ΥΠΟΥΡΓΕΙΟ ΠΑΙΔΕΙΑΣ, ΠΟΛΙΤΙΣΜΟΥ, ΑΘΛΗΤΙΣΜΟΥ ΚΑΙ ΝΕΟΛΑΙΑΣ
ΔΙΕΥΘΥΝΣΗ ΑΝΩΤΕΡΗΣ ΕΚΠΑΙΔΕΥΣΗΣ
ΥΠΗΡΕΣΙΑ ΕΞΕΤΑΣΕΩΝ

ΠΑΓΚΥΠΡΙΕΣ ΕΞΕΤΑΣΕΙΣ ΠΡΟΣΒΑΣΗΣ 2022

ΜΑΘΗΜΑ:	**ΛΟΓΙΣΤΙΚΗ (25)**
ΗΜΕΡΟΜΗΝΙΑ ΚΑΙ ΩΡΑ:	**Δευτέρα, 20 Ιουνίου 2022**
	08:00 - 11:00

ΤΟ ΕΞΕΤΑΣΤΙΚΟ ΔΟΚΙΜΙΟ ΑΠΟΤΕΛΕΙΤΑΙ ΑΠΟ ΕΝΤΕΚΑ (11) ΣΕΛΙΔΕΣ

ΣΥΝΟΔΕΥΕΤΑΙ ΑΠΟ ΤΥΠΟΛΟΓΙΟ ΔΥΟ (2) ΣΕΛΙΔΩΝ

<u>ΟΔΗΓΙΕΣ:</u>

- Να απαντήσετε όλες τις ερωτήσεις (Answer all questions) στο τετράδιό σας.
- Όλοι οι υπολογισμοί πρέπει να φαίνονται καθαρά στο τετράδιό σας.
- Επιτρέπεται η χρήση μη προγραμματιζόμενης υπολογιστικής μηχανής.
- Δεν επιτρέπεται η χρήση διορθωτικού υγρού/ταινίας.

QUESTION 1

PART A

From the questions below, choose and write in your answer book the best answer. Only one answer is correct (for example **i-a** or **i-b** etc).

i. A local company has the following inventory transactions for the month of April:

April 1	Opening Inventory	40 units at €4 each
April 12	Purchases	80 units at €4,75 each
April 26	Sales	70 units at €5,50 each

The value of the closing inventory under AVCO periodic inventory system on 30 April is:

a. €207,50
b. €237,50
c. €225
d. €275

(Marks 2)

ii. Artemis Ltd has the following inventory data for the month of May:

May 1 Opening inventory 20 units at €5,00 each
10 Purchases 90 units at €5,10 each
20 Purchases 50 units at €5,20 each
25 Purchases 100 units at €5,30 each

A physical count of Artemis Ltd's inventory on 31 May revealed that there are 100 units in hand. The value of the closing inventory under LIFO periodic inventory system is:

a. € 530
b. € 508
c. € 519
d. € 515

(Marks 2)

iii. In periods of rising prices (σε περιόδους αύξησης τιμών):

a. under FIFO method, the value of closing inventory increases and therefore gross profit increases.
b. under FIFO method, the value of closing inventory increases and therefore gross profit decreases.
c. under LIFO method, the value of closing inventory increases and therefore gross profit decreases.
d. under LIFO method, the value of closing inventory increases and therefore gross profit increases.

(Marks 2)

iv. The managers of Zeus Ltd wish to purchase a new equipment that costs €80.000. The estimated cash flows that arise at the end of each year are:

Year	Estimated net cash flows
1	€34.000
2	€28.000
3	€24.000
4	€20.000

The payback period is:

a. 2 years and 3 months
b. 2 years and 5 months
c. 2 years and 6 months
d. 2 years and 9 months **(Marks 2)**

PART B

Ekati Plc is a medical technology company that specialises in coronavirus testing. You are given the following information, which relates to the production and sales of 110 000 PCR tests produced by Ekati Plc for the year ended 31 March 2022:

- Rent of premises, €100.000 per quarter (three-month period)
- Direct labour per unit, €16,00
- Production, administration, and marketing costs, €50.000 per month
- Two laboratory machines were purchased at a cost of €1.400.000 each. Each machine has a useful life of 8 years and a scrap value of €200.000. Depreciation is charged on a straight line method
- Royalties per unit, €5,50
- Active pharmaceutical ingredient per unit, €14,50
- Delivery and shipping cost per unit, €6,20
- Formulation cost per unit, €2,80
- Other fixed costs, €200.000 per annum
- The selling price per unit, €60,00

The entire production of 110 000 PCR tests was sold either to governments or laboratories around the world to test people with coronavirus symptoms.

REQUIRED:

Calculate for Ekati Plc, for the year ended 31 March 2022, the:

(a) Contribution per PCR test (per unit) **(Marks 4)**
(b) Breakeven point (number of PCR tests) **(Marks 4)**
(c) Margin of safety in PCR tests **(Marks 1)**
(d) Profit or loss for the year **(Marks 1)**
(e) Number of PCR tests to be sold to earn a profit of €600.000 **(Marks 2)**

Note: Show all your workings.

(Total Marks 20)

QUESTION 2

PART A

Armonia Plc has an Authorised Share Capital of €1.200.000 divided into ordinary shares of €2 each.

The Equity section of the Statement of Financial Position of Armonia Plc on 1 January 2021 is shown below:

Equity	**€**
Issued share capital: ordinary shares of €2 each	800.000
Share premium	90.000
Revaluation reserve	30.000
Retained earnings	100.000
Total Equity	1.020.000

During the year 2021 the following transactions took place:

- On July 1, the directors decided to make a 1 for 4 rights issue at a premium of €0,20 per share. All shareholders exercised their rights.
- On October 1, the directors decided to make a bonus issue of shares of 1 share for every 10 held, by utilizing part of the share premium.
- On November 30, the company offered to the public the remaining ordinary shares at par. The issue was fully subscribed.
- On December 31, a dividend of €0,05 per share was paid. All the shares were eligible for the dividend payment.

REQUIRED:

(a) Show the journal entries to record all the above transactions.

(Marks 10)

(b) Show the revised Equity section of the Statement of Financial Position of Armonia Plc as at 31 December 2021.

Note: Show all your workings.

(Marks 3)

(c) Give two (2) reasons why companies make a rights issue of shares.
(Να γράψετε δύο (2) λόγους για τους οποίους οι εταιρείες προβαίνουν στην έκδοση δικαιωμάτων αγοράς.)

(**Marks 2)**

PART B

The continuing rise of petrol prices worldwide, has led Poseidon Oil Plc, to consider reopening an old rig for drilling (εξέδρα άντλησης πετρελαίου) that was previously closed, as it was making a loss. The cost of reopening the oil rig for drilling will be €40.000.000.

The following information is available:

- The oil rig will have a life of 3 years, with a scrap value of €5.000.000.
- The current cost of capital for the oil company is 8%.
- Assume that all cash flows arise at the end of the relevant year:

	Cash inflows €	**Cash outflows €**
Year 1	27.000.000	9.000.000
Year 2	22.000.000	6.000.000
Year 3	17.000.000	5.000.000

The following is an extract from the present value table of €1 at 8%:

	Discount factor - 8%
Year 1	0,926
Year 2	0,857
Year 3	0,794

REQUIRED:

Calculate the net present value (NPV) of the oil rig's reopening at the end of year 3.

Note: Show all your workings.

(Marks 5)

(Total Marks 20)

QUESTION 3

The Statements of Financial Position of Hercules Plc on 31 December 2020 and 2021 are as follows:

	31 December 2020	**31 December 2021**
Non-current assets	**€**	**€**
Property, plant and equipment at cost	400.000	385.000
Accumulated depreciation	(80.000)	(90.000)
Property, plant and equipment at NBV	320.000	295.000
Investments – Shares in other companies	25.000	40.000
	345.000	335.000
Current assets		
Inventory	65.000	80.000
Trade receivables	32.000	44.000
Bank	-----	20.000
	97.000	144.000
Total assets	**442.000**	**479.000**
Equity and liabilities		
Equity		
Ordinary share capital of €1	180.000	250.000
Share premium	12.000	33.000
Retained earnings	63.000	90.000
	255.000	373.000
Non-current liabilities		
5% Debentures	110.000	50.000
Current liabilities		
Trade payables	39.000	42.000
Taxation	31.000	14.000
Bank overdraft	7.000	-----
	77.000	56.000
Total equity and liabilities	**442.000**	**479.000**

The summarised Statement of Profit or Loss of Hercules Plc for the year ended 31 December 2021 is as follows:

	€
Revenue	200.000
Less cost of sales	(49.000)
Gross Profit	**151.000**
Less Depreciation on Property, Plant and Equipment	(40.000)
Loss on disposal	(16.400)
Other expenses	(35.600)
Profit from operations	**59.000**
Add Investment income (dividends received)	2.000
Less Debenture interest	(3.500)
Bank overdraft interest	(500)
Profit for the year before tax	**57.000**

Additional information:

1. During the year, equipment was bought for €70.000
2. Equipment that costs €85.000 with depreciation to date of €30.000 was sold during the year
3. Dividends paid during the year were €18.000
4. The corporation tax for the year ended 31 December 2021 was €12.000
5. **Cash generated from operations was €91.400.**

REQUIRED:

(a) **Starting with the cash generated from operations of €91.400,** prepare the Statement of Cash Flows of Hercules Plc for the year ended 31 December 2021 in accordance with International Accounting Standard (IAS) 7.

(Marks 17)

(b) State whether profitability or liquidity is more important for a business. Justify your answer.
(Να αναφέρετε τι είναι πιο σημαντικό για μια επιχείρηση η κερδοφορία ή η ρευστότητα. Να δικαιολογήσετε την απάντησή σας.)

(Marks 3)

Note: Show all your workings.

(Total Marks 20)

QUESTION 4

PART A

The following data was extracted from the books of Thalia Ltd on 31 December 2021:

	€
Bank (Dr)	65.000
Revenue	1.900.000
Inventory on 1 January 2021	350.000
Inventory on 31 December 2021	400.000
Purchases	1.250.000
Administration expenses	597.700
Distribution costs	358.000
Finance costs	20.000
Trade payables	180.000
Trade receivables	?
Tax payable	36.000
Current ratio	**3,25:1**

REQUIRED:

(a) Calculate for Thalia Ltd for the year ended 31 December 2021, the:

i. inventory turnover ratio in two decimal places **(Marks 3)**

ii. mark up in two decimal places **(Marks 2)**

iii. amount of trade receivables, using the appropriate ratio. **(Marks 4)**

Note: Show all your workings.

(b) «A current ratio of 2:1 is generally considered to be a good indication for the liquidity position of a business».

Explain what the high current ratio of Thalia Ltd (3,25:1) may indicate.

(«Η αναλογία 2:1 του δείκτη κυκλοφοριακής ρευστότητας γενικά θεωρείται καλή ένδειξη για τη ρευστότητα μιας εταιρείας».
Να εξηγήσετε τι μπορεί να υποδηλώνει ο ψηλός δείκτης κυκλοφοριακής ρευστότητας (3,25:1) της Thalia Ltd.)

(Marks 2)

PART B

The following is an extract from the Statement of Financial Position of Penelope Ltd on 31 December 2020:

Non-current asset	**Cost**	**Accumulated depreciation**	**Carrying value**
	€	€	€
Computer equipment	200.000	120.000	80.000

During the year ended 31 December 2021, the following transactions took place:

September 1	Computer equipment purchased on 1 January 2020 for €60.000 was sold on credit for €12.500
October 1	New computer equipment was purchased on credit at a cost of €40.000

Depreciation is charged at the rate of 25% per annum using the straight line method for each month of ownership.

REQUIRED:

Prepare the following accounts for the year ended 31 December 2021:

(a) Computer equipment **(Marks 2)**

(b) Accumulated depreciation on computer equipment **(Marks 5)**

(c) Computer equipment disposal **(Marks 2)**

(Total Marks 20)

QUESTION 5

The following balances have been extracted from the books of Atlas Plc on 31 December 2021:

	Dr €	Cr €
Allowances for irrecoverable debts		6.900
Carriage inwards	39.000	
Carriage outwards	54.560	
Irrecoverable debts	8.300	
Office buildings at cost	363.000	
Equipment at cost	190.000	
Delivery vans at cost	120.000	
Accumulated depreciation at 1 January 2021:		
Office buildings		36.300
Equipment		66.500
Delivery vans		36.000
10% Debentures (issued on 1 April 2021)		120.000
Ordinary share capital (shares of €1 each)		230.000
Share Premium		30.000
Retained earnings	42.290	
Opening inventory	69.800	
Purchases	787.350	
Revenue		1.284.000
Trade payables		119.700
Trade receivables	98.550	
Wages and salaries	131.250	
Warehouse rent	25.300	
	1.929.400	1.929.400

Additional information:

1. Inventory on 31 December 2021 was valued at €94.750 at cost and €97.600 at net realizable value (NRV).
2. Wages and salaries of €11.250, were outstanding. The wages and salaries were shared between administration expenses and distribution costs at the ratio of 80% and 20% respectively.
3. Allowances for irrecoverable debts was to be maintained at 10% of trade receivables, after writing off an irrecoverable debt of €2.550.
4. The warehouse rent is paid in quarterly instalments of €6.900. The last payment was for the quarter ending on 30 November 2021.
5. Debenture interest was outstanding.

6. Corporation Tax for the year was €18.790.
7. Depreciation is to be charged as follows:

Non-current assets	**Method**	**Apportionment**
Office buildings	10% straight line	
Delivery vans	20% reducing balance	
Equipment	20% reducing balance	To be apportioned between administrative expenses and distribution costs in the ratio 75:25

REQUIRED:

Prepare the Statement of profit or loss of Atlas Plc for the year ended 31 December 2021 in line with International Accounting Standard (IAS) 1.

Note: Show all your workings.

(Total Marks 20)

(GRAND TOTAL MARKS 100)

ΤΕΛΟΣ ΕΞΕΤΑΣΤΙΚΟΥ ΔΟΚΙΜΙΟΥ

ΛΟΓΙΣΤΙΚΟΙ ΑΡΙΘΜΟΔΕΙΚΤΕΣ – ACCOUNTING RATIOS

1. Δείκτες Απόδοσης (ή Κερδοφορίας) – Profitability Ratios

(i) Δείκτης Μεικτού Κέρδους προς Κόστος Πωλήσεων (Mark-up)

Δείκτης Μεικτού Κέρδους προς Κόστος Πωλήσεων= $\frac{Μεικτό\ Κέρδος}{Κόστος\ πωλήσεων} \times 100\%$

Mark up = $\frac{Gross\ Profit}{Cost\ of\ sales} \times\ 100 = \cdots\%$

(ii) Δείκτης Μεικτού Περιθωρίου ή Μεικτού Κέρδους (Gross Profit Margin)

Δείκτης Μεικτού Κέρδους = $\frac{Μεικτό\ Κέρδος}{Πωλήσεις} \times 100 = \%$

Gross Profit margin = $\frac{Gross\ Profit}{Revenue} \times\ 100$

(iii) Δείκτης Καθαρού Περιθωρίου ή Καθαρού Κέρδους (Net Profit Margin)

Δείκτης Καθαρού Κέρδους = $\frac{Καθαρό\ λειτουργικό\ Κέρδος}{Πωλήσεις} \times 100 = \%$

Net Profit margin = $\frac{Operating\ Profit}{Revenue} \times 100 = \%$

(iv) Δείκτης Απόδοσης Απασχολούμενων - Επενδυμένων Κεφαλαίων (Return on Capital Employed-ROCE)

(a) Απόδοση Απασχολούμενων Κεφαλαίων = $\frac{Καθαρά\ Κέρδη\ \boldsymbol{πριν}\ από\ τόκους\ \&\ φόρους*}{Σύνολο\ Απασχολουμένων\ Κεφαλαίων}$ x 100 = %

ROCE = $\frac{Net\ profit\ \boldsymbol{before}\ interest\&\ taxes*}{Total\ Capital\ Employed} \times 100$

**or operating profit*

(b) Απόδοση Απασχολούμενων Κεφαλαίων = $\frac{Καθαρά\ Κέρδη\ \boldsymbol{μετ}ά\ από\ τόκους\&\ φόρους}{Απασχολούμενα\ Κεφάλαια}\ x\,100\ \ = \%$

ROCE** = $\frac{Net\ profit\ \boldsymbol{after}\ interest\ \&\ taxes}{owners'Capital\ Employed} \times 100$

** or Return on Equity or Return on shareholders' funds (ROSF)

2. Δείκτες Ρευστότητας – Liquidity Ratios

(i) Δείκτης Κυκλοφοριακής (ή Γενικής) Ρευστότητας (Current Ratio)

Δείκτης Κυκλοφοριακής Ρευστότητας = $\frac{Κυκλοφοριακό\ Ενεργητικό}{Βραχυπρόθεσμες\ Υποχρεώσεις}$

Current ratio = $\frac{Current\ Assets}{Current\ Liabilities}$

(ii) Δείκτης Πραγματικής (ή Ειδικής) Ρευστότητας (Acid Test or Quick ratio)

Δείκτης Πραγματικής Ρευστότητας = $\frac{Κυκλοφοριακό\ Ενεργητικό - Αποθέματα}{Βραχυπρόθεσμες\ Υποχρεώσεις}$

Acid Test (or Quick ratio) = $\frac{Current\ Assets - Inventory}{Current\ Liabilities}$

3. Δείκτες Δραστηριότητας – Activity Ratios (Use of assets)

(i) Δείκτης Κυκλοφοριακής Ταχύτητας Αποθεμάτων (Inventory Turnover)

Δείκτης Κυκλοφοριακής Ταχύτητας Αποθεμάτων = $\frac{Κόστος\ Πωλήσεων}{Μέσος\ Όρος\ Αποθεμάτων} = \cdots\ φορές$

Inventory Turnover = $\frac{Cost\ of\ Sales}{Average\ Inventory*}$ =? times

*Average inventory= (Opening+closing)/2

(ii) Μέση Περίοδος Είσπραξης (Average collection period)

Μέση περίοδος είσπραξης = $\frac{Χρεώστες}{Πωλήσεις\ με\ πίστωση} \times 365\ μέρες = ?\ μέρες$

Average collection period = $\frac{Trade\ receivables}{Credit\ sales} \times 365\ days = ?\ days$

(iii) Μέση Περίοδος Πληρωμής (Average payment period)

Μέση περίοδος πληρωμής = $\frac{Πιστωτές}{Αγορές\ με\ πίστωση} \times 365\ μέρες = ?\ μέρες$

Average payment period = $\frac{Trade\ \ payables}{Credit\ purchases} \times 365\ days$ =? Days

4. Δείκτες Χρέους ή Μόχλευσης (Solvency Ratios)

(i) Δείκτης Μόχλευσης (Gearing ratio)

Δείκτης Μόχλευσης = $\frac{Κεφάλαιο\ σταθερού\ εισοδήματος*}{Σύνολο\ Απασχολουμένων\ κεφαλαίων**} \times 100 = \cdots\ \%$

Gearing ratio = $\frac{Fixed\ Return\ Funding*}{Total\ Capital\ Employed**} \times 100 = \cdots \%$

* Fixed Return Funding: Preference shares + debentures + other non-current liabilities

**Total capital employed: OSC + PSC + Reserves + non-current liabilities (or total assets less current liabilities)