Exam Questions diving into the world of data module

1. How do you interpret the mean of a dataset in terms of central tendency?
2. If a dataset is [4, 9, 11, 15, 17, 9, 20], find mean and mode and what is the median if an additional value 10 is added to the dataset?
3. Compute the variance and standard deviation of the dataset: [12, 15, 14, 16, 18].
4. Calculate the correlation coefficient between [X: 1, 2, 3, 4, 5] and [Y: 2, 4, 5, 4, 5].
5. Define skewness and the difference between positive and negative skewness.
6. What is the difference between a discrete and a continuous probability distribution?
7. Explain the binomial distribution and give an example of its application.
8. Difference between normal distribution and standard normal distribution.
9. Describe a scenario in data science where calculating the mean would be crucial.
10. How would you interpret a z-score in the context of a normal distribution?