

Study Guide for Open-Notes Quiz #2

Topics covered, with sample questions:

- The Blues (July 2)
 - Give three differences between the “country blues” and “urban blues” styles of the early 1900s.
 - Describe the lyrical form of a typical 12-bar blues song.
- Cells as Factories (July 8)
 - Which cellular structures are responsible for contraction, calcium release/uptake, and ATP production in muscle cells? How does the amount of cellular space devoted to each of these structures depend on the function of a given muscle?
 - At a molecular level, what causes muscle cells to contract?
- Early Rock (July 10)
 - R&B songs were often “bowdlerized” to increase record sales. What does this mean?
 - In what ways do “Maybellene” and “Long Tall Sally” resemble and not resemble standard 12-bar blues songs?
- Engineering Muscle Cells (July 11 & 15)
 - In theory, how could you use genetic engineering to take a slow sprinter like Dr. C. and make him faster?
 - What are antisense oligonucleotides, and how could they be used to treat Duchenne’s Muscular Dystrophy?
 - What must be provided for muscle stem cells to develop, in vitro, into a mature muscle tissue that could be used for meat consumption, biology experiments, or implants?