

NAME.....*Marking guide*

Subsidiary ICT

Theory paper

2 hours 30minutes

August 2016

EOT TERM 2 SENIOR FIVE EXAMS 2016

Subsidiary ICT

TIME: 2 hours 30 minutes

PAPER 1

1. Mention one positive impact of computers in each of the mentioned sectors below.
 - (i) Education.
 - ✓ *Computers and appropriate software have made students to learn at their own pace. This learning is known as Computer Aided Learning (CAL).*
 - ✓ *Through use of computers and internet, E- learning has been made possible.*
 - ✓ *Computers have helped researchers to quickly gather and analyze experimental data.*

✓ ***Computers reduces the time and labor to mark the answer scripts.***

Any one point of these or any related point (01 mark)

(ii) Social/Ethical.

✓ ***Computers and the Internet have revolutionized the way we communicate, bringing tools for people to communicate online.***

any other related point (01 mark)

(iii) Politics and governance.

✓ ***Computers have helped to deliver results of elections in time.***

✓ ***Through computers internet, government policies are able to reach different people within the country***

any other related point (01 mark)

(iv) Security.

✓ ***Through the use of CCTV cameras, the security has been improved.***

2. (a) Define the term **computer literacy**.

Computer literacy is having an understanding of what a computer is and how to use it as a resource.

Or

Computer literacy is the ability to use computers and related technology efficiently, with a range of skills covering levels from elementary use to programming and advanced problem solving.

any other related point (01 mark)

- (b) State the difference between **data** and **information**. (02 marks)

Data is defined as raw facts and figures that have less meaning to the end user.

Or

Data is a collection of raw unprocessed facts, figures, and symbols.

Information is data that is organized, meaningful, and useful. To process data into information, a computer uses hardware and software.

- (c) Mention **two** reasons for e-learning in schools. (02 marks)

- ✓ *Learn on your own device. If your organization is against its employees bringing in their own device to work, you can access your learning when you are not at work.*
- ✓ *Learn at your own pace. ELearning recognizes that your needs are unique and lets you learn in your own time, in your own way, at your own pace.*
- ✓ *You will have access to a unique learning plan that has been designed keeping your job role and capabilities in mind.*

- ✓ *Get access to information as soon as you need it – courses are well structured, so you can find the information you need, easily.*
- ✓ *Self-evaluate. Self-assessments after every course let you know where you stand. If you are unable to fair well in a particular course, you have the option of redoing the course until you get it right.*
- ✓ *Get immediate answers to your most pressing questions through the interactive interface that connects you with peers and industry experts - across the globe.*
- ✓ *Train in a safe environment with simulated learning. This is especially useful for employees who are exposed to hazardous conditions like the pharmaceutical industry and those who must train on the use of heavy/dangerous machinery.*
- ✓ *E-learning is eco-friendly and drastically reduces your carbon footprint.*
- ✓ *Increase your overall productivity by training in your free time, when you are at home or traveling; it is accessible every day.*
- ✓ *You don't have to be connected to the internet. Organizations, whose employees are constantly on the move, make sure that they can train, offline; work is automatically uploaded when you are connected to the internet.*
- ✓ *Perform better, and have greater retention of what you have learnt, than your classroom-trained counterparts, and enjoy the fruit of being a top performer.*

3. (a) Define a computer laboratory. (01 mark)

A computer laboratory is a room with computers which provides computer services to a defined community.

(b) Mention **two** ways you can ensure safety of computers in a lab. (02 marks)

- *Switch on the computer hardware systems starting from the wall socket switch, U.P.S or stabilizer, computer and then the computer.*
- *Protect the computers with U.P.S or a Stabilizer.*
- *Avoid making connections (e.g. Mouse, Monitor) when the computer is on power.*

(c) State **two** things you would consider before setting a computer lab.

(02 marks)

➤ *Security of computers, programs and other resources*

➤ *Reliability of the power source*

➤ *The number of computers to be installed and the available floor space*

➤ *The maximum number of users that the computer laboratory can accommodate*

4. (a) Give the difference between a **file** and **folder**. (01 mark)

A file is an object on a computer that stores data, information, settings, or commands that are used with a computer program

While

A folder is a virtual location where programs and files can be located.

(b) State the file extension for each of the following file types. (02 marks)

FILE TYPE

FILE EXTENSION

Ms excel	<i>.xls or .xlsx</i>
Audio clip	<i>.mp3 .cda .mbr</i>
Ms word	<i>.doc or .docx</i>
Executable program	<i>.exe</i>

(c) In which folder is the file named in the file path below saved?

C:/ users/User/Desktop/TCN/seniorsixpaperonetheory.docx (02 marks)

TCN

5. (a) Distinguish between **cold boot** and **warm boot**. (02 marks)

Cold booting is starting a computer which has been off

While

Warm booting refers to restarting a computer.

(b) State **two** reasons for restarting a computer. (02 marks)

➤ *When a computer freeze*

➤ *After installation of a new software or hardware*

➤ *Attack by a virus.*

(c) Write down the **one** function of the following components below.

(i) CMOS. (01 mark)

It stores the basic input/output system settings

(ii) RAM. (01 mark)

It stores data temporarily on a computer

6. (a) State any **two** factors you would consider before setting up a network.

(02 marks)

❖ *Number of maximum hosts/devices in a network.*

- ❖ *Determine the purpose of the network*
- ❖ *Consider the cost implication of the network.*
- ❖ *The geographical location of the devices to be connected.*
- ❖ *Maintenance implications of the network*

(b) Mention **one** advantage of a peer – to – peer over a client – to – server relationship. (01 mark)

- ✓ *Does not need an expensive server because individual workstations are used to access the files.*
- ✓ *Much easier to set up than a client-server network - does not need specialist knowledge*
- ✓ *No need for a network operating system.*

(c) State **one** function of each of the following networking devices.

(i) Router. (01 mark)

- ✓ *It forwards data packets between computer networks*
- ✓ *It relays information between two different computer networks. (The most common use of a router is relaying data to and from a personal computer and the Internet.)*

(ii) Firewall. (01 mark)

Note: The firewall has two network interfaces: one for the external side of the network, one for the internal side.

✓ *Its purpose is to control what traffic is allowed to traverse from one side to the other.*

7. (a) Distinguish between **input** and **output**. (01 mark)

Input is data entered into a computer for processing

While

Output refers to data that has been processed which is conveyed to the user.

(b) State **two** devices that can be used as both input and output. (02 marks)

- *Touch screen*
- *Facsimile (FAX) machine*
- *Modem*

(c) State the difference between a **softcopy** and **hardcopy**. (02 marks)

Softcopy is a legible version of a piece of data that is not printed on a physical medium, especially as stored or displayed on a computer.

While

Hardcopy is a printed copy of information from a computer.

8. (a) Define machine cycle as applied to computer hardware. (01 mark)

It is the basic operation performed by a central processing unit (CPU)

Or

Machine cycle refers to steps performed by the computer processor for each machine language instruction received.

(b) Mention one function of the following parts in a CPU.

(i) Registers. (01 mark)

It offers temporary storage for the CPU to access information stored on the hard drive

(ii) Control unit. (01 mark)

It directs operation of the processor

Or

It directs the movement of electronic signals between ram and input and output devices.

(c) Mention **two** machine cycle processes. (02 marks)

- *Fetching*
- *Execute*
- *Decode*

9. (a) Mention any **two** services provided by the internet. (02 marks)

✓ *World Wide Web (WWW)*

✓ *E-Mail*

✓ *Telnet*

✓ *File Transfer Protocol (FTP)*

✓ *Gopher*

✓ *Chat Groups*

✓ *Multimedia services (video conferencing)*

(b) State **one** factor that can lead to a slow internet downloads speed. (01 mark)

✓ *The length of the cables used*

✓ *The number of users on a network*

✓ *Distance from Internet Service Provider.*

(c) Define the following types of websites:

(i) Blog. (01 mark)

It is a regularly updated website or web page, typically one run by an individual or small group that is written in an informal or conversational style.

(ii) Wiki. (01 mark)

A wiki is a website that provides collaborative modification of its content and structure directly from the web browser

10. (a) What is the difference between WAN and WLAN. (01 mark)
A wide area network (WAN) is a telecommunications network or computer network that extends over a large geographical distance.

While

A wireless local area network (WLAN) is a wireless computer network that links two or more devices using a wireless distribution method within a limited area such as a home, school, computer laboratory, or office building.

(b) Explain the meaning of the following network concepts.

(i) Bandwidth. (02 marks)

This is the measure of the width of a range of frequencies, measured in hertz.

or

It is the measure of the maximum data which can be transmitted through a transmission media

(ii) Bluetooth. (02 marks)

Bluetooth is a wireless technology standard for exchanging data over short distances from fixed and mobile devices, and building personal area networks (PANs).

11. (a). State two advantages of using a Graphical User Interface (GUI). (02 marks)
❖ *User friendly because it is easy to work and learn with*

❖ *There is no need to type and memorize any command language*

❖ *Interface is similar for any application*

(b) Briefly, explain the following as used in word processing.

(i). Red wave underline below a word. (01 mark)

✓ *It means that the words in a given sentence are misspelt or words do not exist in the computer dictionary.*

(ii). Green wave underline below a sentence. (01 mark)

● *It means that the grammar of a given sentence is wrong.*

(iii). Auto - complete. (01 mark)

A feature of a word automatically predicts the remaining characters in a word or phrase based on what has been typed or input before.

12. With reference to part of a class mark sheet with data entered starting from cell A1 shown below, answer questions (a) –(c)

Name	Math	Bio	ENG	TOT	AVE	POS	PASS/FAIL
Kaana .J	45	73	56	=SUM(B2:D2)			
Amiru S.	46	69	77				
Samira H.	66	71	64				
Shukri A.	71	56	48				
Kyobe D.	40	70	76				

(i) Mention the address of the currently active cell **E2**

(01 mark)

(ii) Assuming the cut-off for promotion to the next class is an average mark of 60.0, use the IF function to write a correct formula which determines whether Kaana J will PASS or FAIL

=IF(F2>60,"PASS","FAIL")

Or

=IF(F2>60,"PASS",IF(F2<60,"FAIL"))

(02 marks)

- (iii) Use a logical function to write a formula which will count the number of students who scored above 50 in Math.

=COUNTIF (B2:B6,">50")

(01 mark)

- (iv) Explain the meaning of the error output #VALUE! When it appears in a cell where you have typed a formula in spreadsheet software.

This error implies that the cells being arithmetically added contain text o/string.

(01 mark)

13. (a) Define the term green computing. (02 marks)

Green computing is the environmentally responsible and eco-friendly use of computers and their resources.

- (b) Give and explain **three** green computing practices. (03 marks)

- ❖ ***Put laptops in "sleep" mode when not in use.***
- ❖ ***E-cycle used computer equipment.***
- ❖ ***Use virtualization technology to consolidate servers***
- ❖ ***Use more efficient displays (use LCDs instead CRTs)***
- ❖ ***Recycle systems and supplies***

14. (a). Give two factors to consider before buying a printer. (02 marks)

- ✓ ***The papers printed per minute***
- ✓ ***The memory of the printer***
- ✓ ***The cost of the printer***
- ✓ ***The availability of the device drivers***

✓ *The availability and cost of the cartridge or toner.*

(b). what is a printer driver? (01 mark)

A printer driver is a piece of software that converts the data to be printed to the form specific to a printer. The purpose of printer drivers is to allow applications to do printing without being aware of the technical details of each printer model.

(c). Outline two reasons for scrolling a page / document. (02 marks)

To view work at the bottom of the document

To read through the document

15. (a) What is meant by the term **ICT** and give **two** examples of ICT tools you have ever used. (02 marks)

(ICT) is an extended term for information technology (IT) which stresses the role of unified communications[1] and the integration of telecommunications (telephone lines and wireless signals), computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information. ICT tools include phones, computers, TV,

(b) Briefly explain **three** components found inside a computer system unit.

(03 marks)

- *Power supply – is the one that feeds electrical power (voltages and currents) to every single part in the PC.*
- *Video Card – it controls the information you see on the monitor.*
- *Hard drive – is the primary archival storage memory for the system.*
- *Memory – It is the system memory often called as RAM (random access memory).*
- *Processor – it is often thought of as the engine of the computer.*

➤ *Motherboard. Is the core of the system. All other computer components are connected to it.*

16. Use the terms below to complete the sentences that follow in (a) –(e)

Slide Transition , Slides, Animation effects, Slide layout, Slide Design

Slide Show, Slide Master, Handouts

(a) The visual movement from one slide to another slide during a slide show is referred to as *Slide transition*. (01 mark)

(b) The *Slide design* set up determines the way text/objects appear on a slide during a presentation. (01 mark)

(c) The presentation of slides in a sequence in full screen view is referred to as *Slide show* (01 mark)

(d) The *Slide layout* defines the arrangement of all items that make up a slide (01 mark)

(e) A user can print several slides on a single page by choosing the print option print *Handout* (01 mark)

17. (a) list three advantages of wireless communication over wired communication (03 marks)

➤ *Wireless medium is flexible in operation as compared to cable that is devices can be moved around without losing access to the network.*

➤ *Wireless networks can span a large geographical area.*

➤ *Wireless communication can take place via satellite even in a very remote area connection is possible.*

(b) In a networking environment a twisted pair cable is always used, it is usually used to transfer voice and data signals.

Explain why it is having wires which are always twisted? (02 marks)

To avoid crosstalk or electromagnetic radiations from neighbouring cables.

18. What do you understand by the term Telecommuting? (01 mark)

Telecommuting is a work arrangement in which employees do not commute to a central place of work.

(b). Give any two advantages of telecommuting. (02 marks)

✓ ***It leads to increased savings of transport costs***

✓ ***Increased independence***

✓ ***It is more flexible***

(c) In modern technology we are experiencing extensive use of the GPS by different organizations and more commonly used by the military in different countries. As a computer student give any two uses of the GPS in your society. (2

marks)

- ***Location - determining a position***
- ***Navigation - getting from one location to another***
- ***Tracking - monitoring object or personal movement***
- ***Mapping - creating maps of the world***

● *Timing - bringing precise timing to the world*

19. Use the following application tools to fill in spaces below: (05 marks)

Format Painter, Highlight, Water Mark, Footer, Footnote, Gallery, Insert, Centre, Justify.

(a) Footnote inserts a citation, narration, reference in a specific page.

(b). Using the Justify tool, text is distributed evenly in a page.

(c). Highlight allows a user to emphasise text in a document.

(d). Word art collections can be obtained from Gallery location.

(e) Format Painter allows a user to copy a given pattern appearance to another piece of text in a document

20. (a) What is meant by the term duplex printing? (02 marks)

Duplex printing is a feature of some computer printers and multifunction printers (MFPs) that allows the printing of a sheet of paper on both sides

(b) Mention any two reasons for networking a printer in a computer laboratory

(02 marks)

✓ *Saving costs on buying other printers*

✓ *Remote use*

✓ *easier tracking*

(c) Name any one example of non-impact printer

(01 mark)

✓ *LaserJet printers*

✓ *Inkjet printers*

*******END*******