Final Examination for Doctor of Public Health

(Duration: 3 hours; Total score: 60)

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

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**Part A: Research Methodology** (30 scores)

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

1). What is the primary research question? (2 scores)

2). What is the type of the research design? (2 scores)

3). What is dependent variable that is the primary outcome of this study? Please specify name and type of the variable. (2 scores)

4) What is(are) independent variable(s) of this study? Please specify name and type of the variable. (2 scores)

5). What is the magnitude of effect that the author used for answering the primary research question? If there was none, please specify what should be reported for the same research question? (4 scores)

6). 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 mechanisms. (8 scores)

7). Indicate the weakest points of this paper and suggest how to improve them? (10 scores)

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

**Based on the attached data set with a description below, please answer the following questions:**

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| **Antibiotic prophylaxis in abdominal hysterectomy: a randomized, double-blinded controlled trial.**    **Study objectives**: To determine the efficacy of Cephazolin and Ampicilin as the antibiotic prophylaxis for abdominal hysterectomy patients.  **Data description:**  ATB "1= Placebo; 2=Ampicilin; 3= Cephazolin"  POFM "Post-operative febrile morbidity 1=Yes; 0=No"  AGE "Age (years)"  WEIGHT "Weight (Kgs)"  HEIGHT "Height (Cms)"  HOSSTAY "Hospital stay (Days)"  ANEMIA "Anemia 1=No 2=Yes"  SURGEON "Surgeon 1=Dr A 2=Dr B"  BLOODTX "Blood transfusion 1=No 2=Yes"  TIME "Duration of the operation (minutes)"  **Example of the data:**  **atb pofm age weight height hosstay anemia surgeon bloodtx time**1 0 39 60 155 7 1 2 1 105  1 0 30 50 151 8 1 1 1 30  1 0 43 54 149 9 1 1 1 75  - - - Some records were omitted - - -  3 0 49 50 150 8 1 1 1 75  3 0 43 61 151 14 1 2 1 90  3 0 51 64 146 7 1 2 1 150  **Data file:** ATB.DTA |

8). Plan for data analysis: Please provide all dummy tables, the tables without number being presented which should be presented in this study. (10 scores)

9). Please provide Stata or R commands (Stata do file or R scripts) to obtain the “main” results for the dummy table you’ve provided on question #8. (10 scores)

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

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