Event Summary

Biomedical Laboratory Science provides members with the opportunity to gain knowledge and skills required for a medical laboratory setting. This competitive event consists of round one on-line test only.

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, including websites, are used in the development of the written test.
   - Daugherty, Ellyn. Biotechnology: Science for the New Millennium, Carnegie Learning. Latest edition. (From this link you will click ‘view your materials’ and then ‘proceed to checkout’.)
   - Biotechnology Innovation Organization http://www.bio.org/ as posted as of September 1, 2020

Round One Virtual Online Test

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

6. Online Test Plan

   Biotechnology industry, equipment and products .................. 10%
   Raw materials of biotechnology ...................................... 8%
   Lab safety and infection control ..................................... 10%
   DNA structure and function .......................................... 8%
   Proteins and enzymes .................................................. 10%
   Genetic engineering .................................................... 8%
   Biotechnology in Health .............................................. 10%
   DNA synthesis, sequencing and genomics ......................... 8%
9. **Sample Round One Test Questions**

1. Which step in the scientific method involves the researcher predicting the results of experimentation based on past research or experience?
   A. Conducting an experiment.
   B. **Developing a hypothesis.**
   C. Formulating the question.
   D. Planning the experiment.
   Daugherty pp 7

2. For the highest possible magnification, the 100x oil immersion lens is used with an ocular that gives a magnification of 10x. This allows one to see an object how many times its actual size?
   A. 10
   B. 100
   C. **1,000**
   D. 10,000
   Estridge pp 145

3. Which biotechnology discipline designs mathematical models and uses computers for analyzing and relating sequential data?
   A. **Bioinformatics**
   B. Analytic science
   C. Research analysis
   D. Industrial science
   Daugherty pp 441
Event Summary

Dental Science provides members with the opportunity to gain knowledge and skills required for dental careers. **This competitive event consists of round one on-line test only.** This event aims to inspire members to learn more about careers in the dental field.

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.

Round One Virtual Online Test

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

Online Test Plan

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>The Dental Team and History</td>
<td>10%</td>
</tr>
<tr>
<td>Oral Health and Nutrition</td>
<td>5%</td>
</tr>
<tr>
<td>General Anatomy and Physiology</td>
<td>15%</td>
</tr>
<tr>
<td>Head and Neck Anatomy</td>
<td>10%</td>
</tr>
<tr>
<td>Tooth Morphology</td>
<td>10%</td>
</tr>
<tr>
<td>Infection Control</td>
<td>15%</td>
</tr>
<tr>
<td>Chairside Assisting/Instruments</td>
<td>15%</td>
</tr>
<tr>
<td>Radiology</td>
<td>10%</td>
</tr>
<tr>
<td>Emergency Management</td>
<td>10%</td>
</tr>
</tbody>
</table>
6. **Sample Round One Test Questions**

1. **What is the term for the area where two bones fused to form the mandible?**
   A. Condyles
   B. Ramus
   C. Coronoid notch
   **D. Symphysis**
   (Phinney pp 118)

2. **Which instrument is best suited for examining teeth for caries, calculus, furcations or other abnormalities?**
   A. Dull chisel
   B. Ball burnisher
   **C. Explorer**
   D. Scalpel
   (Boyd pp 5)

3. **What does the rheostat in the dental unit control?**
   A. Air-water syringe.
   **B. Speed of the handpiece.**
   C. Position of the head of the dental chair.
   D. Overhead lights.
   (Phinneyp pp 366)
Event Summary

Home Health Aide provides members with the opportunity to gain knowledge and skills required for supporting patients in their homes. This competitive event consists of round one on-line test only.

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.

Round One Virtual Online Test

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

Online Test Plan

- Becoming a Home Health Aide .................................................................10%
- Responsibilities and Legal Rights .......................................................5%
- Effective Communication Procedures and Documentation ..................10%
- Infection Control ................................................................................5%
- Wellness and Mental Health .................................................................5%
- Body Systems and Common Disorders .................................................40%
- Caring for Terminally Ill Patient .........................................................5%
- Caring for Patient with Alzheimer’s Disease.......................................5%
- Caring for Patient with Cancer ............................................................5%
- Maternal and Infant Care ....................................................................10
Sample Round One Test Questions

1. A dying client tells the home health aide “Please leave me alone, I just want to be by myself.” What stage of grief is the client experiencing?
   A. Acceptance  
   B. Anger  
   C. Bargaining.  
   D. Depression  
   (Balduzzi pp 355)

2. What is the general term that refers to a serious loss of mental abilities such as thinking, remembering, reasoning, and communicating?
   A. Alzheimer’s disease  
   B. Dementia  
   C. Vascular stroke  
   D. Parkinson's disease  
   (Fuzy pp 186)

3. A nebulizer would most likely be ordered to treat a client with which condition?
   A. Iron deficiency anemia  
   B. Arteriosclerosis  
   C. Emphysema  
   D. Congestive heart failure  
   (Balduzzi pp 329)
Event Summary

Medical Assisting provides members with the opportunity to gain knowledge and skills required to assist in administrative and clinical tasks. This competitive event consists of round one on-line test. This event aims to inspire members to become allied health professionals who respond and assist efficiently in clinical settings.

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.

Round One Virtual Online Test

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

6. Online Test Plan

   Professionalism ................................................................. 5%
   Communication ................................................................. 5%
   Medical Ethics and Law ...................................................... 10%
   Office Procedures ............................................................ 15%
   Health Insurance .............................................................. 10%
   Infection Control ............................................................ 15%
   Collecting and processing specimens ............................ 10%
   Diagnostic testing .......................................................... 10%
   Clinical Equipment ......................................................... 10%
   Physical Exam ................................................................. 10%
7. **Sample Test Questions**

1. Information in the medical record that the patient provides, including medical history and chief complaint, is classified as what type of information?
   A. Administrative
   B. Objective
   C. Identifiable
   D. **Subjective**
   (Blesi pp 596)

2. When a medical assistant makes a derogatory statement about the practices of another health professional, the medical assistant is liable under what type of tort?
   A. Assault
   B. Battery
   C. **Defamation**
   D. Invasion of privacy
   (Simmers pp 108)

3. If a medical insurance policy has a deductible of $75, what is the patient's responsibility?
   A. Patient does not have to pay the first $75 for service.
   B. Patient may deduct this amount from the physician's bill.
   C. Patient reimburses physician for $75 only.
   D. **Patient has to pay this amount each year before the insurance company will pay.**
   (Blesi pp 627)
Nursing Assisting provides members with the opportunity to gain knowledge and skills required for patient care in medical settings. This competitive event consists of round one on-line test only. This event aims to inspire members to learn more about the field of nursing and how to provide quality care.

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 and skill rating sheets.


Round One Virtual Online Test

5. Test Instructions: The written test will consist of 50 multiple choice items in a maximum of 60 minutes.
6. **Online Test Plan**

   Communication & Personal Qualities .......................................................... 5%
   Ethical and Legal Responsibilities .............................................................. 5%
   Human Growth and Development................................................................. 5%
   Anatomy and Physiology .............................................................................. 15%
   Aging and Geriatric Care .............................................................................. 5%
   Nutrition .......................................................................................................... 10%
   Safety and Body Mechanics .......................................................................... 10%
   Infection Control ............................................................................................. 10%
   Vital Signs ........................................................................................................ 10%
   Nursing Assistant Skills ................................................................................ 5%
   Metric Measurements/Conversions ............................................................... 5%
   Disabilities and Disorders .............................................................................. 15%

7. **Sample Test Questions**

1. Which type of diet is often prescribed for patients with chronic constipation, irritable bowel syndrome, or an elevated risk for colon cancer?
   A. High-fiber
   B. Low-cholesterol
   C. High-fat
   D. Low-fiber
   (Roe pp 615)

2. Which of the following statements best describes active listening skills for a Nursing Assistant?
   A. Assuming to understand the basis for a patient's statement.
   B. **Giving the patient your full attention while they are speaking.**
   C. Trying to interpret the meaning of patient's comment.
   D. Rejecting a patient's complaint as unfounded.
   (Dugan pp 38)

3. What is the primary purpose of performing passive range-of-motion exercises?
   A. Prevent bone demineralization.
   B. Preserve muscle mass.
   C. **Prevent contractures and atrophy.**
   D. Increase muscle tone.
   (Dugan pp 460)
Physical Therapy provides members with the opportunity to gain knowledge and skills required for assisting patients with recovery. This competitive consists of round one online test only. This event aims to inspire HOSA members to learn more about physical therapy concepts and techniques.

**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.

**Round One Virtual Online Test**
5. **Test Instructions**: The written test will consist of 50 multiple choice items in a maximum of 60 minutes.

**Online Test Plan**

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight</th>
</tr>
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<tbody>
<tr>
<td>Physical Therapy for Musculoskeletal Conditions</td>
<td>15%</td>
</tr>
<tr>
<td>Physical Therapy for Neuromuscular Conditions</td>
<td>15%</td>
</tr>
<tr>
<td>Physical Therapy for Cardiopulmonary Conditions</td>
<td>15%</td>
</tr>
<tr>
<td>Physical Therapy for Integumentary Conditions</td>
<td>15%</td>
</tr>
<tr>
<td>Physical Therapy for Pediatrics and Older Adults</td>
<td>15%</td>
</tr>
<tr>
<td>Legal and Ethical Considerations</td>
<td>10%</td>
</tr>
<tr>
<td>The Professions of Physical Therapy</td>
<td>15%</td>
</tr>
</tbody>
</table>
7. **Sample Test Questions**

1. Where are wounds caused by venous insufficiency most commonly found on the body?
   A. Sacrum  
   B. Elbow  
   C. **Lower part of the leg**  
   D. Iliac crest  
   *(Pagliarulo pp 276)*

2. What type of resistive exercise involves contracting a muscle without visible joint motion?
   A. Active  
   B. Passive  
   C. **Isometric**  
   D. Progressive  
   *(Pierson pp 132)*

3. Which of the following types of healthcare services includes the health science career pathway for physical therapy?
   A. Support  
   B. Diagnostic  
   C. Social  
   D. **Therapeutic**  
   *(Simmers pp 50)*
Event Summary

Pharmacy Science provides members with the opportunity to gain knowledge and skills required in pharmacy-related careers. This competitive event consists of round one on-line test only. This event aims to inspire members to learn more about pharmacy careers and practices.

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.
   - American Academy of Allergy, Asthma, and Immunology. Symptoms and Diagnosis tab (as posted as of September 1, 2018) https://www.aaaai.org/conditions-and-treatments/allergies/drug-allergy

Round One Virtual Online Test

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

6. Online Test Plan

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Pharmacy Practice History &amp; Practice Settings</td>
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</tr>
<tr>
<td>Pharmacy Law &amp; Ethics and Safety &amp; Infection Control</td>
<td>10%</td>
</tr>
<tr>
<td>Pharmacy Terminology &amp; Abbreviations</td>
<td>10%</td>
</tr>
<tr>
<td>Dosage Formulations &amp; Administration Routes</td>
<td>10%</td>
</tr>
<tr>
<td>Sterile and Non-Sterile Compounding</td>
<td>10%</td>
</tr>
<tr>
<td>Concentration &amp; Dilutions</td>
<td>10%</td>
</tr>
<tr>
<td>Disorders &amp; Treatments</td>
<td>45%</td>
</tr>
</tbody>
</table>
7. Sample Test Questions

1. What was the primary purpose of the Harrison Narcotics Act of 1917?
   A. Promote research for new drugs.
   B. Regulate the dispensing of drugs.
   C. **Stop the recreational use of opium**
   D. Create classifications of prescription drugs.
   (Moini pp 45)

2. The newest forms of insulin have been produced from which source?
   A. Animal
   B. Mineral
   C. Synthetic
   D. **Genetic engineering**
   (Johnston pp 94)

3. A patient is to receive 1 ounce of an over-the-counter medication. How many tablespoons should be given?
   A. 1
   B. 2
   C. 4
   D. 6
   (Moini pp 569)
Event Summary

Sports Medicine provides members with the opportunity to gain knowledge and skills required for patient care in a sports medical setting. This competitive event consists of round one on-line test only. This event aims to inspire members to be learn more about injury prevention, therapeutic intervention and immediate care.

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 official references are used in the development of the written test.

Round One Virtual Online Test

5. Test Instructions: The written test will consist of 50 multiple choice items in a maximum of 60 minutes.
6. Online Test Plan

   - Injury / Illness Prevention and Wellness Promotion……………………30%
   - Examination, Evaluation, and Assessment…………………………30%
   - Immediate and Emergency Care …………………………………….16%
   - Therapeutic Intervention………………………………………………16%
   - Healthcare Administration and Professional Responsibilities………8%
7. **Sample Test Questions**

1. Which professional can best advise an athlete on the psychological aspects of the rehabilitation process and how to cope with an injury?
   A. Sports physiologist
   B. Sports neurologist
   C. **Sports psychologist**
   D. Sports massage therapist
   (Prentice pp 13)

2. Which vitamin is essential for the metabolism of carbohydrates and some amino acids, maintenance of normal appetite, and functioning of the nervous system?
   A. Ascorbic acid
   B. Niacin
   C. Riboflavin
   D. **Thiamine**
   (France pp 9)

3. What is a common mechanism of injury for an MCL sprain?
   A. Quick deceleration, cutting, twisting and landing movement.
   B. Abduction and lower leg rotation on a planted foot.
   C. Falling on the anterior knee while in a flexed position.
   D. **Adduction and internal rotation of the knee**.
   (Beam pp 157)
Event Summary

Veterinary Science provides members with the opportunity to gain knowledge and skills required for diagnosis and treatment of animals. This competitive event consists of round one on-line test only. This event aims to inspire members to learn more about the field of veterinary care.

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.
   - Reference for Skill VII: Preparing a Feline for Exam AAFP and ISFM Feline-Friendly Handling Guidelines
   - References for Companion Animal Breeds/Species Identification: (as posted as of September 1, 2020)
     - Dogs = American Kennel Club - www.akc.org
     - Cats = The Cat Fanciers’ Association - www.cfainc.org

Round One Virtual Online Test

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

6. Online Test Plan  (Includes both Large and Small Animals)
   - Anatomy and Physiology 23%
   - Basic Nutrients 10%
   - Animal Behavior 6%
   - Diseases/Disease Prevention 15%
   - Zoonoses 6%

MS HOSA Virtual SLC 2021 (December 2020)
Clinical Practice 10%
Emergency Care/First Aid 12%
Principles of Surgery 12%
Veterinary Careers 6%

7. Sample Test Questions

1. The average length of pregnancy is how many days for a cat?
   A. 15 - 20
   B. 30 - 35
   C. 58 - 65
   D. 90 - 112
   (Lawhead pp 140)

2. Which procedure is used when performing a surgical site prep scrub?
   A. Scrub from the area with alcohol after removing the hair.
   B. Scrub from the intended incision area outward in concentric circles.
   C. Scrub from the outside of the shaved area to the central area.
   D. Scrub in large straight strokes across the surgical area.
   (Sirois pp 378)

3. What type of organism causes ringworm in animals?
   A. Bacteria
   B. Parasite
   C. Virus
   D. Fungus
   (Lawhead pp 248)