** An-Najah National University**

**جامعة النجاح الوطنية**

**كلية الهندسة**

**Faculty of Engineering**

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| --- |
| **Building Engineering Department**  **Computer aided lamination design (68532)**  **Exercise …..** |

|  |
| --- |
| **Student Name:………………………...** |
| **Registration Number:………………...** |
| **Serial Number:………………………..** |
| **Section: ………………………………..** |
| **Total Exam Mark:** |
| **Exam Weight:** |

|  |
| --- |
| **Instructor Name: Sameh Mona** |
| **Academic Year:2012/2013** |
| **Semester: Spring** |
| **Credit Hours: 3** |
| **Date:** |
| **Exam Duration:** |

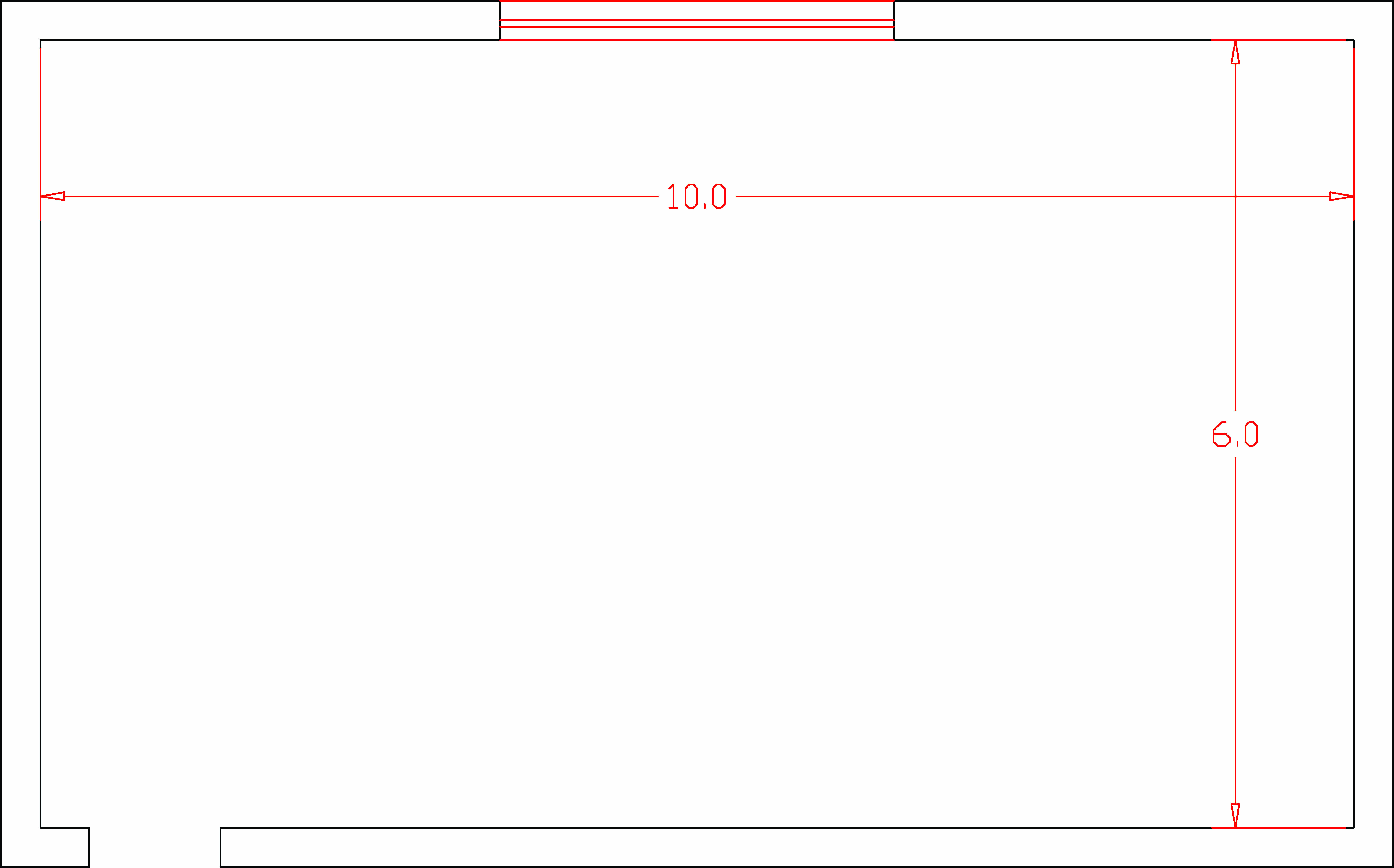
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Required Time** | **Question Grade** | **ILO’s %** | **ILO’s** | **Points** | **Question** |
|  |  |  |  |  | Q1 |
|  |  |  |  |  | Q2 |
|  |  | **Student Grade** | | | |

**Note 1: Latitude: 31.5, longitude: 35.5**

**Note 2: walls reflection: 0.7, ceiling reflection: 0.8, floor reflection: 0.5**

**Part 1**

Calculate the daylight factor and the lighting level for a class room that has 10m long and 6 m width and 3.5m height in the following cases



|  |  |  |
| --- | --- | --- |
| **Window (3.5m\*2.5 m)** | **Average daylight factor** | **Average daylighting level** |
|  |  |  |
| 10 m\*6 m\*3.5 m |  |  |
| 10 m\*8 m\*3.5 m |  |  |
| 10 m\*10 m\*3.5 m |  |  |

**Part 2**

For the previous exercise calculate

|  |  |  |
| --- | --- | --- |
| **Room (10 m\*6 m\*3.5 m)** | **Average daylight factor** | **Average daylighting level** |
|  |  |  |
| Window 2 m\*2.5 m |  |  |
| Window 3.5 m\*2.5 m |  |  |
| Window 5 m\*2.5 m |  |  |