SCINNOVA

VIII

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STUDY GUIDE

Attention, life scientists! Get ready to journey into the intricate world of biology, where the secrets of life await your discovery. From the tiniest cell to the vast complexity of ecosystems, this module will challenge you to explore the wonders of living organisms and their interconnections.

Your ultimate enchiridion for this biological expedition is the study guide below, packed with all the essentials you'll need to navigate through each thrilling round. So, grab your lab coats, sharpen your minds, and prepare to dive into the marvels of life like never before!

Round 1:

Embark on a complex exploration where you'll analyze various simulations to classify a range of conditions and link structure to observed symiptoms. Using diagnostic data, imaging techniques, and clinical case files, you'll interpret results, draw connections, and develop critical diagnostic skills. This module will challenge your diagnostic skills and push you to think critically, enabling you to deepen your knowledge of conditions through both simulation and dissection-based exploration.

Content we expect you to know:

1. Neuroanatomy of humans and animals, including internal and external structures and their functions.

2. In depth knowledge of types, subtypes and risk factors of neurological conditions, including but not limited to, cerebrovascular diseases, along with their associated symptoms.

3. Musculoskeletal system, focusing on muscle anatomy and its role in movement.

4. Lymphatic system's role in fluid balance, immune responses, and tissue health.

5. Interpretation of diagnostic imaging such as CT Scans for brain damage, and clinical test results.

Round 2:

Get ready to immerse yourself in a round designed to test your critical thinking, problem-solving, and practical skills under dynamic conditions. In this round, you'll act as a diagnostic expert, analyzing symptoms, interpreting lab results, and collaborating as a team. As you progress through the challenges, you will encounter real-world scenarios that demand sharp observation, medical knowledge, and adaptability, challenging your theoretical and practical expertise in real-life diagnostic dilemmas.

Content we expect you to know:

1. Knowledge of diagnosis and symptoms of diseases such as neurological disorders, infectious diseases, neuroinflammatory conditions, etc.

2. Anatomy and physiology of animals and humans.

3. Usage of antibiotics based on bacterial responses such as fungal resistance, antimicrobial resistance, insecticide resistance etc.

4. Enzymes: mode of action, inhibition and immobilization of enzymes.

5. Information of lab tests such as CT Scan, MRI, blood test etc and laboratory techniques.

6. Structures of different microorganisms, modes of survival and diseases.

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