UNIVERSITY OF SWAZILND

FACULTY OF HEALTH SCIENCES

SUPPLEMENTARY EXAMINATION PAPER, JULY 2009

TITLE OF PAPER: HEALTH STATISTICS

COURSE CODE: HSC 404

TIME ALLOWED: TWO (2) HOURS

MARKS: 75

INSTRUCTIONS:

1. **THERE ARE THREE (3) QUESTIONS IN THIS PAPER**
2. **ANSWER ALL THREE QUESTIONS**
3. **EACH QUESTION IS ALLOCATED 25 MARKS**
4. **WRITE LEGIBLE**
5. **ALL FINAL ANSWERS MUST BE TO THE NEAREST 1/10.**

THIS PAPER IS NOT TO BE OPENED UNTIL THE INVESTIGATOR HAS GRANTED PERMISSION.

QUESTION 1

A. Below are brief descriptions of how researchers measured a variable. For each situation, determine the level of measurement of the variable and also state whether it is continuous or discrete.

a. People from the Manzini region have excellent health status. (2)

b. My nephew is a nursing sister in a health facility. (2)

c. You have been assigned to the study control group in the study. (2)

d. 500^0C is not twice as hot as 250^0C. (2)

e. 100^0C is twice as hot as 25^0C. (2)

B. Seven (7) clients who were attended at the out patient department had the following pulse rates: 68, 112, 74, 85, 78, 90, and 103.

(i) Compute the standard deviation of the above data. (10)

(ii) State any five (5) properties of standard deviation. (5)

TOTAL 25 MARKS

QUESTION 2: You collected information from gasping clients, data and obtained the following data.

Diastolic blood pressure (mm Hg)	Frequency
40 – 45	27
46 – 51	35
52 – 57	28
58 – 63	39
64 – 69	21
TOTAL	**N = 150**

A. Obtain the mode, median, and mean, of the above sample (6)

B. Calculate the 25^{th} and 78^{th} mm Hg percentiles. (8)

C. What are the percentile diastolic blood pressure (mm Hg) of 47 and 60 mm Hg? (8)

TOTAL 25 MARKS

QUESTION 3: The data below reflect the number of cigarettes smoked by each of 60 subjects on a specific day.

21	67	66	14	52	33	18	6	15	44
21	57	61	48	55	54	23	51	56	49
8	45	18	66	11	42	30	25	63	64
27	13	52	7	40	15	43	54	33	39
55	56	22	58	41	69	43	58	60	29
30	10	8	44	60	55	5	20	18	16

A. Sum up the data in table form. Indicate the relevant tallies, frequencies, percentages, and cumulative percentages in one table. (6)

B. Use the table (developed in A) to answer the following questions:

(i) What are the apparent limits of the class interval 5 – 9? (2)

(ii) What are the real limits of the class interval 5 – 9? (2)

(iii)Compare the percentages in the various class intervals. In which class interval do the lowest and highest percentages of subjects occur? (5)

C. Draw up a histogram for the above data. (10)

TOTAL 25 MARKS