



**Department of Nutrition and Food Engineering**  
Faculty of Health and Life Sciences  
B.Sc. in Nutrition and Food Engineering  
Midterm Examination Spring 2026

**Course Code:** 0511-3103

**Level and Term:** L-3, T-1

**Time:** 1 hour 30 minutes

**Section:** 241 All

**Course Title:** Assessment of Nutritional Status

**Course Teacher Initials:** NS, AIC, MMS

**Total Marks:** 25

**“Maintaining the order of the questions is highly appreciated”**

|   |                                                                                                                                                                                                                                                                                      |  | Mar<br>ks |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------|
| 1 | (a) Identify the anthropometric indicators used for assessing under five child malnutrition. [CLO1,PLO2,C2]                                                                                                                                                                          |  | 2         |
|   | (b) How can you differentiate between nutritional survey and surveillance? [CLO1,PLO2,C1]                                                                                                                                                                                            |  | 3         |
| 2 | (a) State the relationship between serum ferritin levels and body iron stores. [CLO1,PLO2,C3]                                                                                                                                                                                        |  | 2         |
|   | (b) Describe the stages iron deficiency anemia. [CLO1,PLO2,C3]                                                                                                                                                                                                                       |  | 3         |
| 3 | (a) Describe the factors that may confound the interpretation of state biochemical tests. [CLO2,PLO1,C1]                                                                                                                                                                             |  | 2         |
|   | (b) How can you distinguish different stages of anemia using multiple biomarkers? [CLO2,PLO1,C2]                                                                                                                                                                                     |  | 3         |
| 4 | (a) Explain the differences between height and length measurements in children. [CLO2,PLO1,C4]                                                                                                                                                                                       |  | 2         |
|   | (b) A 25-year-old male underwent body composition assessment, his biceps: 6 mm, triceps: 12 mm, subscapular: 14 mm, suprailiac: 10 mm. Calculate the body fat percentage; where $D = 1.1631 - (0.0632 \times L)$ . [CLO2,PLO1,C5]                                                    |  | 3         |
| 5 | (a) How can you differentiate Type-1, Type-2 and Gestational diabetes? [CLO2,PLO1,C5]                                                                                                                                                                                                |  | 2         |
|   | (b) Ms. Ayesha, a 50 years-old woman, has a total cholesterol of 230 mg/dL, HDL of 48 mg/dL and triglycerides of 160 mg/dL. Calculate her LDL using the Friedewald formula and critically analyze her cardiovascular risk status based on the lipid profile findings. [CLO2,PLO2,C4] |  | 3         |