As usual, provide enough detail to support your answers. Make sure to answer all the questions. Also, if you are planning to submit your assignment handwritten, please write legibly. We encourage you to itemize your answers.

Most common errors were:

**Question 2**
- Most students included basic capabilities such as defining data, constructing data, manipulating data, but do not mention important capabilities like backup and recovery, controlled redundancy and security.

**Question 4**
- The question asked for an example. Using the ER model as an example of schema is not a valid answer; you have to be more concrete.

**Question 5**
- Some thought physical data independence is harder because there are two schema (conceptual and external) that needs to remain the same, whereas in logical data independence only the external program has to stay the same.

**Question 6**
- Software, hardware, procedures, data, database access language (e.g. SQL) are not DBMS components.

**Question 8**
- You need to explain each property in ACID (Atomicity, Consistency, Isolation and Durability). If you did not elaborate on ACID properties, you got points deducted.

**Question 9**
- Accessing disk block is expensive because of Seek time (s), rotational delay (rd), and block transfer time (btt). You need to expand on each of the issue.

Kindly remember to expand answer in detail for homework 2.