Knee Anatomy Quiz Answer Key PDF

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Which ligament provides medial stability to the knee?

A. ACL
B. PCL
C. MCL ✓
D. LCL

Which of the following are common knee injuries? (Select all that apply)

A. ACL Tear ✓
B. Meniscal Tear ✓
C. Tennis Elbow
D. Patellar Tendinitis ✓

Which bone is commonly known as the kneecap?

A. Femur
B. Tibia
C. Patella ✓
D. Fibula

Which imaging technique is most commonly used to assess soft tissue injuries in the knee?

A. X-ray
B. CT scan
C. MRI ✓
D. Ultrasound

Which of the following are bones that form the knee joint? (Select all that apply)

A. Femur ✓
B. Tibia ✓
C. Fibula
D. Patella ✓

Which muscle group is primarily responsible for extending the knee?

A. Hamstrings
B. Quadriceps ✓
C. Gastrocnemius
D. Popliteus

Which joint is formed between the patella and the femur?

A. Tibiofemoral joint
B. Patellofemoral joint ✓
C. Meniscal joint
D. Synovical joint

Explain the role of the synovium in the knee joint.

The synovium in the knee joint serves to produce synovIAL fluid, which lubricates the joint, reduces friction, and provides nutrients to the cartilage.

What factors can contribute to the development of arthritis in the knee joint?

Factors contributing to the development of arthritis in the knee joint include age, obesity, previous joint injuries, genetic predisposition, and repetitive stress or overuse of the knee.

Which of the following are components of the knee's soft tissue? (Select all that apply)

A. Synovium ✓
B. Menisci ✓
C. Articular cartilage
D. Joint capsule ✓

Discuss the rehabilitation process for an ACL injury.

The rehabilitation process for an ACL injury generally includes the following phases: 1) Initial recovery (rest, ice, compression, elevation), 2) Range of motion exercises, 3) Strength training (focusing on quadriceps and hamstrings), 4) Functional training (balance and agility drills), and 5) Gradual return to sport, ensuring the knee is stable and strong.

Which muscles are involved in knee flexation? (Select all that apply)

A. Quadriceps

B. Hamstrings ✓

C. Gastrocnemius ✓

D. Popliteus ✓

What type of cartilage covers the ends of bones in the knee joint?

A. Fibrocartilage

B. Elastic cartilage

C. Articular cartilage ✓

D. Hyaline cartilage

What is the primary function of the anterior cruciate ligament (ACL)?

A. Prevents backward movement of the tibia

B. Provides lateral stability

C. Prevents forward movement of the tibia ✓

D. Supports knee flexation

How does the structure of the knee contribute to its function as a weight-bearing joint?

The knee joint is designed with a combination of bones (femur, tibia, and patella), ligaments, cartilage, and menisci that work together to support body weight, provide stability, and allow for movement while absorbing impact.

What are the potential consequences of a torn meniscus if left untreated?

Potential consequences of a torn meniscus if left untreated include chronic pain, joint instability, and the risk of developing osteoarthritis.

Which ligaments are part of the knee's cruciate system? (Select all that apply)

A. ACL ✓

B. PCL ✓

C. MCL

D. LCL

Describe the process and purpose of arthroscopy in knee treatment.

Arthroscopy involves making small incisions around the knee to insert a camera (arthroscope) and surgical instruments, allowing the surgeon to visualize and treat various knee conditions such as meniscus tears, ligament injuries, and cartilage damage.

What is the role of the menisci in the knee joint?

A. Stabilize the patella

B. Absorb shock and distribute weight ✓

C. Connect muscles to bones

D. Produce synovical fluid

What are the functions of the knee joint? (Select all that apply)

A. Weight bearing ✓

B. Flexation and extension ✓

C. Rotation ✓

D. Producing blood cells