

Marks: 20

Time: 40 Minutes

[N.B. – The figures of the right margin indicate full marks. Read the stems carefully and answer the associated questions. Answer all the questions.]

1. The monthly temperatures in the cities of Dhaka (in Degree Celsius) and New York (in degree Fahrenheit) are given in the following table:

City	Jan	Feb	Mar	Apr	May	Jun
Dhaka ($^{\circ}C$)	24	28	32	33	33	32
New York ($^{\circ}F$)	29	32	40	50	60	70

- (a) How is the Range defined? 1
 (b) Can the standard deviation exceed the variance? Prove. 2
 (c) Find the standard deviation of the above data and compare the cities. 3
 (d) Examine the efficacy the standard deviation in light of the given context.
 Is a better measure available? Analyze. 4
2. Compute the $MD(\bar{x})$, $MD(Me)$, Coefficient of Range, Quartile Deviation, and the Coefficient of Quartile Deviation for the following data: 10, 16, 20, 25, 34, 25, 17 $5 \times 2 = 10$

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