

Chattogram Veterinary and Animal Sciences University
MS in Applied Human Nutrition and Dietetics

July-December Semester Final, 2019

Course: Nutrition in Emergencies

Course Code: NUE-502

Full Marks: 40 Time: 2 hours

Answer any **four (4)** questions. Figures in the right margin indicate full marks. **Split answer is strictly discouraged.**

1. a) List out the name of natural hazard and their impact in Bangladesh. 4
b) Explain CPP and the management sequence of a sudden-onset disaster. 6
2. a) What indicators are used to assess the nutritional status of children aged 6-59 months? 4
b) Summarize the main clinical signs and symptoms of micronutrient deficiencies. 6
3. a) Discuss on Operational system strategy during emergency. 6
b) A careful storage and handling can minimize the waste, Explain. 4
4. a) Identify the advantages of wet and dry feeding program. 4
b) Write a short note on- 3x2
 - I. Prevention of vitamin C deficiency
 - II. Rain water harvesting
 - III. Selective feeding program
5. a) Define nutritional survey. Explain the steps involved in a nutritional survey? 5
b) What complications require immediate response during therapeutic feeding? 5

MS in Applied Human Nutrition and Dietetics
July-December Semester Final Examination-2019

Course Title: Advanced Dietetics

Course Code: ADD-502

Full Marks: 40

Time: 2 hours

Answer any **four (4)** questions. Figures in the right margin indicate full marks. **Split answer is strictly discouraged.**

1. a) Differentiate between calorie and Calorie. 2
b) Summarize the Components of Energy Requirements. 3
c) Outline the Energy Requirements methods used by dietitian. 5

2. a) Why we calculate the nutrient content of foods? 2
b) Characterize the Criteria for a comprehensive food composition database. 3
c) What is cooking conversion factor? Briefly discuss the advantages and disadvantages of FCT. 2+3

3. a) Why eating disorders are classified as mental illnesses? 2
b) Illustrate the Binge Eating Disorder, Avoidant/Restrictive Food Intake Disorder and Rumination Disorder with their management. 3
c) Write down the Benefits of minimizing drug-nutrient interactions. Relate the effects of drugs on nutrition? 2+3

4. a) Define Cancer cachexia, Ageusia, Carcinogen. 2
b) Draw the pathophysiology algorithm of carcinogenesis. 3
c) Give the dietary guidelines for cancer patient 5

5. a) What is the DASH diet all about? Give the risk factors for developing hypertension. 2+3
b) Construct the pathophysiology flow diagram of hypertension. 5

MS in Applied Human Nutrition and Dietetics

July-December Semester Final Examination-2019

Course Title: Nutritional Problems, Survey and Surveillance

Course Code: NPS -502

Full Marks: 40

Time: 2 hours

Answer any **four (4)** questions. Figures in the right margin indicate full marks. **Split answer is strictly discouraged.**

1. a) Define nutritional problems. List major nutritional deficiency in Bangladesh. 2
- b) Discuss the causes of malnutrition and how to overcome the malnutrition problem in context of Bangladesh? 2+2
- c) Summarize the situation of nutritional problem in developed and developing countries. 4
2. a) What is nutrition transition? Show its effects on human health. 1+2
- b) Write down the different pattern of nutrition transition. 3
- c) Justify that “Globalization processes linked with the nutrition transition” 4
3. a) Define Anthropometry and Nutritional Anthropometry. 2
- b) For Human body size and body composition measurement which information will be need to consider in Anthropometric assessment? 3
- c) How you calculate a 12 year old male Arm Fat Index (% Fat Area) when Mid Upper arm Circumference is 12.33 cm and Triceps skinfold thickness is 1.5 cm 5
4. a) “Diet is a major lifestyle-related risk factor” Explain. 3
- b) Illustrate the different types of Dietary assessment method with example 5
- c) Write some strength and weakness of different dietary assessment method 2
5. a) Define Survey and Surveillance. Elaborate some sampling technique used in nutritional survey. 2+3
- b) Write a short note on Hidden Hunger and Double burden condition in Bangladesh. 5

MS in Applied Human Nutrition and Dietetics
July-December Semester Final Examination-2019

Course Title: Medical Nutrition Therapy

Course Code: MNT -502

Full Marks: 40

Time: 2 hours

Answer any **four (4)** questions. Figures in the right margin indicate full marks. **Split answer is strictly discouraged.**

1. a) What do you mean by gastroesophageal reflux disease (GERD)? 2
b) Illustrate the symptoms, causes, risk factors and complications of GERD. 4
c) How do you get rid of GERD permanently? Briefly describe the dietary and lifestyle management of acid reflux. 4

2. a) Differentiate between gastritis and ulcer. Enlist the diagnosis examination of Ulceration. 3
b) How does *Helicobacter pylori* cause gastric ulcers in humans? 3
c) Construct the mode of action pathway of Proton pump inhibitors and Bismuth subsalicylate. 4

3. a) Why is gluten called the main culprit for celiac disease? 2
b) Outline the mechanism of Celiac disease with figure. 4
c) Summarize the complications and nutritional management of Celiac disease. 4

4. a) Differentiate between rheumatoid arthritis and gout. 2
b) Design the pathophysiology of rheumatoid arthritis. 4
c) Does exercise aggravate arthritis? Describe the Dietary management and Exercise for arthritic patient. 4

5. a) Briefly discuss the pathophysiology of food allergy and its dietary management. 5
b) Why is autism considered a spectrum disorder? Shortly describe the causes and therapies of autism spectrum disorder. 5

Chattogram Veterinary and Animal Sciences University
MS in Applied Human Nutrition and Dietetics

July-December Semester Final, 2019

Course: Advanced Micronutrient

Course Code: ADN-502

Full Marks: 40 Time: 2 hours

Answer any **four (4)** questions. Figures in the right margin indicate full marks. **Split answer is strictly discouraged.**

1. a) Write an account of folic acid involvement in one carbon metabolism. 4
b) Which vitamin requires cobalt for its activity? How this vitamin absorbed in our body? 1+5

2. a) Vitamin D is a hormone, justify its status as a hormone. 3
b) Discuss the biochemical functions of Ascorbic acid. 4
c) Write a note on therapeutic use and megadose of Vitamin C. 3

3. a) Define minerals. Which factors regulates plasma Ca level? 2+5
b) List out the name of parathyroid functional test. 3

4. a) Identify the role of thiamine pyrophosphate (TPP). 4
b) Write a short note on any three- 3×2
 - I. Macrocytic Anemia
 - II. Biotin Antagonists
 - III. NAD⁺ dependent enzyme
 - IV. Calpains

5. a) Explain the factors influencing Fe absorption. 5
b) Describe Wald's visual cycle. 5

Chattogram Veterinary and Animal Sciences University
Department of Applied Chemistry and Chemical Technology
M.S. in Food Chemistry & Quality Assurance (July-December, 2019)
Course Title: Applied Engineering Chemistry
Course Code: AEC- 502

Full Marks: 40

Time: 02 hours

[Figures in the right margin indicate full marks. Answer four (4) questions. Split answers are discouraged.]

- 1 A common salt solution contains 24% NaCl and 76% water. To recover 80% of the dissolved salt, it is proposed to evaporate a part of the water and then carry out crystallization at a temperature of 20°C. At 20°C the solubility of NaCl in water is 36 g/100g of water. Calculate 10
 - a) the weight of water evaporated per 1000 kg of solution.
 - b) Weight of mother liquor left after crystallization.

- 2 a) Write the working principle of centrifugal pumps. What are the advantages of it? 06
 - b) Why and where we use parallel connections in pump operations? 04

- 3 a) Sketch and briefly discuss pump characteristics curve. 06
 - b) Why and where we use series connections in pump operations? 04

- 4 An aqueous solution of sugar contains 40% sucrose by mass. It is desired to produce a 12% solution by diluting the stream of 40% solution with a stream of pure water. Calculate the ratios of pure water and solution in the system. Also calculate the feed rates if 3tons/hr of 12% solution is required. 10

- 5 a) Discuss in detail about 1, 2-Shell-and-tube heat exchanger. 05
 - b) How waste steam can be utilized in heat exchangers? 05