MS HOSA Virtual SLC 2021
CERT Skills

Event Summary

CERT Skills provides members with the opportunity to gain knowledge and skills required for disaster preparedness and response. This competition consists of an online, multiple choice test. The final score on the written test will determine the winner of this event.

General Rules

1. Competitors in this event must be active members of HOSA and in good standing.

2. Secondary and Postsecondary / Collegiate divisions are eligible to compete in this event.

3. Competitors must be familiar with and adhere to the “General Rules and Regulations of the HOSA Competitive Events Program (GRR).”

Official References

4. All official references are used in the development of the online test. The specific references selected for each skill are from the CERT Curriculum.

- CERT Online Training Course (as posted as of September 1, 2020): https://www.ready.gov/cert

Round One Virtual Online Test

5. **Test Instructions:** The online test will consist of fifty 50 multiple choice items in a maximum of 60 minutes.

6. The final score on the written test will determine the winner of this event

7. **Written Online Test Plan**

   - Disaster Preparedness.........................................................14%
   - CERT Organization.............................................................6%
   - Treating Life Threatening Conditions.................................20%
   - Disaster Medical Operations.............................................24%
   - Disaster Psychology..........................................................6%
   - Fire Safety & Utility Controls.............................................8%
   - Light Search & Rescue Operations.....................................12%
   - CERT & Terrorism...............................................................10%
8. Sample Test Questions

1. What law protects volunteers who provide care in a prudent and reasonable manner?
   A. American Health Care Benefit Act
   B. First Aid Responsibility Law
   C. Good Samaritan Law
   D. US Disaster Recovery Act
   CERT pp 1-25

2. What kind of permission does a CERT volunteer need to treat an unconscious patient?
   A. Contact nearest family member to get permission.
   B. **An unconscious patient is assumed to have given implied consent.**
   C. An EMT must give permission to treat an unconscious patient.
   D. Contact the patient's physician for permission and instructions.
   CERT pp 3-2

3. What is the best way for a CERT volunteer to maintain personal hygiene and prevent the spread of disease among patients?
   A. Change outer clothing frequently.
   B. **Wash hands frequently using soap and water.**
   C. Keep the treatment area free of bacteria by using a disinfectant.
   D. Sterilize all utensils used in the treatment of patients.
   CERT pp 4-11
Event Summary

CPR/First Aid provides members with the opportunity to gain knowledge and skills required for team first aid and basic life support. This competitive event consists of an online, multiple choice test. The final score on the written test will be used to determine the winner of this event.

General Rules

1. Competitors in this event must be active members of HOSA and in good standing.

2. Secondary and Postsecondary/Collegiate divisions are eligible to compete in this event.

3. Competitors must be familiar with and adhere to the “General Rules and Regulations of the HOSA Competitive Events Program (GRR).”

Official References

4. All official references are used in the development of the online test and skill rating sheets.

Round One Virtual Online Test

5. Test Instructions: The online test will consist of 50 multiple choice items in a maximum of 60 minutes.

6. The final score on the online test will be used to determine the winner of this event.

7. Online Test Plan

   Anatomy and Physiology .................................................15%
   Basic Life Support ..........................................................40%
   • General Concepts
   • BLS/CPR for Adults, Children and Infants
   • AED for Adults, Children and Infants
   • CPR with Advanced Airway
   • Mouth-to-Mouth/Rescue Breathing
   • Relief of Choking
   First Aid .............................................................................45%
   • Basics
   • Medical Emergencies
8. **Sample Test Questions**

1. What is the second link in the AHA BLS out-of-hospital adult chain of survival?
   A. Early CPR with an emphasis on chest compressions.
   B. Effective advanced life support.
   C. Multidisciplinary post-cardiac arrest care.
   D. Rapid defibrillation with an AED.
   
   AHA BLS pp 6

2. What can a responsive diabetic who has signs of low blood sugar be given?
   A. Chocolate.
   B. **Something to eat or drink that contains sugar.**
   C. Diet coke.
   D. Nothing to eat or drink.
   
   AHA pp 35

3. After a superficial burn has been cooled, what is the next step?
   A. Apply a commercial burn ointment, if available.
   B. Remove any clothing that is sticking to the skin.
   C. **Cover the burn with a dry, nonstick sterile dressing.**
   D. Place an occlusive dressing over the burn and apply a dressing.
   
   Simmers pp 51
Emergency Medical Technician provides HOSA members with the opportunity to gain knowledge and skills required for emergency medical care. Each team consists of 2 people. Round One is an online, multiple choice test. The average team score on the Round One test will be used to determine the winner of this event. This event aims to inspire members to be proactive future health professionals and be equipped with resilience, physical strength and problem-solving skills to provide immediate treatment in emergencies.

General Rules
1. Competitors in this event must be active members of HOSA and in good standing.
2. Secondary and Postsecondary/Collegiate divisions are eligible to compete in this event.
3. Competitors must be familiar with and adhere to the “General Rules and Regulations of the HOSA Competitive Events Program (GRR).”

Official References
4. All official references are used in the development of the written test. The specific references selected for each skill are the National Registry EMT skill sheets.
   • Emergency Care and Transportation of the Sick and Injured. Series Editor: Andrew N. Pollak, MD, FAAOS. Published by Jones & Bartlett Learning. Latest edition.
   • American Heart Association, Basic Life Support, Latest edition.
   • NREMT Skill Sheets (as posted as of September 1, 2020)

Round One Virtual Online Test
7. Test Instructions: The online test will consist of 50 multiple choice items in a maximum of 60 minutes.
8. **Online Test Plan**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Assessment</td>
<td>20%</td>
</tr>
<tr>
<td>Basic Life Support</td>
<td>20%</td>
</tr>
<tr>
<td>Trauma</td>
<td>15%</td>
</tr>
<tr>
<td>Medical Emergencies</td>
<td>15%</td>
</tr>
<tr>
<td>Pediatrics and Childbirth</td>
<td>15%</td>
</tr>
<tr>
<td>Environmental Emergencies</td>
<td>10%</td>
</tr>
<tr>
<td>Special Situations</td>
<td>5%</td>
</tr>
</tbody>
</table>

9. **Sample Test Questions**

1. Which of the following statements best describes the systolic blood pressure?
   - A. An amount that is double the diastolic pressure.
   - B. The difference between the resting pressure and the pumping pressure.
   - C. The pressure when the heart is relaxing and allowing blood into the atria.
   - D. The pressure created when the heart contracts and forces blood into the arteries.
   
   Limmer 316/Pollak 358

2. If an adult patient is not breathing but has a pulse, the patient should be ventilated at a rate of how many breaths per minute?
   - A. 6-8
   - B. 10-12
   - C. 14-16
   - D. 18-20

   AHA BLS pp 15

3. What is the term for a fracture of the distal radius, especially common in elderly patients with osteoporosis?
   - A. Tommy John
   - B. Supracondylar
   - C. Colles'
   - D. Rotation

   Pollak pp 1121

**Final Scoring**

10. The average team score on the Round One test will be used to determine the winner of this event.
Event Summary

Epidemiology provides members with the opportunity to gain knowledge in regard to health and disease in populations. This competitive event consists of a written examination of concepts related to the study of epidemiology. Competitors are expected to recognize, identify, define, interpret and apply these concepts in an online multiple-choice test. This event aims to inspire members to be proactive future health professionals and improve their scientific literacy as well as provide insights into public health careers. The highest test score will be used to determine the winner of this event.

General Rules

1. Competitors in this event must be active members of HOSA and in good standing.
2. Secondary and Postsecondary/Collegiate divisions are eligible to compete in this event.
3. Competitors must be familiar with and adhere to the “General Rules and Regulations of the HOSA Competitive Events Program (GRR).”

Official References

4. The test plan percentages as well as official references for the development of the test items is as follows. Content is posted as of March 1, 2020 (Nationals Due Date):
   - **CDC website** – 8%
       - An Introduction to Epidemiology
       - Investigating an Outbreak
   - **CDC website** – 8%
     - [Agency for Toxic Substances and Disease Registry: Environmental Health](https://www.atsdr.cdc.gov/sites/brownfields/pdfs/epidemiology-508.pdf)
   - **Basic Epidemiology – World Health Organization** – 10%
     - [http://apps.who.int/iris/bitstream/10665/43541/1/9241547073_eng.pdf](http://apps.who.int/iris/bitstream/10665/43541/1/9241547073_eng.pdf)
     - What is Epidemiology?
     - Measuring Health and Disease
     - Types of Studies
   - **Emerging and Re-emerging Infectious Diseases** – 8%
     - Understanding Emerging and Re-emerging Infectious Diseases
• **Public Health Careers** – 3%
  http://www.publichealth.org/careers/

• **CDC: Disaster Epidemiology and Assessment** – 7%
  http://www.cdc.gov/nceh/hsb/disaster/epidemiology.htm
  - CDC Activities
    o Mission, goals and objectives
    o Application and service in disaster settings: surveillance and rapid needs assessment
    o Applied research to prevent injuries, illnesses and deaths
    o Consultation and training
    o Field investigations

• **Office of Assistant Secretary for Preparedness & Response** – 6%
  http://www.phe.gov/preparedness/Pages/default.aspx
  - Under the preparation tab
    • Responders, Clinicians & Practitioners
    • International Preparedness & Response
    • Public Health Emergency Response

• **CDC: Morbidity and Mortality Weekly Report** – 50%
  https://www.cdc.gov/mmwr/index.html
  - Case studies, investigations, surveillance summaries and scientific information and recommendations

**Virtual Online Test**

6. **Test Instructions:** The online test will consist of 75 multiple choice items in a maximum of 90 minutes. Online case studies, investigations, surveillance summaries, and scientific information will be a part of the test and will include background information about selected public health situations with a series of multiple-choice questions related to the data.

7. 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.

8. Competitors may use a handheld calculator (no graphing calculators) for addition, subtraction, division, multiplication and square root.

9. All competitors may use blank paper for use during the test.

10. **Sample Test Questions**

    1. What is the term for the proportion of a disease or other outcome in exposed individuals that can be credited to the exposure?
    A. **Attributable risk**
    B. Risk benefit
    C. Cohort study
    D. Odds advantage
    WHO pp 35
2. In an epidemiology study, how is the specified population identified?
   A. People affected by the condition/disease.
   B. Conditions where large numbers of people were affected.
   C. **People exposed to a condition/disease.**
   D. People who died from a disease/condition.
   
   CDC Intro 1-4

3. What is the likely cause of the re-emergence of some infectious diseases, such as the diphtheria outbreak in Russia in the 1990s?
   A. Improper sanitation.
   B. **Lapses in vaccination programs.**
   C. Malnutrition which compromises the immune system.
   D. Radiation from nuclear accidents.
   NIH

**Final Scoring**

12. The highest test score will be used to determine the winner of this event. An essay tiebreaker will be administered with the original test. In case of a tie, this written response will be judged and used to break the tie.