



Economics-Management, Statistics and Mathematics  
EXANII Study Guide

**Economy - Administration**

- \*Introduction to administration and historical background
  - Administration Origin
  - Management Definition
  - Theoretical approaches of administration
- \*Systems Approach
  - Concept and classification systems approach
  - The role of administrator in public and private organizations
- \*Functional Areas
  - Marketing
  - Finance
  - Production and Operations
  - Human resources
  - Tourism
- \*Administrative process
  - Concept
  - Stages
- \*General information on economics
  - Definition and purpose of the economy
  - Micro and macroeconomics
- \*First schools of economic thought
  - Mercantilists and Physiocrats
  - Classics
- \*Elements of analysis of the economic system
  - Agents of economic activity
  - Economic activities: production and services
  - Economic indicators: domestic product, gross, inflation, employment, investment flow
- \*Economic process
  - Supply Curve
  - Demand curve
  - Demand, supply and pricing
  - Types of market and competition
- \*The role of administrator in public and private organizations
  - Definition of marketing
  - Marketing strategies
  - Market research
  - Marketing and sales strategies
  - Promotion mix
  - International marketing
  - Social marketing



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**\*Planning**

Definition and planning purposes  
Advantages of planning  
Types of plans  
Mission, vision, projects or purposes, goals and objectives, strategies, policies, procedures, rules, programs,  
Budgets

**\*Organization.**

Concept Organization Function  
Design and organizational structure  
Definition of design and structure  
Classic design principles of the organization  
Specialization

**\*Direction**

Motivation  
Concepts and motivation process  
Theories of motivation  
Leadership  
Leadership Styles  
Communication  
Developing communication skills

**\*Control**

Process Control

**Statistics**

**\*Descriptive statistics**

Notion and utility of descriptive statistics: its scope  
Definition of Population and Sample Variables  
Types of variables (Quantitative and qualitative; continuous and discrete) and level measurement nominal, ordinal and interval)  
Frequency distribution: classes, intervals, limits, limits real brand  
Measures of Central Tendency: media, median, mode, quartiles, deciles and percentiles; Clustered and non-clustered Data  
Measures of dispersion: range, variance and standard deviation; Clustered and non-clustered Data  
Graphical representations: bar, histogram

**\*Set Theory**

Characteristics of set theory  
Set Operations: Union, Intersection, Difference and complement Venn-Euler Diagrams





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Probability

Concept and Application of probability

**Mathematics**

**\*Aritmethics**

Operations of natural numbers and integers (Euclidean algorithm)

Operations of real numbers and scientific notation

Algebra

Methods for representing linear and quadratic equations

Basic operations with algebraic fractions and radicals

Laws of Exponents and radicals (logarithmic and exponential equations)

**\*Geometry**

Parallelism, congruence, similarity (Thales theorem) and straight (and bisector bisector)

Calculate perimeters and areas of plane figures


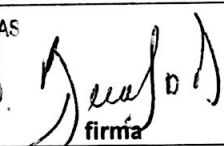
Geometric figures: perimeter, area and volume

Pending the straight and angle between straight

Equations and graphs of the circle, parabola, ellipse and hyperbol

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