FCIS-Ain Shams University
Subject: Introduction to Computers
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Offering Department: Computer Systems
First Year Students

Attempt the following Questions

Question 1: Mark each of the following statements either true (T) or false (F) (30 marks)

1. The most important and well-recognized type of application software is the computer's operating system.
2. Supercomputers are ultrafast systems that can process at a speed of over one petaflop-over one million billion calculations per second.
3. A communication device is a software component that moves data into and out of a computer.
4. A typical computer has different types of memory.
5. A network is a group of two or more computers connected for the purpose of sharing resources.
6. External NICs are always plugged into a chip on the motherboard.
7. NICS can only be used with wireless networks.
8. The USB flash drive is considered legacy technology.
9. A series of steps that results in the solution to a problem is called an algorithm.
10. The greater the number of buses on a microprocessor, and proximity to each other, the faster the processing speed.
11. The ExpressCard provides enhancements in additional memory.
12. The system unit houses the computer's peripheral hardware components.
13. There are five steps of the machine cycle.
14. The execute step in the machine cycle interprets what action the program is telling the computer to perform.
15. The motherboard contains the CPU.
16. A toggle key has two positions: on and off.
17. Virtual keyboard images disappear completely when not in use.
18. There is no difference between memory and storage.
19. The F2 key is often referred to as the help key because it opens the help option in most programs.
20. The time it takes the read/write head to locate the data before reading begins is called transfer performance.
21. Interrupts, signals created by input and output devices, notify the OS when actions are taken.
22. POST checks to see that the hardware is operating appropriately.
23. System utilities are loaded before the operating system is loaded.
24. Preemptive multitasking means that all open programs will shut down if one of the programs stops working.
25. Virtual memory is an enhanced way to utilize the main memory by creating pages of variable size to use when the swap file is full.
26. The best way to improve the performance of your computer is to install more RAM in the computer because the random access memory works faster than the hard disk.
27. A disk cleanup utility will search for and delete unusable files, along with any files in the recycle bin.
28. Disk defragmentation programs are utility programs used to reorganize the disk so empty sectors are eliminated.
29. A business that uses the Internet to provide another business with the materials, services, and/or supplies it needs to conduct its operations is known by the acronym B2C.
30. Cache memory is slower than RAM.

Question 3: complete the following statements by only one answer (30 marks)

1. The _____ is responsible for managing memory.
2. The information on a web page is in _____ or XHTML format.
3. _____ involves businesses that use the Internet to supply consumers with services, information, or products.
4. The Internet _____ is the main high-speed route through which data travels and is maintained by network service providers.
5. A computer that accepts and processes requests for Web pages is a Web _____

6. Boolean search operator _____ is similar in meaning to the exclusion operator.
7. An e-mail _____ is a computer file that is included with an e-mail message.
8. In addition to accessing information using the HTTP protocol, the leading browsers can also transmit files using protocol known as FTP or _____ transfer protocol.
9. In a newsgroup, a(n) _____ is a series of articles that offers a continuing commentary on the same general subject.
10. _____ is the use of networks or the Internet to carry out business of any type.
11. Input, processing, output, and storage are collectively called the _____ processing cycle.
12. Devices that enable computers to connect to a computer network are known as _____ _____ devices.
13. (n) _____ numbers consist of only two digits.
14. The _____ is the large printed circuit board that holds the computer's important components such as the microprocessor.
15. Calculations and comparisons are performed in the ALU, also known as the _____.
16. A machine cycle includes the instruction cycle and the _____ cycle.
17. Superscalar architecture takes advantage of _____ to perform more than one instruction per clock tick.
18. Memory that the processor can use to store frequently accessed program instructions and data to improve the overall speed of the computer is called _____ memory.
19. Heat is removed from the CPU by using heat sink or _____.
20. (n) _____ topology solves the expansion problems of the bus topology by using a central switch.
21. The device that combines the capabilities of a handheld computer with mobile phone capabilities and Web access is known as a _____.
22. A _____ is a device that performs the information-processing cycle.
23. Computer system components are categorized into two main groups: _____ and _____.
24. The programs that enable a computer to work properly are known as _____ software.
25. A technique that uses more than one processor to execute a program is called _____.
26. A network in which each node is connected to the line is called a(n) _____ topology.
27. _____ allows students to learn without requiring them to be at a specific location at a specific time.
28. Obsolete computer equipment, also called e-_____, shouldn't just be thrown into the trash.
29. A _____ is the smallest unit of information that a computer can work with.
30. You enter data and instructions into computer memory by using a(n) _____ device.

Question 3: **(45 marks)**

1. Draw a flowchart and write an algorithm to find N! **(10 marks)**

2. Consider the following algorithm and answer the questions **(15 marks)**

Algorithm
Step 1 a and b are two integer numbers
Step2 While (a ≠ b)
If (a>b) then
a=a-b
Else
b=b-a
End if
End While
Step4 Result=a

a. Draw a flowchart for this algorithm.
b. Given that a=35 and b=15, show the results obtained in each step when the algorithm is applied.
c. What is the function of this algorithm?

3. Draw a flowchart and write an algorithm to know if a number is a prime number or not. **(20 marks)**
Note: a prime number (or a prime) is a natural number greater than 1 that has no positive divisors other than 1 and itself. For Example, 5 is a prime, because it has only two divisors 1 and itself.

Good Luck