**7.16 Calculating the variance and standard deviation:**

Barbara is considering investing in a stock and is aware that the return on that investment is particularly sensitive to how the economy is performing. Her analysis suggests that four states of the economy can affect the return on the investment. ***Using the table of returns and probabilities below, find the expected return and the standard deviation of the return on Barbara’s***

*investment****.***

 Probability Return

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Boom 0.1 25.00%

Good 0.4 15.00%

Level 0.3 10.00%

Slump 0.2 -5.00%

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**8.6 Zero coupon bonds:**

Diane Carter is interesting in buying a five-year zero coupon bond whose face value is $1,000. She understands that the market interest rate for similar investment is 9 percent. ***Assume annual coupon payments. What is the current value of this bond?***