Müəllimin adı: Huseynova Günel Şamxal

Fənnin adı: Probability and statistics

Qrupun nömrəsi: 1045

**Quiz 1**

**Mövzu 1: Introduction to Probability. Basic concepts. Properties of probability.**

1. Problem solving: Formula of classical probability
2. Problem solving: Formula of classical probability
3. Problem solving: Formula of classical probability
4. Problem solving: Formula of classical probability
5. Problem solving: Formula of classical probability

**Mövzu 2 : Conditional probability. Product rule. Independent variables. Product rule for independent variables**

1. Problem solving: Conditional probability
2. Problem solving: Conditional probability

**Mövzu 3: The Law of Total Probability. Bayes’ formula. Independence of events**

1. Problem solving: The Law of Total Probability

**2.** Problem solving: The Law of Total Probability

**3.** Problem solving: The Law of Total Probability

4.Problem solving: Bayes’ formula.

1. Problem solving: Bayes’ formula.
2. Problem solving: Independence of events
3. Problem solving: Independence of events
4. Problem solving: Independence of events

10.Problem solving: Independence of events

**Mövzu 4: Further topics in probability. Permutations. Combinations.**

1. Problem solving: Combinations.
2. Problem solving: Combinations.

**Mövzu 5: Bernoulli trials. Binomial probability.**

1. Problem solving: Bernoulli trials.
2. Problem solving: Bernoulli trials.
3. Problem solving: The most probable number of success.
4. Problem solving: The most probable number of success.
5. Problem solving: Local theorem of Laplace
6. Problem solving: Integral theorem of Laplace
7. Problem solving: Integral theorem of Laplace

**Mövzu 6: Markov chains.**

1. Problem solving: Markov chains.
2. Problem solving: Markov chains.

**Mövzu 7 : Probability distributions. Density functions. The Joint Distribution of a Random variable. The Joint Distribution of two discrete random variables.**

**1.** Problem solving: Probability of distribution function. Density functions.Expected value , dispersion, standard deviation of X continuous random variable.

**2.** Problem solving: Probability of distribution function. Density functions.Expected value , dispersion, standard deviation of X continuous random variable.

**3.** Problem solving: Probability of distribution function. Density functions.Expected value , dispersion, standard deviation of X continuous random variable.

**4.** Problem solving: Probability of distribution function. Density functions.Expected value , dispersion, standard deviation of X continuous random variable.

**5.** Problem solving: Probability of distribution function. Density functions.Expected value , dispersion, standard deviation of X continuous random variable.

**6.** Problem solving: Probability of distribution function. Density functions.Expected value , dispersion, standard deviation of X continuous random variable.

**Mövzu 8: Expected value. Variance and moments. Covariance and the Variance of a sum of random variables**

1. Problem solving:Expected value, variance and standard deviation. .
2. Problem solving:Expected value, variance and standard deviation.
3. Problem solving:Expected value, variance and standard deviation.
4. Problem solving:Expected value, variance and standard deviation.
5. Problem solving:Expected value, variance and standard deviation.
6. Problem solving:Expected value, variance and standard deviation
7. Problem solving:Expected value, variance and standard deviation
8. Problem solving: kth order moments and kth order central moments.
9. Problem solving: kth order moments and kth order central moments.

10.Problem solving: kth order moments and kth order central moments.

11. Problem solving: kth order moments and kth order central moments.

**Mövzu 9: Laws of large numbers.**

1. Problem solving: Chebyshev’s inequality.
2. Problem solving: Chebyshev’s inequality.
3. Problem solving: Chebyshev’s inequality.
4. Problem solving: Chebyshev’s inequality.
5. Problem solving: Chebyshev’s inequality.
6. Problem solving: Chebyshev’s inequality.

**Mövzu 10: Uniform distribution, Normal distribution and Exponential distribution.**

1. Problem solving: Uniformly distribution.
2. Problem solving: Uniformly distribution.
3. Problem solving: Uniformly distribution.
4. Problem solving: Exponential distribution.
5. Problem solving: Exponential distribution.

**Mövzu 11: One random variable function. Two random variables functions.**

1. Problem solving: One random variable function.
2. Problem solving: One random variable function.
3. Problem solving: One random variable function.
4. Problem solving: Two random variable functions.
5. Problem solving: Two random variable functions.

**Mövzu 12: Jointly distributed random variables.**

1. Problem solving: The probability of jointly distributed random variables.
2. Problem solving: The probability of jointly distributed random variables.
3. Problem solving: Find the two dimensional density function of jointly distributed random variables.
4. Problem solving: Find the two dimensional density function of jointly distributed random variables.
5. Problem solving: Find the two dimensional distribution function of jointly distributed random variables.

**Mövzu 13: Expected value, variance and standard deviation of jointly distributed random variables.**

1. Problem solving: Expected value and variance of jointly distributed random variables.
2. Problem solving: Expected value and variance of jointly distributed random variables.

**Mövzu 14: Introduction to statistics. Frequency distributions measures of central tendency. Measures of variation. Variance. Deviations. Standard deviation for a grouped distribution.**

1. Problem solving: Find the mean , variance of distribution selection.
2. Problem solving: Find the mean , variance of distribution selection.
3. Problem solving: Find the variance of given distribution selection.
4. Problem solving: Find the variance of given distribution selection.
5. Problem solving: Find the variance of given distribution selection.

**Mövzu 15: The method of purchase of price. The interval of reputation.**

1. Problem solving: Find unknown parameter ,of normal distribution.
2. Problem solving: Find unknown parameter ,of normal distribution.
3. Problem solving: Find unknown parameter of exponential distribution.