CASA0005: Geographic Information Systems and Science – Coursework Mark Scheme

We are required to use the marking scheme set out by the University of London - this scheme is far from ideal. For example, with the pass mark at 50%, marks in the 60%s are generally seen as merit quality, with a mark of 70% indicating work of distinction quality, most marks fall into the narrow band from 50 to 70, with marks rarely awarded above 80%.

Applicable to <u>both</u> part 1 and part 2 of the assessment

	80-100% (Distinction ++)	70-79% (Distinction)	60-69% (Merit)	50-59% (Pass)	40-49% (Fail, near pass)	1-39% (Fail)
Report structure	Exceptional adaption of the standard model of the standard scientific investigation applicable to the research attempted. The superb narrative throughout seamlessly transitions the reader between perfectly balanced sections of the report.	Excellent awareness, implementation and balance of the elements within the standard model of scientific investigation in line with the research attempted. The linkage between sections is obvious and there is a strong narrative throughout.	Clear and logical structure of the report following the standard model of scientific investigation. The balance, linkage and narrative between sections are evident, but could be improved upon considering the nuances of the topic.	Good structure of the report following the standard model of scientific investigation. There is a narrative and linkage between sections but it is not directly obvious with some unbalance.	Poor report structure that vaguely follows the standard model of scientific investigation. There is no obvious linkage between sections, with little narrative throughout.	Failure to use of the standard model of scientific investigation with a highly disorganised, illogical and unbalanced structure that obtains no narrative throughout.
Presentation	Presented to a professional	Presented very well and would	Presented well but may require	May lack polish and would need	Poorly presented and	Very badly presented. Only a

standard and would be immediately ready for publication. Exceptionally well written; stylish with no errors in spelling, punctuation or grammar.	only require minor editing for publication. Very well written with virtually no errors in spelling, punctuation or grammar.	the some editing before publication. A good, well written piece of work with few errors in spelling, punctuation or grammar.	attention before reaching publication standard. A more-or-less competent piece of work but may contain some errors in spelling, punctuation or grammar.	would need serious editing before publication. A weak piece of work containing a number of errors in spelling, punctuation or grammar.	complete re-write would bring it up to standard. A very poor piece of work. Written English is incoherent, with numerous errors in spelling, punctuation and grammar.

Part 1 marking criteria

Pertinent or topical problem (with a spatial dimension) framed in a appropriate local/national/international social, environmental, political or other context	Research problem is globally pertinent or topical to a social, environmental, political or other context and has been framed at the optimal spatial scale.	Research problem is highly pertinent or topical to a social, environmental, political or other context and has been framed at an appropriate spatial scale, based upon logical reasoning.	Research problem is pertinent or topical to a social, environmental, political or other context and has been framed at an appropriate spatial scale but with some assumptions and limited reasoning.	Research problem is somewhat pertinent or topical to a social, environmental, political or other context. However a more appropriate variation of the research problem to the specific disciple could have been proposed, possibly at an	Research problem is vaguely pertinent or topical to a social, environmental, political or other context. The research problem and spatial scale should be completely reconsidered.	Research problem is completely impertinent and/or untopical, having no relevance to any social, environmental, political or other context. The selected spatial scale is highly unsuitable.

				alternative spatial scale.		
Quality (breadth and depth) of background research and framing of research hypothesis	Extensive background research evaluating multiple forms of credible sources to produce a compelling and coherent framing of the research question, presented in a concise and informative manner.	A broad range of background research evaluating multiple forms of credible sources to produce a convincing framing of the research question.	A range of background research evaluating multiple forms of credible sources to produce a legitimate framing of the research question.	Background research considering several credible sources to produce a plausible framing of the research question.	Limited background research considering few credible sources, producing an unreasonable and illogical framing of the research question.	No evidence of background research to support the research question.
Relevance and applicability of dataset(s) and proposed analysis methodologies to the problem identified	Selected data and presented analytical methodology are able to perfectly solve the presented research question or the limitations are evidently understood and expertly expressed. The data and methodology would be accepted with no corrections by an academic journal.	Selected data and presented analytical methodology are highly relevant to the presented research question. Limitations and presented and well expressed. The data and methodology would be accepted with minor corrections by an academic journal.	Selected data and presented analytical methodology are relevant to the presented research question There might be several limitations that have been discussed.	Selected data and presented analytical methodology are somewhat relevant to the presented research question but better alternatives could have been sought. Limitations might have been listed but poorly expressed.	Selected data and presented analytical methodology are not sensible to answer the presented research question and have major flaws. Limitations are present but have little relevance to the	Selected data and presented analytical methodology are completely inappropriate to answer the presented research question. There is no consideration of any limitations.

					datasets and/or analysis.	

Part 2 marking criteria

	A+ (80-100%)	A (70-79%)	B (60-69%)	C (50-59%)	Fail (near pass) (40-49%)	Fail (1-39%)
Mapping and visualisation proficiency	Figures, maps, and diagrams are entirely appropriate for the data and analysis. They are creative, of publishable quality, clear, well labelled and convey the intended information expertly. Maps demonstrate exemplary cartographic practice.	Figures, maps, and diagrams are appropriate for data the analysis being clear and well labelled. Maps effectively convey information and demonstrate excellent cartographic practice.	Figures and diagrams are fairly appropriate but could be improved upon (e.g. unnecessarily complex / too much irrelevant detail) and may contain minor errors. Maps are cartographically sound.	Figures and diagrams are adequate but more appropriate visualisations could have been implemented. There might also be multiple errors that detract from their usefulness alongside poor cartographic practice.	Figures and diagrams are poor and do not aid understanding in any way. Maps may lack even basic features such as legends.	Figures and diagrams are bad or missing entirely. Maps may be full of major problems.
Reproducibility of work	All data/code/toolboxes are published in	All data/code/toolboxes are published in	Some data/code/toolboxes are published in	Limited data/code/toolboxes are published at	An attempt was made at publishing data/code/toolbox	No attempt made at publishing

	an open-access online repository with an associated website (e.g. blogdown, bookdown / something that shows independent learning) which has clear and informative comments enabling exact replication of analysis and results.	an open-access online repository, with clear and appropriate commentary on an RMarkdown website (or similar) permitting replication of analysis and results with no alterations.	an open-access online repository, with limited commentary on a basic RPubs document (or similar) permitting replication of analysis or results with minimal adjustments.	an online resource, with a lack of clear commentary (e.g. poorly commented code / documentation) permitting partial replication of analysis or results.	es at an online resource (e.g. some evidence of using a repository / sharing methodology) with a vague and ambiguous commentary, being very difficult to reproduce analysis or results.	data/code/toolboxes.
Appropriateness and quality of analysis	The analysis is entirely appropriate to the problem. It demonstrates creativity, a comprehensive understanding of appropriate sophisticated techniques, exemplary technical	The analysis is appropriate to the problem, demonstrating excellent understanding of appropriate sophisticated techniques, broad technical proficiency and skills which are indicative of	The analysis is appropriate to the problem, demonstrating a sound technical knowledge with some additional learning that could be built upon.	The analysis might not be as efficient, creative and challenging as it could be. It demonstrates technical knowledge but may be limited to skills learned during the course.	An attempt at appropriate analysis is made but does not address the problem effectively and demonstrates that the material covered in class has not been understood correctly.	The analysis is absent or entirely inappropriate for the problem and lacks scientific integrity and quality.

	proficiency and skills which are indicative of significant additional independent learning. The analysis is of publication quality.	additional independent learning.				
Interpretation and communication of results with critical reflections on findings	Interpretations of results are very clear and logical, providing exemplary critical reflection of findings / methods with excellent links to a wide variety of relevant literature.	Interpretations of results are clear and logical with appropriate critical reflections of findings / methods with good links to relevant literature.	Results are logically interpreted to a moderate standard but with some ambiguity. Critical reflections are somewhat appropriate and linked to literature.	Results have been interpreted relatively logically but in an uncertain manner. Critical reflections are limited and immoderately appropriate with little linkage to literature.	Results have been interpreted in an illogical format with vagueness and ambiguity. Critical reflections are limited and completely inappropriate with no linkage to literature.	Results have not been interpreted and there is no evidence of any critical reflection.

Distribution of marks

This section outlines the percentages assignment to each of the marking criteria per part of the assessment

Part 1 (50% of final grade) composed of:

- Report structure: 5%
- Presentation: 5%
- Pertinent or topical problem (with a spatial dimension) framed in a appropriate local/national/international social, environmental, political or other context: 30%
- Quality (breadth and depth) of background research and framing of research hypothesis: 30%
- Relevance and applicability of dataset(s) and proposed analysis methodologies to the problem identified: 30%

Part 2 (50% of final grade) composed of:

- Report structure: 5%
- Presentation: 5%
- Mapping and visualisation proficiency: 20%
- Reproducibility of work: 20%
- Appropriateness and quality of analysis: 20%
- Interpretation and communication of results with critical reflections on findings: 30%