

TABLE E-1 Basic Competency Examination in Musculoskeletal Medicine*

Question	Answer
1. What common problem must all newborns be examined for?	Congenital dislocation of the hip (CDH, dislocation, subluxation also accepted): 1 point
2. What is a compartment syndrome?	Increased pressure in a closed fascial space: 1 point
3. Acute septic arthritis of the knee may be differentiated from inflammatory arthritis by which laboratory test?	Any analysis of fluid from aspiration (cell count, Gram stain, culture): 1 point
4. A patient dislocates his knee in a car accident. What structure(s) is/are at risk for injury and therefore must be evaluated?	Must mention popliteal artery: 1 point
5. A patient punches his companion in the face and sustains a fracture of the 5th metacarpal and a 3-mm break in the skin over the fracture. What is the correct treatment, and why?	Irrigation and debridement; risk of infection: 1/2 point each
6. A patient comes to the office complaining of low-back pain that wakes him up from sleep. What two diagnoses are you concerned about?	Tumor and infection: 1/2 point each
7. How is compartment syndrome treated?	Fasciotomy (surgery also accepted): 1 point
8. A patient lands on his hand and is tender to palpation in the “snuff box” (the space between the thumb extensor and abductor tendons). Initial radiographs do not show a fracture. What diagnosis must be considered?	Scaphoid fracture (carpal bone fracture also accepted): 1 point
9. A 25-year-old male is involved in a motor-vehicle accident. His left limb is in a position of flexion at the knee and hip, with internal rotation and adduction of the hip. What is the most likely diagnosis?	Hip dislocation: 1 point
10. What nerve is compressed in carpal tunnel syndrome?	Median nerve: 1 point
11. A patient has a disc herniation pressing on the 5th lumbar nerve root. How is motor function of the 5th lumbar nerve root tested?	Dorsiflexion of the great toe (toe extensors also accepted): 1 point
12. How is motor function of the median nerve tested in the hand?	Any median function (metacarpophalangeal finger flexion; thumb opposition, flexion, or abduction): 1 point
13. A 12-year-old boy severely twists his ankle. Radiographs show only soft-tissue swelling. He is tender at the distal aspect of the fibula. What are 2 possible diagnoses?	Ligament sprain and Salter-Harris I fracture (sprain, fracture also accepted): 1/2 point each
14. A patient presents with new-onset low-back pain. Under what conditions are radiographs indicated? Please name 5 (example: history of trauma).	Age >50; neurological deficit; bowel or bladder changes; history of cancer, pregnancy, drug use, or steroid use; systemic symptoms (night pain, fever); pediatric population: 1/4 point each, full credit for 4 correct responses
15. A patient has a displaced fracture near the fibular neck. What structure is at risk for injury?	Common peroneal nerve (peroneal nerve also accepted): 1 point
16. A 20-year-old injured his knee while playing football. You see him on the same day, and he has a knee effusion. An aspiration shows frank blood. What are the three most common diagnoses?	Ligament tear, fracture, peripheral meniscal tear (capsular tear, patellar dislocation also accepted): 1/2 point each, full credit for 2 correct responses
17. What are the five most common sources of cancer metastatic to bone?	Breast, prostate, lung, kidney, thyroid: 1/4 point each, full credit for 4 correct responses
18. Name two differences between rheumatoid arthritis and osteoarthritis.	Any two correct statements (i.e., inflammatory versus degenerative, proximal interphalangeal joint versus distal interphalangeal joint, etc.): 1/2 point each
19. Which malignancy may be present in bone yet typically is not detected with a bone scan?	Myeloma (full credit for hematological malignancies—leukemia, lymphoma): 1 point
20. What is the function of the normal anterior cruciate ligament at the knee?	To prevent anterior displacement of the tibia on the femur: 1 point

continued

TABLE E-1 (continued)	
Question	Answer
21. What is the difference between osteoporosis and osteomalacia?	Osteoporosis—decreased bone density; osteomalacia—decreased bone mineralization (any true statement about epidemiology, pathophysiology—e.g., estrogen versus vitamin D—also accepted): 1 point
22. In elderly patients, displaced fractures of the femoral neck are typically treated with joint replacement, whereas fractures near the trochanter are treated with plates and screws. Why?	Blood supply to femoral head (osteonecrosis, nonunion also accepted): 1 point
23. What muscle(s) is/are involved in lateral epicondylitis (tennis elbow)?	Wrist extensors (full credit for any wrist extensor—extensor carpi radialis brevis, extensor carpi radialis longus, extensor digitorum communis): 1 point
24. Rupture of the biceps at the elbow results in weakness of both elbow flexion and _____?	Supination: 1 point
25. What muscle(s) control(s) external rotation of the humerus with the arm at the side?	Infraspinatus or teres minor accepted (full credit for rotator cuff): 1 point
*Reproduced from: Freedman KB, Bernstein J. The adequacy of medical school education in musculoskeletal medicine. J Bone Joint Surg Am. 1998 Oct;80(10):1421-7.	

TABLE E-2 Full List of Countries of Origin of All Articles	
Country	No. of Studies
United States	21
United Kingdom	11
Germany	3
Canada	3
Sweden	2
Australia	2
Poland	1
Barbados	1
India	1
Netherlands	1
Ireland	1