Depreciation on office equipment(672.000-428.000)x25%	61.000
*(362.600-2.600)x5%	**330.000**

W4 Distribution costs	**€**
General Distribution costs	74.500
Wages and salaries (121.500x1/5)	24.300
Marketing director remuneration	26.000
Loss on delivery van 20.000-(80.000-56.000)	4.000
Depreciation on delivery vans (496.000-80.000)x20%	83.200
W5	**212.000**
Finance cost	
80.000x10%	8.000

(ii) Statement of Changes in Equity for the year ended 31 December 2018T

	Share Capital €	Share Premium €	Revaluation Reserve	Retained Earnings €	Total €
Balance at start	4.000.000	1.000.000		1.070.000	6.070.000
Issue of shares	1.000.000	500.000			1.500.000
Land Revaluation			409.000		409.000
Profit for the year				434.000	434.000
Dividends paid				(500.000)	(500.000)
Balance at end	5.000.000	1.500.000	409.000	1.004.000	7.913.000

(Marks 5)

<u>Workings</u>

1. Issue of shares	**€**	**€**
Dr Bank (1 000 000x€1,5)	1.500.000	
Cr OSC (1 000 000x€1)		1.000.000
Cr Share Premium (1 000 000x€0,5)		500.000
2. Land revaluation		
Dr Land (4.090.000x10%)	409.000	
Cr Revaluation Reserve		409.000

3. **Dividend paid:** 5 000 000 sharesx€0,1 = €500.000

(Κεφ. 5.2-5.3, σελ.88-89) **(Total Marks 20)**

ANSWER TO QUESTION 3

(a)

(i) PROPERTY, PLANT AND EQUIPMENT–COST A/C

	€000		€000
Balance b/d	1.500	**Disposal**	**50**
Bank	100	Balance c/d	1.550
	1.600		1.600

(Marks 2)

(ii) ACCUMULATED DEPRECIATION A/C

	€000		€000
Depreciation - disposal	**30**	Balance b/d	250
Balance c/d	300	SOPL- charge for the year	80
	330		330

(Marks 2)

(iii) DISPOSAL A/C

	€000		€000
PPE at cost	50	Accumulated Depn (w3)	30
		Bank-proceeds	**12**
		Loss on disposal	8
	50		50

(Marks 2)

(b)

Amalthia plc
STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2018

	€000	€000
Cash flows from operating activities		
Profit before taxation	70	
Add: Loss on sale of machinery	8	
Add: Depreciation	80	
Add: Finance cost	10	
Operating cash flows before working capital changes	**168**	
Less: Increase in trade and other receivables	(6)	
Less: Increase in inventories	(4)	
Add: Increase in trade payables	5	
Cash flows generated from operations	**163**	
Interest paid	(10)	
Income tax paid (W1)	(60)	
Net cash flows from operating activities		**93**
Cash flows from investing activities		
Purchase of non-current asset (W2)	(100)	
Proceeds from sale of non-current asset (W4)	12	
Net cash flows used in investing activities		**(88)**
Cash flows from financing activities		
Proceeds from issue of share capital (980+30-1,110-50)	150	
Proceeds from long-term borrowings (200-50)	(150)	
Dividends paid	(10)	
Net cash flows used in financing activities		**(10)**
Net Decrease in cash and cash equivalents		**(5)**
Cash and cash equivalents at beginning of period		45
Cash and cash equivalents at end of period		40
Net Decrease in cash and cash equivalents		**(5)**

(Κεφ.6.3-6.6 σελ.112-116) **(Marks 14)**

Workings

CORPORATION TAX A/C

	€000		€000
Bank - paid	**60**	Balance b/d	80
Balance c/d	40	SOPL- charge for the year	20
	100		100

(Total Marks 20)

ANSWER TO QUESTION 4

(α) (i) PAYBACK:

Machine F

year	Cash flows €	Cumulative cash flows
0	(10.000)	(10.000)
1	4.500	(5.500)
2	2.500	(3.000)
3	2.500	(500)
4	2.500	2.500

The Payback period of machine F is **3 years and 2,4* months**
500/2.500X12=2,4 months

Machine G

year	Cash flows €	Cumulative cash flows)
0	(10.000)	(10.000)
1	3.500	(6.500)
2	3.500	(3.000)
3	4.000	1.000
4	2.500	3.500

The Payback period of machine G is **2 years and 9 *months**
*3.000/4.000x12=9 months

(Marks 4)

(ii) Average Rate of Return (ARR)

Year	Machine F			Machine G		
	Cash flows	Depn*	Net Profit	Cash flows	Depn**	Net Profit
	€	€	€	€	€	€
1	4.500	1.700	2.800	3.500	1.600	1.900
2	2.500	1.700	800	3.500	1.600	1.900
3	2.500	1.700	800	4.000	1.600	2.400
4	2.500	1.700	800	2.500	1.600	900
5	1.000	1.700	(700)	1.500	1.600	(100)
			4.500			7.000
		Average profit	4.500/5= 900		Average profit	7.000/5= 1.400

*10.000-1.500=8.500/5=1.700 per year

**10.000-2.000=8.000/5=1.600 per year

Machine F ARR=Average net profit /initial capital
ARR= 900x100/10.000=**9%**

Machine G ARR=Average net profit /initial capital
ARR= 1.400x100/10.000=**14%** **(Marks 10)**

(b) The managers of Fresco Ice cream Company **should purchase machine G** because it has the:

- ✓ **Shortest Payback period**
- ✓ **Higher ARR than machine F**

(Κεφ.9.3, 9.4 σελ.177-180) **(Marks 3)**

(c) Calculation of Gearing:

Gearing ratio= $\frac{€900.000+€600.000}{€900.000+€600.000+€500.000}$ = 75% **(Marks 2)**

Η εταιρεία έχει **75%,** δείκτη δανειακής επιβάρυνσης που **θεωρείται ψηλό** αφού είναι ένδειξη ότι αυτή χρηματοδοτείται κυρίως από ξένα κεφάλαια, **εξαρτάται από δάνεια** και **περικλείει κινδύνους** σε περίπτωση μη αποπληρωμής τους.
(The company is highly geared. It is mainly financed by external sources and is therefore at high risk)

(Κεφ.7.7, σελ.145-146) **(Mark 1)**

(Total Marks 20)

ANSWER TO QUESTION 5

PART (A)
(a)

Plexi Ltd
Manufacturing A/c for the year ended 31 December 2018

	€	€
Raw Materials:		
Opening inventory		31.000
Add Purchases	179.100	
Add Carriage Inwards	1.200	180.300
		211.300
Less Closing inventory		31.400
Cost of Raw Materials used		179.900
Direct labour		
Manufacturing wages (79.500+500)x6/8		60.000
Direct expenses		
Patents and Royalties		6.500
PRIME COST		246.400
Factory Overheads		
Light and heat (4.900-800)x60%	2.460	
Factory supervisor's salary	14.000	
Manufacturing wages (79.500+500)x2/8	20.000	
Rent (8.000+900)x60%	5.340	
Depreciation of factory machinery	11.400	53.200
Work in Progress		
Add work in progress at start	8.500	
Less work in progress at end	(7.550)	950
Cost of Production		**300.550**

(Κεφ.3.1- 3.4 σελ 37-43) **(Marks 7)**

(b)

Plexi Ltd Income Statement for the year ended 31 December 2018		
	€	**€**
Sales		461.000
Less Cost of sales:		
Opening inventory of finished goods	8.140	
Purchases of finished goods	30.850	
Add carriage inwards	200	
Cost of goods manufactured	300.550	
	339.740	
Less Closing inventory of finished goods	(8.250)	(331.490)
Gross profit		129.510

(Κεφ. 3.5 σελ 44) **(Marks 3)**

PART (B)

(a)

Formula	**2019**	**2018**
i) Gross Profit Margin = $\frac{\text{Gross Profit}}{\text{Sales}}$x100	$\frac{€280.000}{€800.000}$ x100 = **35%**	$\frac{€450.000}{€850.000}$ x100 = **52,94%**
ii) ROCE = $\frac{\text{Net Profit before interest}}{\text{Total capital employed**}}$ x100	$\frac{€58.000 + €22.000}{€200.000}$ x100 = **40%**	$\frac{€91.000+€24.000}{€179.000}$ x100= **64,25%**
iii) Receivables collection days = $\frac{\text{Trade receivables}}{\text{Credit Sales}}$ x365	$\frac{€135.000}{€720.000*}$ x 365 = **68,4 days**	$\frac{€75.000}{€765.000}$ x 365 = **35,78 days**

(Marks 6)

*__2018__ credit sales: 850.000x90%= 765.000
2019 credit sales: 800.000x90%= 720.000

**__2018__ Total CE: 40.000+19.000+120.000= 179.000
2019 Total CE: 40.000+10.000+150.000= 200.000

(b) (i) Το ποσοστό Μεικτού κέρδους έχει μειωθεί κατά 17,94% δηλαδή από 52, 94% το 2018 σε 35% το 2019. Αυτή η μείωση μπορεί να οφείλεται σε διάφορους παράγοντες όπως:

- Στην ***αύξηση της τιμής αγοράς*** που δεν επιβαρύνει τους πελάτες
- Στην αγορά προϊόντων από ***άλλο προμηθευτή σε ψηλότερη τιμή***
- Στη **μείωση της τιμής πώλησης**

(The gross profit margin was reduced by 17,94% from 52,94% in 2018 to 35% in 2019) Some of the reasons for this reduction could be:

- *An increase in the purchase price not been passed on to customers*
- *The purchase of goods from a different supplier at a higher price*
- *A decrease in the selling price* **(Marks 2)**

(ii) Όσο πιο μικρή είναι η περίοδος είσπραξης των χρεωστών, τόσο καλύτερο είναι για την επιχείρηση επειδή:

- Η επιχείρηση θα εισπράξει τις απαιτήσεις της σε σύντομο χρονικό διάστημα και αυτό θα έχει θετική επίδραση πάνω στις ταμειακές της ροές
- Μειώνει την πιθανότητα για επισφαλείς απαιτήσεις

(The shorter the Trade Receivables collection period the better for the company because:

- *It will have a positive effect on its cash flow*
- *It will reduce the risk of irrecoverable debts)* **(Marks 2)**

(Κεφ.7.4- 7.6 σελ 138-144) **(Total Marks 20)**

(GRAND TOTAL MARKS 100)