

ANATOMY AND PHYSIOLOGY- SKELETAL SYSTEM



MCQ- REVIEW QUESTIONS

- 1. Where in the skeleton is the scapula located?
 - A. in the axial skeleton
 - B. in the appendicular skeleton
 - c. in the carpal region
 - D. in the shoulder girdle

Answer is D: The scapula (shoulder blade) is part of the shoulder girdle. It is also part of the appendicular skeleton, but choice D is the more specific answer.

- 2. Which of the following bone markings forms part of an articulation?
 - A. the deltoid tuberosity of the humerus
 - B. the lateral condyle of the femur
 - c. the greater trochanter of the femur
 - D. the greater tubercule of the humerus

Answer is B: The lateral condyle of the femur articulates with the lateral facet of the superior articular surface of the tibia, in the knee joint.



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- 3. Where is the epiphyseal plate of a long bone located?
 - A. in the diaphysis
 - B. between the diaphysis and the epiphysis
 - c. in the epiphysis
 - D. in the medullary canal

Answer is B: The "plate" is the hyaline cartilage between the shaft (diaphysis) and end (epiphysis) of a long bone in children and adolescents. In adults it is replaced by an ossified "epiphyseal line".

- 4. Which of the following is a **NOT** a projection from a bone surface?
 - A. trochanter
 - в. tubercle
 - c. trabeculum
 - D. tuberosity

Answer is C: A trabeculum (plural trabeculae) is the internal bony structure of spongy (cancellous) bone.



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- 5. Where in the skeleton is the scapula located?
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 - B. in the appendicular skeleton
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Answer is D: The scapula (shoulder blade) is part of the shoulder girdle. It is also part of the appendicular skeleton, but choice D is the more specific answer.

- 6. Which of the following bone markings forms part of an articulation?
 - A. the deltoid tuberosity of the humerus
 - B. the lateral condyle of the femur
 - c. the greater trochanter of the femur
 - D. the greater tubercule of the humerus

Answer is B: The lateral condyle of the femur articulates with the lateral facet of the superior articular surface of the tibia, in the knee joint.



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- 7. In which structure are osteoclasts and osteoblasts found?
 - A. in the periosteum
 - B. in the haversian canals
 - c. in the lacunae of osteons
 - D. in the trabeculae of osteons

Answer is A: The membrane around bones houses the bone forming cells (osteoblasts) and the bone reabsorbing cells (osteoclasts).

- 8. Which of the listed bones is superior to the rest?
 - A. manubrium
 - в. xiphoid process
 - C. COCCYX
 - D. femur

Answer is A: The manubrium is the upper part of the sternum. The xiphoid process is the lower part.



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- 9. Choose the correct sentence. Compact bone contains
 - A. lamellae and osteocytes but no osteons.
 - B. trabeculae, canaliculi and osteons.
 - c. haversian systems and canaliculi but no osteons.
 - D. osteons and lamellae but no trabeculae.

Answer is D: Compact bone does contain osteons, but not trabeculae (which occur in cancellous bone).

- 10. Which of the list below is a cell that reabsorbs bone?
 - A. osteon
 - в. osteoblast
 - c. osteocyte
 - D. osteoclast

Answer is D: The suffix "-blast" refers to an immature cell. In this case it develops into an osteocyte after it has secreted bone matrix around itself.



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- 11. The formula for the inorganic salts in bone is
 - A. NH₆C₃COOH
 - B. C₆H₁₂O₆
 - c. Ca₁₀(PO₄)₆OH₂
 - D. $CH_3(CH_2)_7CH = CH(CH_2)_7COOH$

Answer is C: This is hydroxyapatite. It is the only one with calcium and phos-phorus. All the others are organic molecules.

- 12. Freely moveable joints are also known as
 - A. fibrous joints
 - B. cartilaginous joints
 - c. amphiarthroses
 - D. synovial joints

Answer is D: Synovial joints have synovial fluid between the articulating bones. Fibrous joints have fibre between the articulating bones. Cartilaginous joints have cartilage between the bones. Amphiarthroses are "slightly move- able" joints.



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- 13. Which of the following is a projection from a bone surface?
 - A. fossa
 - в. fissure
 - c. foramen
 - D. facet

Answer is D: Facet is an articular surface that projects from a bone surface. A fossa is a shallow basin-like depression in a bone, often serving as articular surface.

- 14. Which of the listed bones is the most inferior?
 - A. ethmoid
 - в. sphenoid
 - c. femoid
 - D. hyoid

Answer is D: Hyoid is in the neck. Choice A & B are in the skull. Femoid is not a bone.



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- 15. Choose the correct sentence. Cancellous bone contains
 - A. lamellae and osteocytes but no trabeculae.
 - B. trabeculae, canaliculi and osteons.
 - c. haversian systems and canaliculi but no osteons.
 - D. trabeculae and lamellae but no osteons.

Answer is D: Cancellous (spongy) bone does not contain osteons, but does contain the little beams known as trabeculae.

- 16. Which of the following bones is part of the cranium?
 - A. occipital
 - в. mandible
 - c. hyoid
 - D. carpal

Answer is A: the occipital bone forms the floor of the cranium.



ANATOMY AND PHYSIOLOGY - URINARY SYSTEM



- 17. The appendicular skeleton includes all of the following **EXCEPT** one. Which one?
 - A. the pectoral girdle
 - в. the thoracic cage
 - c. the phalanges
 - D. the lower limbs

Answer is B: The thoracic cage (the ribs) are part of the axial skeleton.

- 18. What is the name given to the central tunnel of an osteon that contains bloodvessels?
 - A. canaliculus
 - B. endosteum
 - c. haversian canal
 - D. medullary canal

Answer is C: Also known as the central canal. The medullary canal is a macro-scopic structure within the diaphysis (shaft) of a long bone.

- 19. Which of the following is an example of a synovial joint?

 The joint between the:
 - A. tibia and fibula
 - B. sternum and rib number 1
 - c. thoracic vertebrae 4 and 5





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D. proximal ends of the radius and ulna

Answer is D: The radius and ulna are freely moving at the elbow joint.

- 20. Which list contains the bones of the pelvic and pectoral girdles?
 - A. coxal, scapulae, manubrium, ilium
 - B. clavicles, cervical, coccyx, innominate
 - c. clavicles, scapulae, coxal
 - D. clavicles, scapulae, sacrum, coxal

Answer is C: The manubrium, coccyx, sacrum are within the axial skeleton.
