

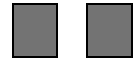
# KULLEĠĠ SAN BENEDITTU

## Boys' Secondary, Kirkop

Mark

HALF-YEARLY EXAMINATION – 2011/12

Track 2 (AS)



FORM 3	COMPUTING								TIME: 1h 30min
Question	1	2	3	4	5	6	7	8	Global Mark
Max. Mark	22	9	24	9	9	12	8	7	100
Mark									

DO NOT WRITE ABOVE THIS LINE

Name: \_\_\_\_\_

Class: \_\_\_\_\_

### Instructions:

- Answer **ALL** questions.
- Calculators are **NOT** allowed, so show all your working on the exam paper.
- Good English and orderly presentation are important.
- Read carefully each question.

### 1. General Section

[22 marks]

a. What do these **acronyms** stand for?

[9 marks]

i. CPU	
ii. ROM	
iii. RAM	
iv. MICR	
v. CRT	
vi. VDU	
vii. ALU	
viii. OMR	
ix. OCR	

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

[9 marks]

i. Hardcopy is data displayed on a monitor screen.	
ii. Information is what users read from the set of data given by the computer.	
iii. Microsoft Word is system software.	
iv. Process refers to what is done to the inputted information.	
v. A CD-RW is read only.	
vi. The laser printer is an impact printer.	
vii. Backup refers to making a copy of the original data on another storage device.	
viii. A laptop falls in the category of microcomputers.	
ix. A floppy disk can hold more data than a CD-ROM.	

c. Order the following types of computers according to their **size**, starting with the **smallest**. The first one has been done for you. [4 marks]

Microcomputer	
Mainframe computer	
Microcontroller	<b>1</b>
Supercomputer	
Minicomputer	

2. This question is about the Computer System

[9 marks]

a. List the three **components** that make up the **CPU**.

[3 marks]

i. \_\_\_\_\_

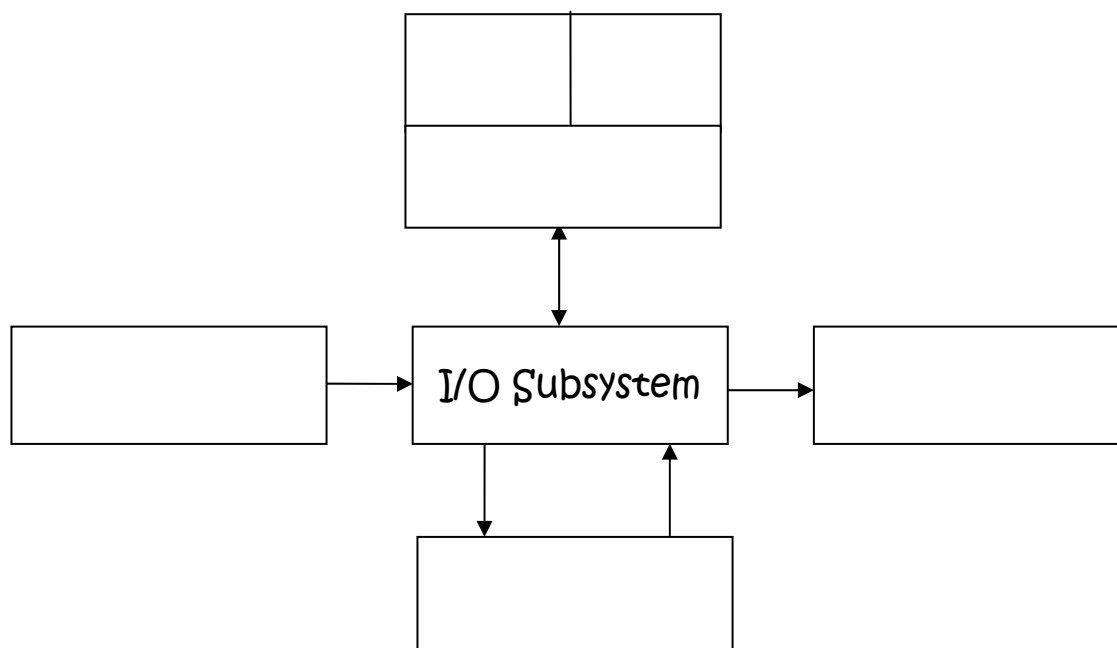
ii. \_\_\_\_\_

iii. \_\_\_\_\_

- b. Complete the following block diagram to show how the I/O subsystem is linked to the other components of the computer system. Use the following terms:

***CU, Output, Memory Unit, Secondary Storage, Input, ALU***

[6 marks]



**3. This question is about Storage.**

[24 marks]

- a. Fill in the blanks using the following terms:

***tracks, storage capacity, magnetic tape, sectors, CD-ROM, serial access***

[6 marks]

- i. \_\_\_\_\_ is the data access method used by magnetic tape.
- ii. The \_\_\_\_\_ is a secondary storage device that is most commonly used for backups and archiving information.
- iii. A \_\_\_\_\_ is a removable read-only disk on which data is read through the use of laser beams.
- iv. Data is recorded on a disk in rings called \_\_\_\_\_ and slices called \_\_\_\_\_.
- v. A hard disk has two advantages over floppy disks: reliability and \_\_\_\_\_.

b. Write down two **storage devices** which fall under each of the following categories.

[6 marks]

Magnetic Media	Optical Media	Electronic Media

c. List down two **differences** between **RAM** and **ROM**.

[4 marks]

RAM	ROM

d. What is **serial** access? Mention a storage device which only works sequentially.

[2 marks]

Definition: \_\_\_\_\_  
\_\_\_\_\_

Device: \_\_\_\_\_

e. What is **direct** access? Mention a storage device which only works randomly.

[2 marks]

Definition: \_\_\_\_\_  
\_\_\_\_\_

Device: \_\_\_\_\_

- f. How many **bits** are there in 1 **byte**? \_\_\_\_\_ [1 mark]
- g. How many **bytes** are there in 1 **Kilobyte**? \_\_\_\_\_ [1 mark]
- h. How many **bits** are there in 1 **Kilobyte**? \_\_\_\_\_ [2 marks]

**4. This question is about Input and Output Devices. [9 marks]**

- a. Mention two **pointing devices**. [2 marks]

i) \_\_\_\_\_

ii) \_\_\_\_\_

- b. Mention an **impact** printer and a **non-impact** printer. [2 marks]

Impact: \_\_\_\_\_

Non-Impact: \_\_\_\_\_

- c. Mention a device which is both **input and output**. [1 mark]

i) \_\_\_\_\_

- d. Mention a type of **monitor**. [1 mark]

i) \_\_\_\_\_

- e. **Underline** the correct answer: [3 marks]

- i) (OCR, OMR, MICR) scans and reads predefined positions on specially prepared forms.
- ii) (OCR, OMR, MICR) is used for bank cheques.
- iii) (OCR, OMR, MICR) uses a scanner to take a digital image of printed or hand-written text.

**5. This question is about Analogue and Digital Data.**

**[9 marks]**

- a. Draw a graphical representation of an analogue and digital signal. [2 marks]

Analogue	Digital

- b. What is the difference between **Analogue** and **Digital data**? [2 marks]

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- c. Give an example of each type of data. [2 marks]

Example of analogue data: \_\_\_\_\_

Example of digital data: \_\_\_\_\_

- d. For each of the following situations, write down a computer device which is appropriate for each circumstance. [3 marks]

i. A device which converts analogue data to digital data.

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ii. A device capable of converting analogue data to digital data and vice-versa.

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iii. A device which converts digital data from the computer to analogue data.

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**6. This question is about Number Conversions.**

**[12 marks]**

Complete the following table by performing the required number conversions.  
Show **all** your working in the space provided.

Decimal	Binary	Hexadecimal
102 <sub>10</sub>		
	1010 1110 <sub>2</sub>	
		F1 <sub>16</sub>

*Space for working*

**7. This question is about System Utilities.**

**[8 marks]**

Who am I? Choose from the following terms.

***Disk defragmentation, File compression, Scan disk, Anti-virus, Formatting,  
Folder, File, Tree structure***

- a. I can detect and remove computer infections.
- b. I can contain a number of files and sub-directories.
- c. I help you to see how your folders are organised.
- d. I improve the performance of your computer by reorganising files which have been split up into contiguous locations.
- e. I check the disk for physical errors.
- f. I can take different formats such as .doc, .xls and .exe.
- g. I can reduce the size of folders to take less space on the hard disk.
- h. Remember to do a backup before using me as I delete all data.

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8. This question is about Databases.

[7 marks]

- a. The following table has been created to keep students' records. Write down an appropriate **data type** for each field. [4 marks]

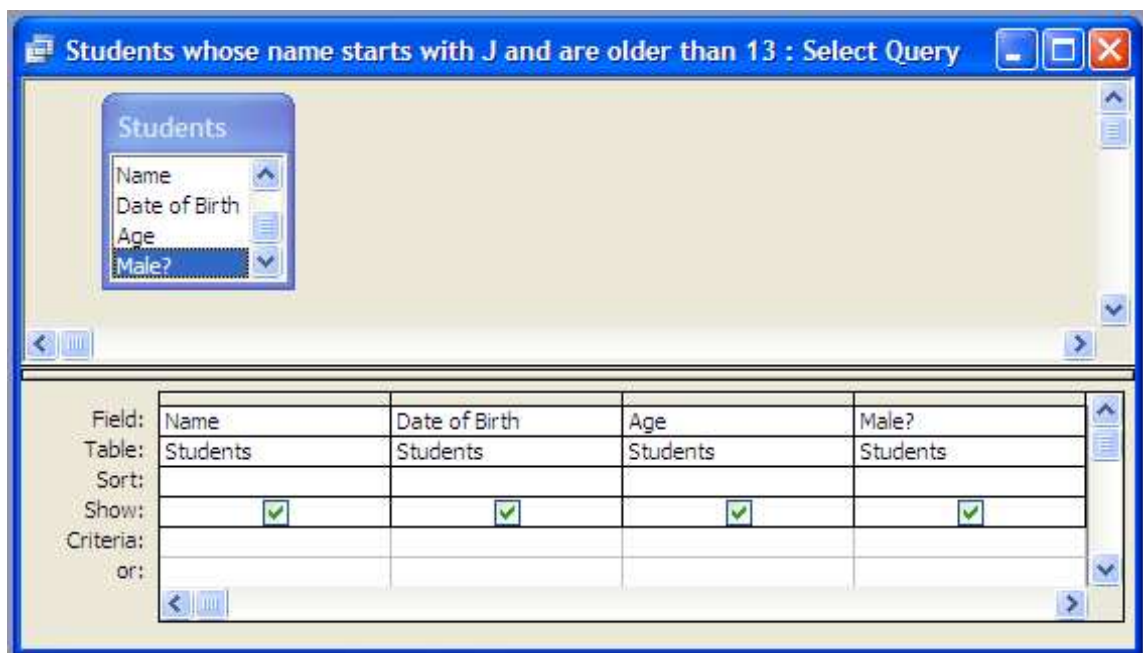
Field name	Data type
i. Name	
ii. Date of Birth	
iii. Age	
iv. Male?	

- b. Write down a field which can be set as a primary key for the above Students table.

[1 mark]

- c. The user of this database wants to create a query to output a list of all **male** students who are **older than 13 years** and.

The following screenshot shows the query in Design View. It is noted that the user did not fill up the criteria. Can you help him fill in the criteria section based on the query specified above? [2 marks]



END OF EXAM