**Final Exam Themes**

**for Food Engineering BSc students**

1. **food technology**
2. **unit operation**
3. **food industry economics**

**1.**

a) Milling industry - milling of wheat, quality parameters of flour

b) Elements of Fluid Mechanics (classification of fluids, definition and types of viscosity, flow parameters -flow rate, -flow velocity, -pressure, -cross flow section)

c) Importance and Economic Indicators of Food Industry within the National Economy (Main functions, ratio in the GDP, labour, investment)

**2.**

a) Baking and pasta industry - the bread production

b) Laws of flow of fluids (characterization of flows - Re number, Velocity profiles, Boundary layers, Bernoulli’s Law, Bernoulli equation, Principle of Continuity)

c) Situation of Global Food Industry – (Structure, main food industrial brances, key figures of production, trade and consumption)

**3.**

a) Malt and beer technology, brewing

b) Size reduction of Solids, Basic Principles, Equipment and Methods

c) Measuring Methods and Theories of Competitiveness of Food Industry

**4.**

a) Processing of sugar, candy and chocolate production

b) Centrifugal separation and centrifuge equipment in food industry

c) Analysis of the External Business Environment. Methods (PEST, PORTER’s Five Forces) SWOT)

**5.**

a) Plant oil production, quality parameters of oil

b) Mixing in the food processing

c) Regulations and Organisations of Global Food Trading, Basic forms of Trading, Methods of Pricing)

**6.**

a) Processing of poultry, quality and quantity parameters of egg, processing of egg

b) Mass transfer and diffusion - Fick's law, characterization of diffusion processes

c) Effecting Factors of Food and Drink Demand, Supply and Trading

**7.**

a) Processing of large mammals (cattle, porcine)

b) Principles of gas absorption - gas-liquid equilibrium (Henry's law), equipment for absorption

c) Give an Overview of Your own Country’s Food Industry (Importance in the national economy, main branches, production, consumption, export – import, difficulties, challenges.)

**8.**

a) Quality and quantity parameters of milk, processing of milk

b) Distillation and rectification - vapor–liquid equilibrium, batch distillation, rectification

c)Concentration and Forms of Cooperation or Integration in the Food and Drink Industry (with examples)

**9.**

a) Thermal processing of fruits and vegetables (drying, concentration, pasteurization)

b) Crystallization

c) Basic Principles and Structure of Food Supply Chain and FCM

**10.**

a) Fermentation food processing technologies (wine, spirits, lactic fermentation of vegetables)

b) Membrane processes

c) Future Trends and Challenges of Global Food and Drink Industry