

*Kingdom of Saudi Arabia  
King Saud University  
Collage of Applied Medical Sciences  
Community Health Department  
Clinical Nutrition Program*



**CHS 268**  
**Nutrition during Physiological Stress**  
**First Mid Term Exam**  
**1<sup>st</sup> semester 1436-1437H**  
**Time allowed: 1hours (9-10)**  
**Date: Tuesday 06/10/2015**  
**Marks: 20**

**Instructor:**  
**Dr. Iman Bindayel**

**Student name:**.....

**Student ID:**.....

**Mark:**        **/20**

**Q1: Choose the right answer: (10 marks)**

1. A disruption to the body's chemical environment that threatens its normal and healthy functioning is called
  - a. metabolic stress.
  - b. severe stress.
  - c. physiological stress.
  - d. none of the above
2. Which of the following is an example of a condition that cannot lead to metabolic stress?
  - a. Deep wounds
  - b. Burns
  - c. Infection
  - d. Hypothyroidism
3. Which hormone(s) is/are referred to as the counter regulatory hormone(s)?
  - a. Catecholamines
  - b. Glucagon
  - c. Cortisol
  - d. Insulin
  - e. a, b and c
  - f. All of the above
4. Which of the following hormones promote glycogen breakdown?
  - a. Catecholamines and antidiuretic hormone
  - b. Catecholamines and glucagon
  - c. Cortisol and aldosterone
  - d. Aldosterone and catecholamines
5. Sara is a 45-year-old woman who has recently been involved in an automobile accident. Her injuries include a broken leg and two broken ribs. What clinical finding would you expect for this patient?
  - a. Hyperglycemia
  - b. Elevated cortisol levels
  - c. Increased fluid and sodium retention
  - d. All of the above
6. The clinical signs of inflammation include:
  - a. Heat
  - b. Pain
  - c. Swelling
  - d. Loss of function
  - e. All of the above

7. Ryan's knee was injured in a basketball game. When he gets home he notices swelling, redness, heat and pain in his knee. What is causing the redness?
  - a. Accumulation of fluid at the site of the injury
  - b. Dilation of small blood vessels in the injured area
  - c. Influx of warm arterial blood
  - d. Edema within the damaged tissues
8. Vascular response to injury include
  - a. Vasoconstriction
  - b. Swelling
  - c. Increase in permeability of blood vessel
  - d. a and b
  - e. All of the above
9. Shock is initiated by a sudden drop in
  - a. Fluid retention.
  - b. Blood flow.
  - c. Heart rate.
  - d. Respiratory rate.
10. Which of the following is the precursor for the eicosanoids?
  - a. Amino acids
  - b. Fatty acids
  - c. Vitamin A
  - d. Vitamin D

**Q2: Answer the following questions: (8 marks)**

**A. What are the main metabolic differences between long term starvation and severe stress? (5 marks)**

**B. What are the cells within connective tissue that produce and release histamine? (1 mark)**

**C. What are the three factors that we should consider when deciding nutritional intervention ? (2 mark)**

**Q3: Put the right term beside the definition (2 marks):**

1.                   : an acute inflammatory response caused by infection; characterized by symptoms similar to those of SIRS
2.                   : are hormone-like proteins that regulate immune responses (interleukin-1, interleukin-6 and tumor necrosis factor  $\alpha$ )