1- **Define** the following expression:

* Operating system (state the objectives).
* Abstraction and arbitration.  * Kernel and shell.

2- **Draw** the simplified block diagram for the computer system structure. **Brief** the main four components.

3- **What** is the function of the following programs?

[Command processor – librarian – compilers]

4- **Classify** the operating system according to system and user point of view.

5- **Describe** the computer system organization using a simple sketch.

6- **When** we use the direct memory access operation?

7- **Compare** between dynamic (RAM) and static (RAM) [cache].

8- **What** is the difference between (DDRAM-DDRAM2-DDRAM3)?

9- **What** are the different types of operating system?

10- **What** is the relation between the processor speed and the hardware multiplier factor?

11- **What** is the difference between graphical user interfaces (GUI), Character user interfaces (CUI)