

UNIT TWO

1. Discuss the functions of the skeletal system.
2. List the bones that are found in the axial skeleton and appendicular skeleton.
3. Discuss the functions of the salts and the organic fibers in bone.
4. Describe the functions of the osteoprogenitor cells, osteoblasts, osteocytes, and osteoclasts.
5. Discuss the functional differences between compact bone and spongy bone.
6. Describe the gross anatomy of a long bone. Include the regions, the type of bone tissue, membranes, and medullary cavity.
7. Describe the microscopic appearance of the Haversian systems (osteons) in compact bone and the functions of the Volkmann's canals. Also differentiate between concentric, interstitial, and circumferential lamellae.
8. Describe the anatomy of cancellous (spongy) bone with its trabeculae.
9. List the areas (future bones) in the skeleton where intramembraneous and endochondrial ossification occurs.
10. Outline the events of intramembraneous ossification.
11. Discuss the structure and functions of the fontanelles.
12. Describe the process of endochondrial ossification.
13. Describe the process of increasing the diameter of a developing bone.
14. Describe the process of increasing the length of a developing bone.
15. Discuss bone remodeling, repair and aging bone. Define osteopenia and osteoporosis.
16. Discuss the types of bones found in the body from long to pneumatic bones.
17. Discuss the functions of condyles, processes, depressions, and foramina in bones.
18. Discuss some differences between the female and male skeleton. List some bone features that can be used in the age determination.
19. Discuss the differences in the anatomy and physiology of the pectoral and pelvic girdles.
20. Discuss the functions of the vertebral curvatures and arches of the foot.
21. Explain the differences between the three categories of functional joints (synarthrosis, amphiarthrosis, and diarthrosis) and their various structural categories.

22. Describe the anatomy, tissue type, and functions of the six components of a complex synovial joint.
23. Discuss the relationship between strength (stability) and mobility (flexibility) in a synovial joint.
24. Describe the types of movements found at the variety of synovial joints e.g. flexion, abduction, and pronation.
25. Describe the structural classification of synovial joints from gliding to ball and socket, include axial types and examples.
26. Define arthritis, bursae and bursitis.
27. Discuss the four characteristics of muscle tissue.
28. Discuss the functions of the three types of muscle tissue.
29. Briefly compare the anatomical and physiological differences between the three types of muscle tissue and state their locations in the body.
30. Describe the microanatomy of a skeletal muscle fiber. Include sarcolemma, sarcoplasm, sarcoplasmic reticulum, transverse tubules, terminal cisternae, triads, sarcomeres, and the various bands and lines.
31. Discuss what happens to the lengths of the bands and zones during muscle contraction or sarcomere shortening.
32. Describe anatomy of the epimysium, perimysium, and endomysium within a skeletal muscle organ.
33. Define deep fascia, tendon, aponeurosis and ligament.
34. Discuss muscle compartments especially of the upper limb and compartment syndrome.
35. Describe the following muscle shapes regarding the arrangement of the muscle fibers: parallel, convergent, unipennate, bipennate multipennate, and circular, include examples.
36. Discuss what is meant by a muscle's origin, insertion, and action.
37. Define the role of the prime mover, synergists (guiding muscles), fixators (stabilizers), and antagonist (contralateral) regarding group muscle action. Use flexion of the forearm as an example.
38. Discuss how muscles are named.
39. Discuss the overall functions of the appendage muscle and the general differences between proximal and distal muscles.
40. Discuss the differences between the three classes of levers include examples and the relationship between muscle strength and distance from the fulcrum.