

DEPARTMENT OF MANAGEMENT SCIENCE

BMS4201: BUSINESS STATISTICS

BBIT YEAR II

ASSIGNMENT IV

QUESTION ONE

- a) A purchasing agent obtained samples of 40 watt bulbs from two companies. He had the samples tested in his own laboratory for lengths of time (in thousands of hours) with the following results:

	Number of bulbs from	
Length of life	Company A	Company B
17 - 19	10	3
19 - 21	16	40
21 - 23	20	12
23 -25	8	3
25 - 27	6	2

- i) Compute the average life of bulbs from each company. (6 marks)
- ii) Compute the standard deviation of life of the bulbs from each company. (8 marks)
- iii) Compute the Interquartile range of life of bulbs from each company. (5 marks)
- iv) Compute the coefficient of variation life of bulbs from each company. (3 marks)
- v) Determine the mode of life of bulbs from each company. (4 marks)

QUESTION TWO

- a) The time in seconds that a random sample of employees took to complete a task is as follows:

63 229 165 77 19 71 67 59 66 102 81 72 50

55 74 61 82 48 70 86

- i) Determine the median of the distribution. (3 marks)
- ii) Compute the first and third quartiles (4 marks)
- iii) Identify any outliers in the data. (5 marks)
- iv. Construct a box plot for the data. (6 marks)
- v. Determine the arithmetic mean of the distribution. (2 marks)