IVERSITY OF DAR ES SALAAM-COLLEGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES

IS 258: PC MAINTANANCE (3 UNITS)

TIME 0730-0900 2013-04-02551 **DATE: 11th June, 2015**

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66%

ttempt all questions
ll marks add up to 100%
e precise and to the point
ssure your work is readable

one:

e the most correct answer out of alternatives given (5 marks)

i. Which of the following terms are measures of CPU speed?
   a. Megahertz and gigahertz
   b. Megabytes and gigabytes
   c. Megahertz and gigabytes
   d. Frontside bus, backside bus

ii. What do you need to install on top of your CPU to keep it from overheating?
   a. RAM
   b. Heat sink assembly
   c. Thermal dissipater
   d. CPU disperser

i. How should you handle RAM?
   a. Touch only the gold contacts at the bottom of the stick.
   b. Touch only the edges, never the gold contacts.
   c. You should only use special tongs when handling RAM.
   d. It is unsafe to ever handle RAM.

v. What is true about a double-sided DIMM?
   a. It has memory chips on the front and back.
   b. It can be installed forward or backwards.
   c. It is twice as fast as a single-sided DIMM.
   d. It has half the capacity of a quad-sided DIMM

. Which of the following is/are not part of the CPU?
   a. Control unit
   b. ALU
   c. Registers
   d. Primary Storage

4

i.	ii.	iii.	iv.	v
a	b	b	b A	d

lain the meaning and purpose of the following activities/ devices on PC. (15 marks)

i. Over clocking using BIOS set up
It is the process of increasing the processor speed that help to increase the performance of computer but it can damage the system. Not recommended

Throttling
It is the process of shutting down the system when the processor has done too much work which cause the over heating of the system.

Multi-core processing
It is the process of having more than one core processor in a same housing in which each core has two ALU with independently functionality

Cache
It is the temporary memory that is used to store instruction, data, address during the execution of programs in computer. It is found in processor and RAM as a upper part

RAM
It is a random access memory that store temporarily that when power is on. It helps to speed up the execution of programs in PC cause it is faster. It is volatile.

c) What is preventive maintenance? Give two advantages of preventive maintenance. (10 marks)

It is the process of putting the computer into order by doing the necessary work of maintenance to keep computers in good shape (i) It helps to speed up the computer example disk defragmentation (ii) Increase the life span of the computer.

d) Explain in details three methods that can be used to protect PC against power problems. (6 marks)

i) Surge suppression (ss) – They is when there is the problem the current will be directed to ground without harming the system
ii) UPS – (uninterrupted power supply) when power is off it will help the PC to have power and when it almost over it will save the work and turn off.
iii) Alternative power supply example (stand by power supply) – when there is a power problem it will take over.

e) Compare Volatile and Non-volatile memory; describe the three types of ROM used in a PC. (14 marks)

Volatile memory is the memory that can perform during power presence and non-volatile can perform even with when power is OFF. Volatile is temporary while non-volatile is permanent memory storage. Three types of ROM
(i) PROM (Programmable – ROM)
ii) EPROM (Erasable – PROM) (iii) EEPROM (Electronical Erasable Programmable ROM)

11

Question two

a) Give four main types of IDE interfaces; and mention four possible settings of ATA drives. (12 marks)

i) Serial ATA
ii) Parallel ATA
iii) MCA IDE
iv) XT IDE

The four possible setting
i) Slave (dual drive) (iii) master (dual drive)
ii) Master (single drive) (iv) Cable select

12

b) Explain the four common window commands used with hard drives. (6 marks)

i) Copy – transfer data from one part of hard drive to another and leave copy
ii) Cut – transfer data without leaving copy
iii) Paste – put data from another location
iv) Delete – Remove data from hard disk.

c) Give four functions of UART integrated circuit chip. (8 marks)

i) Helps to connect different types of interfaces / support all interface types
ii)

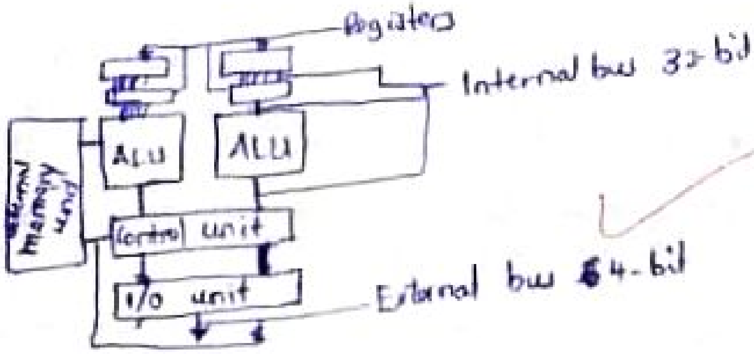
00

d) There are different features that affect the performance of the Processor. Describe any five features. (10 marks)

i) ~~Processor speed~~ Heat sink – To reduce heat to the processor
ii) Internal bus speed architecture
iii) External bus speed architecture
iv) Processing architecture (Multiprocessing, multiprocessor, multi-core processing)
v) Location of L1, L2, L3 (When located in processor it maximize the speed)

4

e) Draw a neat labelled diagram showing basic components of a processor and explain function of each component. (14 marks)



6

i) ALU – It is the arithmetic and logic unit that is used for logical decision example mathematical calculation.
ii) Control unit – Used to control all the activities of the PC
iii) I/O unit – To connect processor with the I/O devices
iv) Registers – For temporary storage of addresses, instructions during processor execution
v) Memory unit – For interaction between processor and the main memory.

8