



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2023/2024

### SECOND YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN HUMAN RESOURCE MANAGEMENT

#### SMB 3113: BUSINESS STATISTICS

DATE: APRIL 2024

TIME: 2 HOURS

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INSTRUCTIONS: Answer question *one* and any other *two* questions

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#### QUESTION ONE (30 MARKS)

- a) Discuss the importance of statistics in your area of study (5 marks)
- b) Discuss any four methods of collecting primary data (5 marks)
- c) The following data is an extract for the student's weight in kilograms

57	59	59	60	61	63	67	74	80	50
59	60	63	62	61	65	70	80	89	54
59	63	60	64	65	68	75	90	92	56
60	60	64	66	69	78	84	96	99	60

#### Required:

- i. Prepare a frequency distribution for the above data (5 marks)
- ii. Present the data in the form of histogram (3 marks)
- iii. From the histogram determine the mode (2 marks)

- d) Despite the universal approach of business statistics, it has its own limitations. Discuss any five (5 marks)
- e) Discuss any four methods of data classifications (5 marks)

### QUESTION TWO (20 MARKS)

- a) Explain the meaning of dispersion and its importance (8 marks)
- b) The following data relates to marks scored in a class of business statistics

Marks	
10-20	6
20-30	8
30-40	10
40-50	2
50-60	?
60-70	7
70-80	9
80-90	4
90-100	6
	$\sum f = 56$

Its further stated that the center most mark is 55

#### Required:

- i. Find the value of the missing frequency (5 marks)
- ii. Determine the value of mean and standard deviation (7 marks)

### QUESTION THREE (20 MARKS)

- a) Discuss the three types of correlation (6 marks)
- b) Find the coefficient of correlation between the use of fertilizers and land productivity from the following data (14 marks)

Fertilizers	Productivity
15	85
18	93
20	95
24	105
30	120
35	130
40	150
45	160

#### QUESTION FOUR (20 MARKS)

- a) Explain the properties of regression coefficient (6 marks)
- b) On the basis of figures recorded below for supply and price for nine years. Calculate the regression line of supply on price (14 marks)

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Price	145	140	130	124	133	127	120	110	116
Supply	80	82	86	91	83	85	89	96	93

#### QUESTION FIVE (20 MARKS)

- a) Write short notes on the following (20 marks)
- Stratified sampling
  - Multi-stage sampling
  - Judgement sampling
  - Quota sampling
  - Random sampling