



Last updated: September 10th, 2025

Pathophysiology

PLEASE NOTE THE FOLLOWING DIFFERENCES IN HOW THIS EVENT WILL BE RUN AT HOSA CANADA'S FALL LEADERSHIP CONFERENCE (FLC):

1. **Written test time kept at 60 minutes for 100 questions at FLC only.** This test includes a tiebreaker portion, the details of which are specified in the guidelines below.
2. Written test will take place online and be open book at FLC only.

PLEASE NOTE HOSA CANADA'S SPRING LEADERSHIP CONFERENCE (SLC) WILL BE IN-PERSON AND THIS EVENT WILL BE RUN ACCORDING TO THE GUIDELINES IN THE FOLLOWING PAGES, EXCEPT FOR THE FOLLOWING DIFFERENCE:

1. There will be a verbal announcement when there are 30 minutes and 5 minutes remaining to complete the written test at SLC.
**Please note that NO verbal announcements will be made at the International Leadership Conference (ILC).*

Pathophysiology

Health Science Event

Eligible Divisions: Secondary & Postsecondary / Collegiate	Round 1: 50 Q test in 60 minutes	Digital Upload: NO
Solo Event: 1 competitor		



New for 2025-2026

Total number of test questions and test timing have been reduced. Editorial updates have been made.

Event Summary

Pathophysiology allows members to gain knowledge and skills regarding pathophysiology concepts. This competitive event consists of a written test. In the event of a tie, the essay will be judged to break the tie. This event aims to inspire members to learn about the anatomy and physiology of human diseases impacting the health community.

Sponsorship

HOSA-Future Health Professionals is appreciative for the sponsorship of Pathophysiology by [iCEV](#). iCEV has developed a [special landing page](#) for HOSA competitors and advisors.



Dress Code

Proper business attire or official HOSA uniform. Bonus points will be awarded for [proper dress](#).

Competitor Must Provide:

- [Photo ID](#)
- Two #2 lead pencils (not mechanical) with eraser

HOSA Conference Staff will provide equipment and supplies as listed in [Appendix I](#).

General Rules

1. Competitors must be familiar with and adhere to the [General Rules and Regulations](#).

Official References

2. The references below are used in the development of the test questions.
 - a. [iCEV Pathophysiology and Anatomy and Physiology Courses](#) (Individual course is \$65. Teacher access for 25 students is \$1500)
 - b. [Frazier. Essentials of Human Diseases and Conditions. Elsevier, Latest edition.](#)
 - c. [Zelman, Mark; Raymond, Jill; Holdaway, Paul; Dafnis, Elaine; Mulvihill, Mary Lou. Human Diseases A Systemic Approach. Pearson. Latest edition.](#)

Written Test

3. [Test Instructions](#): The written test will consist of 50 multiple-choice items in a maximum of 60 minutes.
4. One essay question will be administered with the original test.
5. **Time Remaining Announcements:** There will be NO verbal announcements for time remaining during ILC testing. All ILC testing will be completed in the Testing Center, and competitors are responsible for monitoring their own time.

6. Test Plan

The test plan for the Pathophysiology Test is:

- Disease Process & Terminology (includes cancer & neoplasms) - 12%
- Body Systems
 - Integumentary - 8%
 - Musculoskeletal - 10%
 - Circulatory & Lymphatic - 12%
 - Respiratory - 8%
 - Digestive - 12%
 - Endocrine - 8%
 - Nervous & Senses - 10%
 - Reproductive - 6%
 - Urinary - 6%
 - Mental Disorders - 8%

7. Sample Test Questions

1. What area of pathophysiology study is concerned with the examination of the whole tissue? (iCEV online course)
 - A. Cytopathology
 - B. Forensic pathology
 - C. Hematopathology
 - D. Histopathology**
2. Which type of shock is caused by a severe allergic reaction? (Zelman pp 107)
 - A. Anaphylactic**
 - B. Cardiogenic
 - C. Hypovolemic
 - D. Neurogenic
3. What neurotransmitter is produced insufficiently in a patient with Parkinson's disease? (Frazier pp 560)
 - A. Aldosterone
 - B. Dopamine**
 - C. Gamma globulin
 - D. Prednisone

Final Scoring

8. In the event of a tie, the essay will be judged to break the tie.

Future Opportunities:

Graduating high school or completing your postsecondary/collegiate program doesn't mean your HOSA journey has to end. As a HOSA member, you're eligible to become a HOSA Lifetime Alumni Member - a free and valuable opportunity to remain connected, give back, and help to shape the future of the organization. Learn more and sign up at hosa.org/alumni.