



GRE TSA UNIVERSITY - THIKA

**UNIVERSITY EXAMINATIONS
SEPTEMBER - DECEMBER 2021 SEMESTER**

**BACHELOR OF SCIENCE IN HOSPITALITY
MANAGEMENT**

COURSE CODE: BSHM 404

**COURSE TITLE: STATISTICAL METHODS IN HOSPITALITY
AND TOURISM**

DATE: 16 NOVEMBER 2021

TIME: 11.30 AM - 2.30 PM

INSTRUCTIONS TO CANDIDATES

1. SECTION A IS **COMPULSORY**.
2. SECTION B: ANSWER ANY OTHER **THREE** QUESTIONS.
3. **DO NOT** WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.
4. ALL ROUGH WORK SHOULD BE AT THE BACK OF YOUR ANSWER BOOKLET AND CROSSED OUT.

CAUTION: All exam rooms are under CCTV surveillance during the examination period.

SECTION A: COMPULSORY

Question One

The data represent the ages of 102 employees working in a Saafi Group of hotel.

34,67,40,72,37,33,42,62,49,32,52,40,31,19,68,55,57,54,37,32,54,38,20,50,56,48,35,52,29,56,68,
65,45,44,54,39,29,56,43,42,22,30,26,20,48,29,34,27,40,28,45,21,42,38,29,26,62,35,28,24,44,46,
39,29,27,40,22,38,42,39,26,48,39,25,34,56,31,60,32,24,51,69,28,27,38,56,36,25,46,50,36,58,39,
57,55,42,49,38,49,36,48,44

- a) Were the data obtained from a population or a sample? Explain your answer [4 Marks]
- b) Calculate ALL measures of central tendency without grouping the data [9 Marks]
- c) Construct a frequency distribution for the data set [6 Marks]
- d) Calculate the mean, median and mode of the dataset [9 Marks]
- e) Calculate the variance and standard deviations of the dataset [6 Marks]
- f) Illustrate the dataset into a histogram [6 Marks]

SECTION B: ANSWER ANY THREE QUESTIONS

Question Two

- a) The following table gives the frequency distribution of the number of orders received each day during the past 40 days at the office of a purchasing department of a hotel company.

No of order	Frequency
10-12	2
13-15	10
16-18	16
19-21	12

Calculate;

- i The mean [3 Marks]
 - ii The median [3 Marks]
 - iii The mode [3 Marks]
 - iv Variance [3 Marks]
 - v Standard deviation [3 Marks]
- b) Enumerate five benefits of statistics as applied in the field of hospitality and tourism management [5 Marks]

Question Three

a) Using the given data set below,

X	1	2	3	4	5	6	7	8	9
Y	9	8	10	12	11	13	14	16	15

i Calculate the coefficient of correlation [4 Marks]

ii Obtain the line of regression [3 Marks]

iii Estimate the value of y which should correspond to $x=6.2$ [3 Marks]

b) Distinguish between the following:

i Descriptive statistics and Inferential statistics [4 Marks]

ii Continuous variable and Discrete variable [4 Marks]

iii Finite population and Hypothetical population [2 Marks]

Question Four

a) Calculate the mean, median and mode for the following frequency distribution:

Class	1-4	5-8	9-12	13-16	17-20	21-24
Frequency	10	14	20	16	12	8

[10 Marks]

b) Discuss five characteristics of statistics in the hospitality and tourism industry [10 Marks]

Question Five

Listed below are the ages of a group of 50 employees in Shanzu Hotel:

26, 38, 28, 41, 30, 26, 28, 37, 29, 39, 27, 27, 18, 36, 22, 31, 26, 43, 16, 20, 39, 25, 31, 24, 44, 21, 38, 23, 34, 24, 43, 24, 40, 22, 40, 21, 45, 23, 37, 29, 36, 26, 49, 42, 44, 45, 47, 51, 54, 55

You are required to:

a) Calculate all measures of central tendency without grouping the data [9 Marks]

b) Compute the standard deviation and variance without grouping observations in the dataset

[6 Marks]

c) Distinguish between continuous variable and discrete variable [5 Marks]