

STUDY GUIDE
NFS Content Knowledge Test
Industry Certification

LEVEL I FOOD, NUTRITION, AND WELLNESS

<i>HUM-FNW-1</i>	<i>Demonstrate employability skills required by business and industry.</i>
Topics	First impressions, job applications, teamwork, work ethic, communication styles
<i>HUM-FNW-2</i>	<i>Examine how related student organizations are integral parts of career and technology education courses through leadership development school and community service projects and competitive events.</i>
Topics	History, creed, national programs
<i>HUM-FNW-3</i>	<i>Analyze factors that influence food choices and quality of diet.</i>
Topics	Ethnic and religious influences, packaging for quality, government and legislative regulations
<i>HUM-FNW-4</i>	<i>Evaluate nutritional information in relation to wellness for individuals and families.</i>
Topics	Saturated fat intake, Nutrition Fact panels, nutrient dense foods, dietary supplements, nutrient classes, measuring calories, portion sizes, Dietary Reference Intakes, Dietary Guidelines for Americans, GRAS List, MyPlate,
<i>HUM-FNW-5</i>	<i>Analyze the effects of food eating behaviors and wellness.</i>
Topics	Healthy strategies for maintaining weight, effects of eating disorders, caloric nutrients, artificial sweeteners
<i>HUM-FNW-6</i>	<i>Investigate the health and nutrition requirements of individuals and families with special needs.</i>
Topics	Nutrients for athletes, race and obesity, dietary nutrient concerns for older adults, healthy snacks for young, school-age children, nutritional patterns of lower socio-economic groups, dietary zinc for Vegans
<i>HUM-FNW-7</i>	<i>Analyze food safety and sanitation practices from production to consumption.</i>
Topics	Kitchen fire safety, knife safety, internal cooking temperatures for meat and poultry, FATTOM
<i>HUM-FNW-8</i>	<i>Compare the causes and foods at risk for illnesses.</i>
Topics	Bacteria and viruses, E.Coli, Listeriosis, Salmonella, Shigella, Vibrio
<i>HUM-FNW-9</i>	<i>Evaluate scientific and technical advances in food processing, storage, product development and distribution for nutrition and wellness.</i>
Topics	Steps in the Scientific Method, active packaging, functional foods, bioengineered foods, organic farming land, UHT
<i>HUM-FNW-10</i>	<i>Design and demonstrate ability to select, store, prepare and serve nutritious, safe and appealing foods.</i>
Topics	Preparing fish and poultry for cooking, cooking methods for tougher cuts of meat, storing dairy, measurements, and equivalents, purchasing grains and fruits, flavones and carotenoids, reconstituted, fruit classifications, whole-grain products
<i>HUM-FNW-11</i>	<i>Research careers related to food, nutrition, and wellness.</i>
Topic	Nutritionist, dietitian, FACS teacher, Chef, quality control, food production, food inspector, fast food manager

LEVEL II FOOD FOR LIFE

<i>HUM-FL-1</i>	<i>Demonstrate employability skills required by business and industry.</i>
Topics	First impressions, job applications, teamwork, work ethic, communication styles
<i>HUM-FL-2</i>	<i>Outline the function of the digestive system and absorption process during the lifespan.</i>
Topics	Types of digestion, parts of the stomach, peristalsis, digestive enzymes, aerobic metabolism, bile

HUM-FL-3 Topics	<i>Design and demonstrate a nutritious diet.</i> Dietary Guidelines for Americans, DASH Diet, food labels, types of vegetarian diets
HUM-FL-4 Topics	<i>Identify and discuss the requirements of maternal and fetal nutrition during pregnancy.</i> Nutrients needing no increase during pregnancy, oxytocin, vitamins, and birth defects, functions of B vitamins during pregnancy,
HUM-FL-5 Topics	<i>Investigate the proper feeding of newborns by analyzing nutritional requirements and potential deficiencies of mother and child during the first weeks after birth.</i> Vitamin shots given after birth, types of formulas, how long to give breast milk/formula, Phenylketonuria
HUM-FL-6 Topics	<i>Develop a nutritionally balanced diet for infants from birth through the first year of life.</i> When and why to introduce solid foods, galactosemia, preferred style of parental feeding, introducing cereal, juice, and solid foods, effects of excessive vitamin A
HUM-FL-7 Topics	<i>Develop a nutritionally balanced diet for children in the different stages of childhood.</i> Childhood diabetes, rule for amount of food for preschool children, Type 2 diabetes,
HUM-FL-8 Topics	<i>Develop a nutritionally balanced diet for an adolescent.</i> Teenage diet, common eating disorders, e-cigs, vaping, and lung disease,
HUM-FL-9 Topics	<i>Develop a nutritionally balanced diet for the middle adult years.</i> Nutrients to prevent osteoporosis, common food allergies, beginning of bone loss, when to lower calorie requirements, amount of milk needed for calcium and vitamin D requirements
HUM-FL-10 Topics	<i>Develop a nutritionally balanced diet for the elderly.</i> Blood-clot reducing medicines and supplements, adjusting to a low-fat diet, diabetic diet therapy, unsaturated fats and serum cholesterol, sodium and hypertension, Type 1 diabetes and diet, low-cholesterol diet, calories per day and supplements
HUM-FL-11 Topic	<i>Research careers in foods and nutrition.</i> Nutritionist, dietitian, FACS teacher, Chef, quality control, food inspector

LEVEL III FOOD SCIENCE

HUM-FS-1 Topics	<i>Demonstrate employability skills required by business and industry.</i> Communication styles, work ethic, interview techniques, critical thinking, and creativity
HUM-FS-2 Topics	<i>Define food science and explore careers in food science.</i> Food production, biotechnologists, analysts, quality control, food scientist, dietitian, business sector, government sector, HACCP
HUM-FS-3 Topics	<i>Investigate how and why scientific evaluation of foods is conducted.</i> Bias in experiments, mass, measuring equipment, scientific method, controls in experiments, descriptive responses, volatile substances in sensory evaluation
HUM-FS-4 Topics	<i>Explore the basic chemistry concepts of food science.</i> Covalent bonds, ionic bonds, atomic mass unit, atoms, molecules, electrons, physical and chemical changes, ions, reactants
HUM-FS-5 Topic	<i>Observe how energy works in food preparation and preservation.</i> Temperature and molecular motion, forms of energy, convection, and conduction, latent heat
HUM-FS-6 Topics	<i>Examine why water and acidity are important factors in food preparation and preservation.</i> Pure water, pH in beverages, characteristics of acids and bases, adhesion, cohesion, atmospheric pressure
HUM-FS-7 Topics	<i>Summarize why carbohydrates are important in food preparation, preservation, and the nutritional impact on diets.</i> Gelatinization, retrogradation, syneresis, viscosity, disaccharides, and monosaccharides, supersaturated solutions, hydrolysis in digestion of carbohydrates, function of gums in foods

<i>HUM-FS-8</i>	<i>Summarize why lipids are important in food preparation and preservation and the nutritional impact they have on a diet.</i>
Topics	organic acids, glycerol, carboxyl groups, cholesterol, stanols, and sterols
<i>HUM-FS-9</i>	<i>Summarize why proteins are important in food preparation and preservation and the nutritional impact they have on diets.</i>
Topics	Electrolytes, complete proteins, coenzymes, substrate, enzymes, and activation energy, proteins in milk and eggs
<i>HUM-FS-10</i>	<i>Investigate the sources and impact of food formulations, preparation, and preservation of food constituents' important health.</i>
Topics	Food vehicles, precursors, water-soluble vitamins, nutrients needed for bone formation
<i>HUM-FS-11</i>	<i>Investigate the reasons for the use of food additives and food analogs in food preparation and in processed products.</i>
Topics	Synthetic flavoring, advantages and disadvantages of food analogs, manufacturers' responsibility in safety of food additives
<i>HUM-FS-12</i>	<i>Analyze the principles of fermentation.</i>
Topics	Foods resulting from bacterial fermentation, quick rising yeast vs conventional yeast, lactic acid bacteria and salt
<i>HUM-FS-13</i>	<i>Investigate measures used to produce safe and wholesome food under sanitary conditions.</i>
Topics	Low-acid canned goods and botulinum, temperature danger zone, E. coli related foods
<i>HUM-FS-14</i>	<i>Compare and contrast different food preservation methods and the resultant quality of preserved food.</i>
Topics	Primary and secondary containers, home canning techniques with water-bath, low water activity in intermediate-moisture foods

SAMPLE TEST QUESTIONS

1. Which of the following foods would help a vegan meet the requirement for zinc?

a. Fortified cereals and soymilk	c. Leafy green vegetables
b. Fortified margarine and milk	d. Legumes and whole grains
c.	
2. Why is bioengineering more effective than traditional crossbreeding methods for changing food characteristics?

a. Bioengineered foods never spoil.	c. Bioengineering is a less costly process.
b. Bioengineered products are not regulated by any government agencies.	d. Bioengineering requires less time to get desired results
3. Grapes are in the classification group of _____.

a. Berries	c. Pomes
b. Drupes	d. Citrus
4. Aerobic metabolism releases energy to convert substances to simpler products. During this metabolic process _____.

a. Nutrients are combined with oxygen within cells	c. There is new formation of body tissues.
b. Fats are reduced without using oxygen.	d. The building up and breaking down of substances is continuous.
5. Why is there an increased need for B vitamins during pregnancy?

a. For development of red blood cells	c. To provide an increase in hemoglobin
b. Essential for development of infant's bones and teeth	d. Essential for the fetus's collagen development

6. How is sodium a predisposing factor to hypertension?
 - a. An increase of sodium dilates blood vessels.
 - b. An increased intake of sodium causes fluid shifts in the body, which puts extra pressure on the blood vessels.
 - c. It acts as a diuretic and causes a loss of body fluids.
 - d. It causes fluids to move too quickly to the kidneys, which puts extra pressure on the heart.

7. If an elderly client consumes fewer than ____ calories per day, a multivitamin-mineral supplement is recommended.
 - a. 1,000
 - b. 1,200
 - c. 1,500
 - d. 1,800

8. Which atom does not need eight electrons in its outer energy level to be stable?
 - a. Carbon
 - b. Chlorine
 - c. Hydrogen
 - d. Sodium

9. What allows a fatty acid molecule to bond with glycerol?
 - a. Carboxyl groups
 - b. Hydrogen atoms
 - c. Hydroxyl groups
 - d. Triglycerides

10. How are enzymes and activation energy related?
 - a. Enzymes and activation energy are both substrate complexes.
 - b. Enzymes have varying degrees of sensitivity to heat just like energy has varying levels of activation.
 - c. Enzymes inhibit substrates from forming activation sites needed for energy.
 - d. Enzymes lower the energy needed to activate, or start, a chemical reaction.

ANSWERS

1. D
2. D
3. B
4. A
5. A
6. B
7. C
8. C
9. A
10. D