

JUNIOR LYCEUM ANNUAL EXAMINATIONS 2005

Educational Assessment Unit – Education Division

FORM 3 (Option)

COMPUTER STUDIES

TIME: 1h 30min

Name: _____

Class: _____

Directions to Candidates:

Answer ALL questions in Section A on this paper.

Answer any TWO questions from Section B on separate foolscaps.

The use of flow chart template is permitted.

Calculators are NOT allowed.

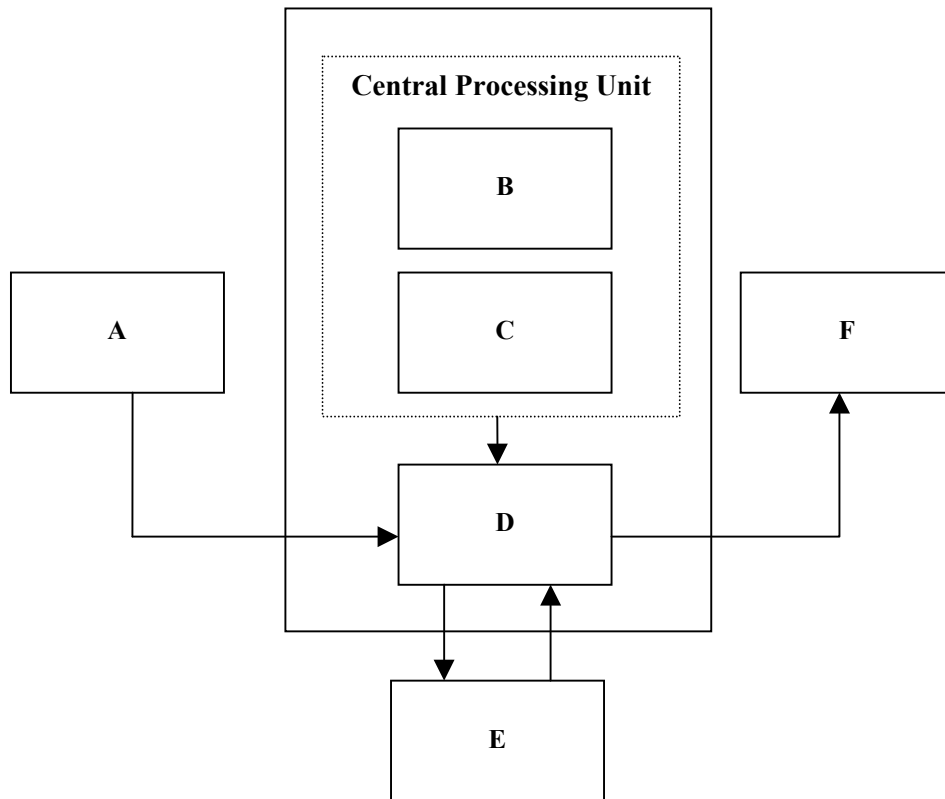
Good English and orderly presentation are important.

For office use only:

Question	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Paper Total	Course Work	Final Mark
Max	5	5	5	5	5	5	5	5	5	5	5	15	15	15	85%	15%	100%
Mark																	

Section A - Answer all Questions

- 1 The diagram below shows a simple computer system with its data flow. Identify the six components marked as A, B, C, D, E and F shown in the diagram.



- A _____
- B _____
- C _____
- D _____
- E _____
- F _____

[5]

- 2 (a) Truth tables list the possible inputs and outputs of logic gates and circuits. Fill in the truth tables for the **AND**, **OR** and **NOT** gates.

AND		
Inputs		Output
A	B	C

OR		
Inputs		Output
A	B	C

NOT	
Input	Output
A	B

[3]

- (b) A thermometer can be either **Digital** or **Analogue**. Distinguish between analogue and digital data.

Digital: _____

Analogue: _____

[2]

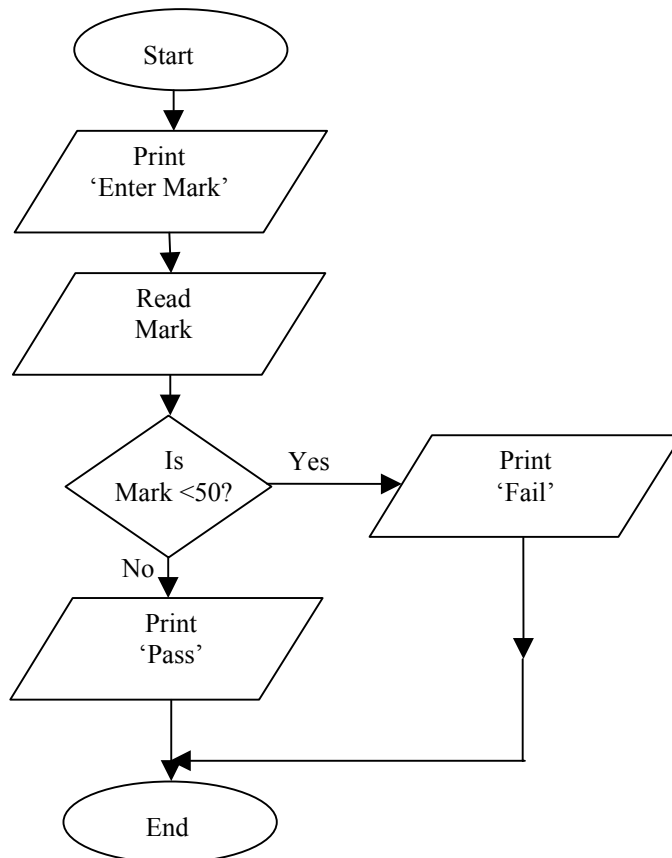
- 3 (a) What do you understand by an **algorithm** and by a **flowchart**?

Algorithm: _____

Flowchart: _____

[2]

- (b) The **main steps of an algorithm** are shown in the flowchart below. Briefly explain what the algorithm does.



[3]

4 State whether the following statements are **True** or **False**.

- i. 1 *Megabyte* is the same as 2 *Kilobytes*: _____
- ii. The largest amount of memory that a computer can handle in any one operation is a *word*: _____
- iii. *Serial access* devices are faster than *random access* devices: _____
- iv. A *floppy* can hold more information than a *CD*: _____
- v. *Optical storage* involves the use of a laser beam to burn spots on the medium: _____

[5]

5 (a) Say what the following **abbreviations** stand for:

POS: _____
CAD: _____
WWW: _____

[3]

(b) Give an **application** where POS and CAD can be used.

POS _____
CAD _____

[2]

6 (a) Word-processing is commonly used to type documents. Give **one** advantage of using a word-processor rather than a typewriter.

Advantage: _____

[1]

(b) **Tabulation** and **Print Preview** are both commonly used in word-processing. Describe briefly what they mean.

Tabulation: _____

Print Preview: _____

[2]

(c) Give **two** functions of the **Shift** key when used in word-processing.

1st function: _____
2nd function: _____

[2]

7 Complete the table below to obtain a conversion of each number in **binary**, **hexadecimal** and **decimal**.

Binary	=	Hexadecimal	=	Decimal
1 0 0 0 0 1 0 1	=		=	
	=	A5	=	
	=		=	184

Working Space:

8 (a) Although the **ink-jet** and the **laser printers** are the most common types of printers, the **dot matrix** is still in use. Give **one advantage** of each type of printer. [5]

Dot Matrix: _____

Ink-Jet: _____

Laser: _____

(b) When choosing a printer one has to consider various **factors**. Give **two** factors which you consider important. [3]

1st factor: _____

2nd factor: _____

9 (a) What do the letters **OCR** and **OMR** stand for? [2]

OCR: _____

OMR: _____

(b) Briefly explain the **difference** between both systems (OCR and OMR). [2]

[1]

(c) Give a **typical use** of both systems:

OCR: _____

OMR: _____

[2]

10 Give the unit of measurement for the following peripherals:

e.g. *Floppy Disk capacity: Megabytes*

i. Hard Disk Capacity: _____

ii. Printer's Speed: _____

iii. CPU speed: _____

iv. Speed of a modem: _____

v. Printer's resolution: _____

[5]

11 Write a short program in Pascal which asks the user to **input** a mark and after it is **read**, it will give the **output** 'Fail' **if** the mark is less than 45 and the **output** 'Pass' **if** the mark is 45 or greater.

[5]

Section B – Answer any TWO questions

- 12 (a) Briefly explain the following items which are related to the Internet:
- i. **Browser** [3]
 - ii. **Search Engine** [3]
 - iii. **Bookmark** [3]
- (b) Describe briefly **three** uses of the Internet at home. [3]
- (c) Although emails are of great advantage, they still have some disadvantages. Give **one** advantage and **two** disadvantages when using email. [3]

- 13 Many schools use a spreadsheet program to enter results of students' examinations. The diagram below is part of a worksheet used in a particular school to enter the Half Yearly results.

	A	B	C	D	E
1	Half Yearly Exams 2005				
2		Maths	English	Maltese	
3	Tony	55	74	65	
4	Joseph	67	43	77	
5	Paola	87	87	84	
6	Martha	90	56	77	
7	John	92	87	80	
8	Louise	45	67	51	
9	Marija	92	87	77	
10	Peter	77	77	23	
11	Steve	80	88	91	
12	Josette	84	78	91	
13					
14	Total				
15	Average				
16	Maximum				
17	Minimum				
18					

- (a) What **functions** would you use in cells B14, B15, B16, B17? [8]
- (b) What would be the results in cells B16 and B17? [1]
- (c) Explain how you would use **replication (autofill)** for cells C14 and C15 instead of typing the function again. [2]
- (d) **Sorting** is a feature found in spreadsheets. Explain the steps that you would use to sort the cells from A3 to A12 in **descending** order. [2]
- (e) Data in spreadsheets can be represented graphically using **charts/graphs**. Sketch **two** different types of charts that you would use to represent the data. [2]

- 14** Write short notes on any **five** of the following:
- i. Formatting a floppy disk
 - ii. Antivirus
 - iii. Mail merge
 - iv. Table of Contents in Word-processing
 - v. Vector and Raster Devices
 - vi. Bar Code Reader

[15]
