



Pathophysiology Knowledge Test

Purpose To encourage HOSA members to improve their ability to identify, spell, define and apply the prefixes, suffixes, roots, anatomy and physiology of human diseases impacting the health community.

Description This event shall be a written test requiring competitors to apply, analyze, synthesize and evaluate information related to pathophysiology. Competitors will recognize, identify, define, interpret and apply terms related to human diseases and conditions in a 100 item multiple choice test plus one tie-breaker essay question. Written test will measure knowledge and understanding at the recall, application and analysis levels. Higher-order thinking skills will be incorporated as appropriate.

Dress Code Competitors must be in official HOSA uniform or proper business attire. Bonus points will be awarded for [proper dress](#).

- Rules and Procedures**
1. Competitors in this event must be active members of HOSA-Future Health Professionals and in good standing in the division in which they are registered to compete (Secondary or Postsecondary/Collegiate).
 2. Competitors must be familiar with and adhere to the "[General Rules and Regulations of the National HOSA Competitive Events Program \(GRR\)](#)."
 3. One essay question will be administered with the original test. In case of a tie, the essay question will be judged and used to break the tie.

4. The test plan and resources for the Pathophysiology Knowledge Tests are:

PATHOPHYSIOLOGY

- Disease Process and Terminology (Including cancer and neoplasms) 12%
- Body Systems:
 - Integumentary 8%
 - Musculoskeletal 10%
 - Heart 8%
 - Blood vessels 4%
 - Lymphatic 6%
 - Respiratory 8%
 - Digestive 12%
 - Endocrine 8%
 - Nervous (including senses) 12%
 - Reproductive 6%
 - Urinary 6%

References for Pathophysiology

- [Frazier. Essentials of Human Diseases and Conditions. Elsevier. Latest edition.](#)
- [Zelman, Mark; Raymond, Jill; Holdaway, Paul; Dafnis, Elaine; Mulvihill, Mary Lou. Human Diseases A Systemic Approach. Pearson. Latest edition.](#)

NOTE: States/regions may use a different process for testing, to include but not limited to pre-conference testing, online testing, and testing at a computer. Check with your Area/Region/State for the process.

5. All competitors shall report to the site of the event at the time designated for the event orientation. The test will immediately follow the orientation. **No proxies will be allowed for the orientation.**
6. [Test Instructions](#): Competitors will be given instructions on the use of the Scantron form. After instructions have been given to the competitors, they will be notified to start the test. There will be a maximum of **90 minutes** to complete the test. There will be a verbal announcement when there are 15 minutes remaining for the test period. Competitors may be excused from the testing site promptly after completion of the test.
7. The competitor should write his/her answer to the tie-breaker essay question on the tie-breaker page of the test that remains attached to the original test.

Competitor Must Provide:

- Event guidelines (orientation)
- Two #2 lead pencils with an eraser

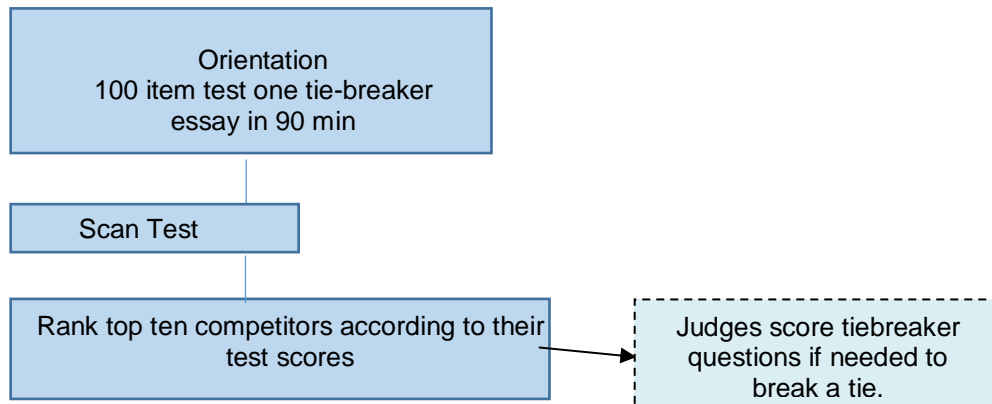
Required Personnel:

- One Event Manager
- One QA to provide quality assurance for the event by ensuring that the guidelines are followed and all event documents are complete.
- Proctors for Testing – Approximately one proctor for 20 competitors
- One judge who is considered by the HOSA Competitive Events committee to be an expert in the area being tested - to grade the essay questions in case of a tie
- Event assistants as needed

Facilities, Equipment and Materials:

- One room to accommodate the total number of competitors
- Tables/chairs or schoolroom desks/chairs for total number of competitors
- Table/chairs for event personnel to provide for registration and materials distribution
- Test packets which are pre-numbered and Scantron / answer forms
- Timer or clock
- Evaluation Forms – competitor and personnel
- #2 lead pencils with eraser to complete evaluations

Event Flow Chart



Sample Test Questions

1. The primary cause of osteomalacia is a deficiency or ineffective use of:
 - A. calcium.
 - B. iodine.
 - C. vitamin A.
 - D. vitamin D.
2. The type of shock that is caused by a severe allergic reaction is:
 - A. anaphylactic shock.
 - B. cardiogenic shock.
 - C. hypovolemic shock.
 - D. neurogenic shock.
3. What neurotransmitter is not produced in sufficient quantities in a patient with Parkinson's disease?
 - A. aldosterone
 - B. dopamine
 - C. gamma globulin
 - D. prednisone