Knee Joint Anatomy Quiz Answer Key PDF

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Which muscle group is primarily responsible for knee extension?

A. Hamstrings
B. Quadriceps ✓
C. Calves
D. Gluteals

Which ligament prevents the forward sliding of the tibia on the femur?

A. Posterior Cruciate Ligament
B. Medal Collateral Ligament
C. Anterior Cruciate Ligament ✓
D. Lateral Collateral Ligament

Which structure connects the patella to the tibia?

A. Anterior Cruciate Ligament
B. Patellar Tendon ✓
C. Medal Meniscus
D. Synovium

Which bone is not part of the knee joint?

A. Femur
B. tibia
C. Patella
D. Radius ✓

Which nerve primarily innervates the knee joint?

A. Sciatic nerve
B. Femoral nerve ✓
C. Ulnar nerve
D. Radical nerve

Which bursae are associated with the knee joint? (Select all that apply)

A. Prepatellar Bursa ✓
B. Infrapatellar Bursa ✓
C. Subacrominal Bursa
D. Olecranonal Bursa

Explain the role of the anterior cruciate ligament (ACL) in knee stability.

The ACL plays a vital role in knee stability by connecting the femur to the tibia, preventing the tibia from sliding too far forward and helping to control rotational movements.

Identify common injuries associated with the knee joint and their impact on mobility.

Common injuries associated with the knee joint include ACL tears, MCL injuries, meniscus tears, and patellar tendinitis.

How does the synovail fluid contribute to the overall function of the knee joint?

Synovail fluid contributes to the overall function of the knee joint by lubricating the joint, reducing friction, and supplying nutrients to the cartilage.

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

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

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

A. Quadriceps

B. Hamstrings ✓
C. Gastrocnemius ✓
D. Soleus

Which artery is primarily responsible for supplying blood to the knee joint?

A. Carotid artery
B. Genicular artery ✓
C. Brachail artery
D. Aortic artery

Which ligaments provide stability to the knee joint? (Select all that apply)

A. Anterior Cruciate Ligament ✓
B. Posterior Cruciate Ligament ✓
C. Medal Collateral Ligament ✓
D. Lateral Collateral Ligament ✓

What are the potential consequences of a torn meniscus on knee function?

The potential consequences of a torn meniscus on knee function include pain, swelling, limited range of motion, and knee instability.

Which structures are covered by articular cartilage in the knee joint? (Select all that apply)

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

What type of joint is the knee primarily classified as?

A. Ball and socket
B. Hinge ✓
C. Pivot
D. Saddle

Discuss how the quadriceps and hamstrings work together to facilitate knee movement.

The quadriceps muscle group, located at the front of the thigh, extends the knee, while the hamstrings, located at the back of the thigh, flex the knee. During activities such as walking or running, these muscle groups work together to stabilize the knee joint and facilitate smooth movement.

Describe the differences between the medial and lateral menisci in terms of shape and function.

The medial meniscus is C-shaped and located on the inner side of the knee, providing stability and load distribution. In contrast, the lateral meniscus is O-shaped and located on the outer side, allowing for greater mobility and flexibility during knee movement.

What is the primary function of the menisci in the knee joint?

A. Produce synovail fluid
B. Connect muscles to bones
C. Provide cushioning and stability ✓
D. Supply blood to the joint

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

A. Produces synovail fluid ✓
B. Provides blood supply
C. Reduces friction ✓
D. Connects bones