Agent-based Model of a Natural System - Group Report Mark Scheme

Abstract/General Introduction/Overall Presentation (10%)

- Abstract is succinct (<=200 words) but easy to understand
- The question that your report will be addressing is clearly described
- English is clear and understandable.
- Main sections should be numbered and labelled as per the template. Sensible use of well presented, fully labelled and captioned figures and correctly referenced citations.

Literature review (25%)

The objectives in this case are to demonstrate:

- The ability to search the literature to find models of relevance to a particular natural system.
- The ability to summarise the features investigated and most important results.
- The ability to extract and describe more detailed information (e.g. relating to methodology, parameterisation and assumptions/simplifications) (for one paper only).

An excellent (first class) review would also demonstrate:

- The ability to critically evaluate the relevance and impact of an existing agent- based model.
- The ability to note any similarities and differences between the published models mentioned (or is e.g. model B an extension of model A)?
- The use of the literature to deduce particular successes and remaining challenges in the field.

Model description/Methodology: **(20%)**

The objectives are:

- Briefly but clearly describe the pertinent components and behavior of the natural system
- Justification of model design appropriate for relevant natural system
- Use of a sensibly structured model description (e.g. the ODD protocol mentioned in the project description).
- Clear statement of any assumptions you have made in developing your model.

Model simulations and results: (25%)

The objectives are to demonstrate the:

- Ability to adapt/develop and implement appropriate computational code for the simulation of this model (your submitted code will be used in conjunction with your report to judge this).
- Ability to plan and run sensible computational experiments and present the results clearly
- Ability to analyse code efficiency in a sensible and methodological way
- Ability to present possible options for efficiency improvements

Discussion and conclusion (20%)

The objectives are to demonstrate:

- Ability to critically analyse your model and results
- Ability to reflect on the limitations of a particular model and suggest possible improvements
- Ability to compare your model and results with one published in the literature.

Each of the sections will be awarded a mark between 1 and 10 as indicated in the chart below. These will then be converted to a percentage by calculating a weighted average (weighting factors are indicated in brackets above.

An indication of the level of attainment needed for a particular mark range is given below:

10	You have clearly met the objective and demonstrated deep knowledge of the concepts covered in this course, with evidence of independent thinking or engagement beyond the level of material directly covered during lectures/laboratory sessions.
9	
8	
7	Objective has clearly been met very well.
6	Objective has been met effectively
5	Objective has been partially met (fail for COM6009 students)
4	
3	Objective has not been met – fail.
2	
1	

Your marks for each criterion will be averaged and converted into a percentage for your group mark.

Individual marks will be calculated by multiplying your group report mark by your individual WebPA score (where a score of 1 represents an average contribution for your group). Please see the separate document *Conversion of Group marks into individual marks* for further information.

NOTE: It is the university's policy that all cases of plagiarism will be investigated. All material found to be plagiarised will be removed from your work, and will not be marked. This may result in you receiving a low mark, or even failing this module. You may also receive other sanctions such as a note entered on your student record. Please read the guidelines in the university handbook or http://www.shef.ac.uk/ssid/exams/plagiarism.html for further information.

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