Qualifying Examination

for Doctor of Philosophy (Epidemiology and Biostatistics)

(Duration: 09.00 – 16.00; Total score: 100)

*Students can use books or internet. Communication with anybody else is strictly prohibited.*

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**Part A: Epidemiology** (40 scores)

**Based on the attached article, please answer the following questions:**

1) What is the main conclusion of this paper? (2 scores)

2). What is the magnitude of effect that the author used for answering the primary research question? If there was none or inappropriately reported, please specify what should be reported for the research question? (8 scores)

3). What are biases that could make the results invalid? Please specify name and roles of each bias, i.e., the conclusion could be distorted in what way and by what mechanism. (10 scores)

4). Will you recommend this paper as a piece of evidence for health care provider? Please describe. (10 scores)

5). Please summarize in one paragraph of less than 10 lines the main points that will improve the quality of this paper- pretending you are writing a letter to the editor of this journal regarding this paper. (10 scores)

**Part B: Biostatistics** (30 scores)

**Based on the data set with a description attached at the end of this material, please answer the following questions:**

6). Plan for data analysis: Please provide a dummy table, the table without number being presented, that is the main finding to answer the research question for this study. (10 scores)

7). Please provide Stata or R commands (Stata do file or R scripts) to obtain the results for the dummy table you’ve provided. (10 scores)

8). Please summarize results as an abstract. Note that this must be presented with real results obtained from your own analysis. (10 scores)

**Part C: Dissertation in brief for all students except Ms. Worawan** (30 scores)

**Based on your own your plan on your dissertation, please answer the following questions:**

9) Summarize your dissertation in one paragraph of no more than 300 words (5 scores)

10). Describe all possible alternative statistical methods that could be efficiently applied to your main paper as well as their advantages and disadvantages and justify why the one you selected is the best choice. (10 scores)

11) What is the main weakness of your thesis and how it affects the main conclusion? (5 scores)

12) What is/are the impact(s) that would be expected from the findings of your thesis? (10 scores)

**Part C: Dissertation (ONLY For Ms. Worrawan Poochada)** (30 scores)

**Please answer the following questions in brief for this written qualifying exam and later prepare a presentation (15-20 min) of your answers for oral qualifying exam**

1. Based on the study result from research and the surveillance report from health data, which one is more suitable to describe situations of work-related diseases among Thai farmers? What is your reason regarding strength and weakness to support the answer? (5 scores)
2. Have you ever found misrepresented data or distortion of report in the morbidity rate of occupational diseases among Thai farmers? If so, please describe in list of possible causes. (5 scores)
3. What is the solution for problems of distorted report and how to develop methods for the best representative of health data to accurate, accessible and actionable information of occupational diseases among Thai farmers? Please describe your idea in brief. (5 scores)
4. For your PhD dissertation in program of Epidemiology and Biostatistics, please summarize your concept paper in 3-4 paragraphs for the rational explanation of your research concerning occupational diseases in Thai farmers, the methodology (design, data collecting and analysis), and the impacts that would be expected from the findings. (15 scores)

GOOD LUCK