This exam is closed book, closed notes. There are 5 sections/questions.

Grade:

#1 _______/ 16
#2 _______/ 24
#3 _______/ 32
#4 _______/ 10
#5 _______/ 18

Final Grade __________/ 100
1. Complete the crossword puzzle using the clues. Each answer is worth 2 pt. **Total 16 pts**

**Across**
4. Most common type of hip dislocation (**posterior**)
5. A condition where the hip socket does not fully cover the femoral head (**hip dysplasia**)
8. Type of graft where cartilage is taken from a cadaver (**allograft**)

**Down**
1. Pocket of synovial fluid that forms a lump behind the knee (**bakers cyst**)
2. Forms at the union of the ilium, pubis, and ischium (**acetabulum**)
3. Bursa between patella and skin (**prepatellar**)
6. This bone is a form of cartilage until the ages of 3-5 (**patella**)
7. The menisci are made of this type of cartilage (**fibrous**)

**Complete the crossword below**

```
  b
 /  a / a
6 p k c
posterior e e

  h i p d y s p l a s i a

  a b
 /  b
  p f t c u
  a e y l
  t b l s u
  e r l t m

  a l l o g r a f t

  l u r
  a s
```

Created on TheTeachersCorner.net Crossword Maker
2. Label the components of the knee. 24 pts
Name: **Solution**

3. Analyze the following images.

(a) Name the muscles of the quadriceps that the letters A, B, C, D, E, and F are pointing to. **10 pts**

![Muscles of the Quadriceps Diagram](image)

(b) Comparing the MRI on the left and the one on the right, state the injury that is depicted? What are the causes and treatment? **4 pts**

The image shows an ACL tear. This is typically caused by the bones of the leg twisting in opposite directions under full body weight. The treatment is typically reconstruction using either the quadriceps tendon, the patellar tendon, or the hamstring tendon.
(c) What does the X-ray show? What are the causes and treatment? 4 pts

This image show osteoarthritis of the knee. The cause of this is wear and tear of the cartilage. The treatment option is either a partial or total knee replacement.

(d) Name the injuries depicted by A, B, C, D, and E? How would A and D be treated? How would B and E be treated? 14 pts

A: flap tear, B: radial tear, C: degeneration, D: bucket handle tear, E: longitudinal tear

A and D are treated with a partial meniscectomy.
B and E could be stitched.
Name: Solution

4. Label the ligaments and structures of the hip depicted in the figures. **10 points**
5. (a) What disease is depicted in this X-ray? What are possible causes and what is a treatment option? 4 pts

This image so Perthes disease as indicated by the open growth plates (since it occurs in children) and the flattened, collapsed femoral head on the right. The cause is genetic and affects more boys than girls. The treatment is orthopaedic bracing and surgery.

(b) Name the muscles at A, B, C, D, and E. 10 pts

A: Gluteus medius, B: Gluteus maximus, C: Gluteus minimus, D: Piriformis, E: Quadratus femoris
(c) Describe the injury depicted in the X-ray.  **2 pts**

*This is an anterior dislocation which is when the femur is pushed out of the socket in the forward direction.*

(d) Describe what is depicted in the MRI.  **2 pts**

*This image is depicting avascular necrosis in the hip on the right of the image. This is due to a loss of blood supply to the head of the femur causing it to collapse and lose its rounded shape. This is most common in adults which is indicated by the closed growth plates.*