**Belarusian State University  
Mechanics and Mathematics Faculty  
Nonlinear Analysis and Analytical Economics Department**

**Summary of diploma paper  
‘Some Inventory Management Models in Specific Tasks’**

**Alexandra A. Gladkaya**

**Olga I. Pindrik, academic adviser**

**2017**

The diploma paper contains:

- 37 pages,  
- 4 charts,  
- 1 table,  
- 4 works of reference that have been used.

Keywords: COST- EFFECTIVE VOLUME OF AN ORDER, OPTIMAL STRATEGY, RESERVE INVENTORY, EFFECTIVE TERM OF AN ORDER PROCESSING and EXPENSES.

The purpose of this diploma paper is to study some probabilistic inventory management models as well as consider their application citing specific examples.

The inventory management is the process of defining and maintaining the optimal inventory level at an enterprise. Thus far many theoretical models have been developed which make it possible to calculate the optimal volume of an order, the term of making an order and the inventory level thus minimizing expenses. The inventory management models are divided into deterministic and probabilistic models. Deterministic models are simpler by definition in comparison with probabilistic ones. Probabilistic inventory models are more precise compared with deterministic models because they take into account many factors which are capable of affecting the result. The demand in probabilistic models, in contrast to deterministic models, is a random value.

The diploma paper is abstract in nature.

Specific probabilistic inventory management models are considered in this diploma paper as well as tasks are chosen which may be solved based on the application of certain models thereto.

The diploma paper is produced individually.