CHUKA  **UNIVERSITY**

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF DOCTORATE IN TOURISM MANAGEMENT

PTOM 931: ADVANCED STATISTICS IN TOURISM

STREAMS: PhD(Tourism) Y1S2 **TIME: 3 HOURS**

DAY/DATE: TUESDAY 18/4/2023 **2.30 A.M. – 5.30 A.M.**

INSTRUCTIONS:

- Answer Question One and any other TWO
- Do not write anything on the question paper

SECTION A (20 marks)

1. An investor wants to develop an age-sensitive tourist facility. The age distribution of the tourists visiting a hotel similar to the proposed is given below

Number	10 – 19	20–29	30–39	40–49	50–59	60–69
f	120	150	145	130	100	80

a. Workout the Mean absolute deviation of the distribution. (6 marks)

b. Determine the median age. (6 marks)

c. Calculate the confidence interval of the mean. (6 marks)

d. Determine the ratio of tourist aged 20-29 and 50-59 years (2 marks)

SECTION B (40 marks)

2. **a.** Before going to the field you are required to develop a tool of data collection. With examples explain, four levels of measurement that could represent the data to be collected by the tool. (12 marks)

   b. Explain how you would ensure that the tool of data collection gave valid and reliable data. (8 marks)

3. The number of orders served per hour by three waiters is given below.

Waiter 1	22	18	23	18	16	17	15
Waiter 2	30	22	25	28	18		
Waiter 3	14	15	17	16	19	16	

   a. Using Analysis of Variance test, determine whether there are differences between the hotels. (12 marks)

   b. Using Tukey–Kramer test determine the means that were significantly different. (8 marks)

4. The mean monthly customer satisfaction of two hotels is given below.

Merica	5.5	5.0	6.5	7..7	8.5	8.6	5.8	6.4	6.5
Cathys	8.5	9.2	6.5	8.8	9.5	9.4	9.9	9.5	

   i. With reasons, select a test that can be used as a hypothesis test (8 marks)

   ii. Using the selected test, test for significant differences between the two hotels. (12 marks)

Attached statistical tables: t; Anova, Man U, Q table