Introduction

The report which will be marked for your assessment is Laboratory 1 Timber and Flitch Beams. .Your reports should be between 1000 and 1500 words.

Timber bending

a) Timber Beams
Timber beams will be loaded in two different orientations – ‘plank’ and ‘beam’. You need to explain
the set up of the experiment and to present your results. The results need also to be produced in
graphical form in order for you to be able to interpret them.

Note that results include explanation of the shape of the timber (the nature of the failure) at the end
of the experiment and any audible effects which occurred during loading and failure. You should
comment on your results. In particular you should relate your results to the second moment of area
of the timber in each orientation. You will need to take measurements of your timber beam in order
to calculate the second moment of area.

b) Deflection of flitch beam
You will measure the deflection of three flitch beams, which will be loaded incrementally.
Each group will make their (numerical) results available for all the class. Your report on this
experiment must include all the sets of results (from each set of students), and your conclusions
should take account of all of the results. To achieve this, your group MUST submit the numbers
(deflection against load) for both beam and plank, within two weeks of the day you do your timber
experiment. Ian will then make all these results available for all of you HERE
Your report will need to include appropriate graphs of your results.

What you should submit:
On-line submission of Lab Report in PDF format.
The Report is to be written in the usual technical report style following standard technical
report conventions.

Refer to the Rubric for the mark scheme.

Need Help? Just ask

Here is our help [guide to submitting onlineLinks to an external site.](https://ltech.ljmu.ac.uk/?page_id=5157). If having issues that are affecting your studies and/or your wellbeing, please contact the Student Engagement Team for confidential advice and support. We also offer [workshopsLinks to an external site.](https://saw.ljmu.ac.uk/%22%20%5Ct%20%22_blank) on a wide variety of topics including Managing Anxiety.

Academic Misconduct

By submitting any work for marking at LJMU, you are confirming that you are aware of the [LJMU policyLinks to an external site.](https://www.ljmu.ac.uk/about-us/public-information/student-regulations/appeals-and-complaints) regarding cheating and all forms of academic misconduct. The submitted work is your own/the group's work and all the sources consulted have been appropriately acknowledged. You are aware that, in a case of doubt, an investigation may be held.

***It is your responsibility to check that you have submitted the correct files. Marks may be unmoderated - Marks are finalised at the Board of Examiners.***

Rubric

**5205CIV Coursework Part 2 Lab Report**

| 5205CIV Coursework Part 2 Lab Report |
| --- |
| **Criteria** | **Ratings** | **Pts** |
| This criterion is linked to a learning outcomeList of Group MembersA list of group members who were present for the experiment (and details of when the experiment was carried by any group member who could not be present with the rest of the group). |

|  |  |
| --- | --- |
| **3.0 Pts****Full marks** | **0.0 Pts****No marks** |

 | 3.0 pts |
| This criterion is linked to a learning outcomeThe purpose of the experiment(including some background theory) |

|  |  |
| --- | --- |
| **16.0 Pts****Full marks** | **0.0 Pts****No marks** |

 | 16.0 pts |
| This criterion is linked to a learning outcomeA risk assessment for that experiment |

|  |  |
| --- | --- |
| **10.0 Pts****Full marks** | **0.0 Pts****No marks** |

 | 10.0 pts |
| This criterion is linked to a learning outcomeMethodology |

|  |  |
| --- | --- |
| **16.0 Pts****Full marks** | **0.0 Pts****No marks** |

 | 16.0 pts |
| This criterion is linked to a learning outcomeRaw results |

|  |  |
| --- | --- |
| **15.0 Pts****Full marks** | **0.0 Pts****No marks** |

 | 15.0 pts |
| This criterion is linked to a learning outcomeCalculations, graphs and/or tables as needed |

|  |  |
| --- | --- |
| **20.0 Pts****Full marks** | **0.0 Pts****No marks** |

 | 20.0 pts |
| This criterion is linked to a learning outcomeDiscussion |

|  |  |
| --- | --- |
| **10.0 Pts****Full marks** | **0.0 Pts****No marks** |

 | 10.0 pts |
| This criterion is linked to a learning outcomeConclusion |

|  |  |
| --- | --- |
| **10.0 Pts****Full marks** | **0.0 Pts****No marks** |

 | 10.0 pts |
| Total points: 100.0 |