

UGANDA COAST GUARDS UNIVERSITY
FACULTY OF SCIENCE
SUPPLEMENTARY/SPECIAL EXAM 2009/2010
STA1102: STATISTICAL ORGANIZATION
BSc I GEN, IT, FM, & ECON

DATE: 3/8/2010

Time: 2:00pm – 5:00pm

INSTRUCTIONS: Attempt all questions in Section A and 3 questions from Section B.

SECTION A

(Write the correct alternative)

1. Which of the following represents the best data coding system?

A.

10-15	16-20	21-25
1	2	3

B.

Male	Female
M	F

C.

Secondary	Primary	University
0	1	2

D.

Muganda	Itesoit	Munyoro
1	2	1

2. What is deductive coding? It is coding

A. By subtraction

B. By induction

C. Known sample

D. Unknown sample

3. The purpose of data cleaning is to remove

A. Dirt

B. Outlier

C. Dust

D. None of the above

4. What is meant by degrees of freedom (d.f)?
 - A. Scores with restriction to vary
 - B. $n+1$
 - C. Scores without restriction to vary
 - D. Non of the above
5. Probability theory serves to:
 - A. Confuse students
 - B. Measure certainty
 - C. Measure uncertainty
 - D. Measure capability
6. When is Type II error committed?
 - A. Reject wrong H_0
 - B. Reject correct H_0
 - C. Accept wrong H_0
 - D. Accept correct H_0
7. The following are true of a compound event except:
 - A. Contained by sample space
 - B. Contain sample space
 - C. Contain simple events
 - C. None of these
8. When a coin is tossed, head and tail are;
 - A. Independent
 - B. Dependent
 - C. Conditional
 - D. Mutually exclusive
9. The following make a population except:
 - A. 10 students of BAM I
 - B. Ages of all students at UMU
 - C. All Ugandans
 - D. All mountain gorillas
10. Which of the following computer software is best suited for analyzing clinical data
 - A. Excel
 - B. SPSS
 - C. EpInfo
 - D. Dbase

SECTION B
(Answer 3 questions)

QUESTION 11

- a) State and explain the;
 - i) Additive law of probability
 - ii) Multiplicative law of probability
- b) What is the probability of getting a total of 6 or 7 when two fair dice are rolled?

QUESTION 12

- a) Explain clearly how you can use the random numbers method to pick a random sample of 30 students from your class.

- b) In a certain country the lowest statutory working age is 15 years while the retirement age is 75 years. A social scientist wishes to estimate the mean age of the working population in the country. He wants his estimated mean working age to differ by 5 years from the population mean. What sample size should he select from the working population if his level of confidence of 95%?

QUESTION 13

- a) Using examples explain the following statistical concepts;
- i) Random experiment
 - ii) Natural process
 - iii) Sample space
 - iv) Event
- b) A committee of 5 is to be selected from a group of 6 men and 8 women. If the selection is random and there is equally likely chance of each being picked. What is the probability that the committee will consist of 2 men and 3 women?

QUESTION 14

- a) What is the probability of getting a 1 conditional on getting an odd number when a die is rolled?
- b) An experiment consists of a coin being tossed 3 times in succession. Find the probability of getting
- i) Exactly 2 heads
 - ii) At least 1 tail

QUESTION 15

- a) What is a hypothesis?
- b) Using examples, clearly explain the necessary steps one can undertake in order to successfully test a given hypothesis.

... GOOD LUCK! ...