

# QAD Series

## Bones, Frog & Development

### Bones of Rabbit

1. **Scapula is an example of**  
a) long bone    b) short bone    c) flat bone    d) irregular bone
2. **Acetabulum forms**  
a) elbow joint    b) knee joint    c) shoulder joint    d) hip joint
3. **Articular cartilage of synovial joint is**  
a) Fibro-cartilage    b) Hyaline cartilage  
c) Elastic cartilage    d) all of these
4. **In old age, stiffness of joints is due to the**  
a) decrease in synovial fluid    b) increase in synovial fluid  
c) higher viscosity of synovial fluid    d) none of the above
5. **Coronoid fossa is present in**  
a) Femur    b) Humerus    c) Lower jaw    d) all
6. **Which of the following is skull bone?**  
a) Atlas    b) Coracoid    c) Pterygoid    d) Arytenoid
7. **Manubrium is a part of**  
a) pelvic girdle    b) skull  
c) thoracic cage    d) pectoral girdle
8. **This facial bone is unpaired**  
a) nasal    b) vomer    c) lacrimal    d) palatine
9. **Pubic symphysis consists**  
a) acetabulum    b) obturator foramen  
c) fibro-cartilage    d) all
10. **The ellipsoid is found in**  
a) hip    b) knee    c) shoulder  
d) radius and scaphoid of hand
11. **Which ribs show "bucket handle" type of movement?**  
a) Rib no. 1-2    b) Rib no. 3-8  
c) Rib no. 6-10    d) Rib no. 11-12
12. **The first digit of forearm is termed as**  
a) pollex    b) hallux    c) pollux    d) none
13. **Which one is tarsal bone?**  
a) Scapheoid    b) Ulnane    c) Intermedium    d) Cuboid
14. **Deltoid ridge is found in:**  
a) Humerus    b) Femur    c) Tibia    d) Ulna
15. **Olecranon fossa is related to**  
a) humerus    b) femur    c) radio ulna    d) tibio fibula
16. **Wrist bones are called:**  
a) Carpal    b) Metacarpal    c) Tarsal    d) Metatarsal
17. **Which of the following fits into deep sigmoid notch?**  
a) Head of humerus    b) Condyle of femur  
c) Trochlea of humerus    d) Head of femur
18. **Obturator foramen of rabbit is found in:**  
a) Pelvic girdle    b) Pectoral    c) Shoulder    d) Skull
19. **In rabbit, the presence of the odontoid process in the centrum is the characteristic of:**  
a) Atlas vertebra    b) Typical cervical vertebra  
c) Axis vertebra    d) Thoracic vertebra
20. **Diastema is the gap between:**  
a) Incisors and premolars    b) Canine and molar  
c) Premolar and molars    d) Canine and incisor
21. **Hypapophysis is present in the:**  
a) Sacral vertebra of the rabbit    b) Atlas of the rabbit  
c) Axis of the rabbit    d) Lumbar vertebra of the rabbit
22. **Adjoining bones of frontal in rabbit's skull are:**  
a) Nasal and parietal    b) Maxilla and squamosal  
c) Occipital and sphenoid    d) Dentary and temporal
23. **Humerus differs from femur in having a:**  
a) Neural spine    b) Glenoid cavity  
c) Sigmoid notch    d) Deltoid ridge
24. **Number of false ribs in Rabbit is:**  
a) Two pairs    b) Three pairs    c) Six pairs    d) Twelve pairs
25. **Sigmoid notch in rabbit is found in:**  
a) Radio ulna    b) Tibia fibula    c) Femur    d) Humerus
26. **Sphenoid bone in human skull lies between the:**  
a) Temporal and occipital bones    b) Maxilla and zygomatic bone  
c) Zygomatic and temporal bones    d) Frontal and ethmoid bones
27. **Lumbar vertebra is located in:**  
a) Neck region    b) Thoracic region  
c) Abdominal region    d) Tail region
28. **Which vertebra of rabbit is largest?**  
a) Sacral    b) Lumbar    c) Thoracic    d) Caudal
29. **One of the following is not found in lumbar vertebra of rabbit**  
a) Metapophysis    b) Anapophysis    c) Epiphysis    d) Hypapophysis
30. **Structure responsible for formation of sigmoid notch is olecranon**  
a) process of humerus    b) process of femur  
c) process of radio-ulna    d) process of tibio-fibula
31. **A sesamoid bone is:**  
a) Palatine    b) Pterygoid    c) Patella    d) Presphenoid
32. **Which one of the following is correct digital formula for the Phalanges of rabbit?**  
a) 0, 2, 2, 3, 3    b) 0, 3, 3, 3, 3    c) 2, 3, 3, 3, 3    d) 2, 2, 3, 3, 3
33. **The lower jaw of mammal is made up of:**  
a) Dentaries    b) Angular    c) Maxilla    d) Coronoid
34. **The number of occipital condyles in mammals is:**  
a) 3    b) 5    c) 1    d) 2
35. **The cnemial crest is present in:**  
a) Femur    b) Tibia    c) Fibula    d) Humerus
36. **Which of the following is a part of splanchnocranium?**  
a) Frontal    b) Vomer    c) Incus    d) Occipital condyle
37. **Lower jaw of rabbit articulates with:**  
a) Parietal    b) Squamosal    c) Jugal    d) Alisphenoid
38. **In rabbit, the jaw suspensorium is**  
a) Craniostylic    b) Autostylic    c) Hyostylic    d) Amphistylic
39. **Scroll bones are found in:**  
a) Nostrils    b) Ears    c) Eyes    d) Vertebral column
40. **The zygomatic arch in skull of rabbit is made up of three bones which are:**  
a) Jugal and processes of maxilla and squamosal  
b) Jugal and squamosal    c) Pterygoid and squamosal  
d) Pariotic, jugal and process of maxilla
41. **Sella tursica is a depression that accommodates the pituitary gland and is found in:**  
a) Parasphenoid    b) Alisphenoid    c) Basisphenoid    d) Palatine
42. **The term acetabulum is associated with:**  
a) Pectoral girdle    b) Pelvic girdle    c) humerus    d) ulna
43. **Saddle joint is present between the:**  
a) Metacarpal and carpal    b) Metacarpal and phalanges  
c) Tibia and femur    d) Humerus and radius
44. **One of the followings is not a part of mammalian bone:**  
a) Periosteum    b) Peritoneum    c) Endosteum    d) Lamella
45. **The shoulder and hip joints are type of:**  
a) Ball and Socket    b) Hinge joint    c) Pivot joint    d) Gliding joint
46. **Number of tarsals in the ankle (tarsus) of a rabbit is:**  
a) 4    b) 5    c) 6    d) 9
47. **Anticlinical vertebra is:**  
a) Cervical    b) Thoracic    c) Lumbar    d) Caudal
48. **The process of bone formation is known as:**  
a) Calcification    b) Ossification    c) Chondrification    d) Hemolysis
49. **Bones of which are not corresponding?**  
a) Humerus and femur    b) Hip girdle & shoulder girdle  
c) Carpals and tarsals    d) Atlas and malleus
50. **Typically all mammals have seven cervical vertebrae EXCEPT:**  
a) elephant    b) sea cow    c) kangaroo    d) man
51. **One of the following is not found in lumbar vertebra of rabbit:**  
a) metapophysis    b) anapophysis  
c) epiphysis    d) hypapophysis
52. **Nucleus pulposus is found in**  
a) brain    b) liver  
c) inter vertebral disc    d) nucleus
53. **The thoracic rib of rabbit is**  
a) monocephalous    b) unicephalous  
c) bicephalous    d) cartilagenous
54. **Which of the following processes is not a part of pectoral girdle?**  
a) Acromian    b) Coracoid    c) Olecranon    d) Metacromian
55. **Besides girdles in skeleton the term pelvis is associated with**  
a) kidney    b) brain    c) liver    d) testis
56. **In mammals, coronoid process is a part of**  
a) axis vertebra    b) atlas vertebra    c) pelvic girdle    d) lower jaw
57. **Optic foramen is related to**  
a) Alisphenoid    b) basisphenoid    c) orbitosphenoid    d) presphenoid
58. **The vertebral column is connected to pelvic girdle in the**  
a) coccygeal region    b) sacral region  
c) lumbar region    d) cervical region
59. **The term "acetabulum" is associated with**  
a) pectoral girdle    b) pelvic girdle    c) fasciola hepatica    d) both b & c
60. **Bone marrow does not occur in**  
a) fish    b) birds    c) amphibia    d) mammalia
61. **What is the name of joint between ribs and sternum?**  
a) Cartilagenous joint    b) Synovial joint  
c) Fibrous joint    d) Angular joint
62. **Bone related with skull is**  
a) Coracoid    b) Atlas    c) Pterygoid    d) Arytenoid
63. **Total no. of bones in each forelimb of Rabbit**  
a) 14    b) 21    c) 24    d) 30
64. **Sternum is connected to ribs by**  
a) bony matter    b) aneolar tissue  
c) hyaline cartilage    d) white fibrous cartilage
65. **Rabbit has no**  
a) Basisphenoid    b) Parasphenoid    c) Orbitosphenoid    d) Presphenoid
66. **Innominate is**  
a) a nerve    b) a vein    c) an artery  
d) a pair of skeleton and an artery
67. **In mammal, the lower jaw is made of**  
a) Maxilla    b) Dentary    c) Mandible    d) Ethmoid



## Frog

1. **Sciatic vein of frog open in**  
a) Heart      b) Liver      c) kidney      d) Pelvic region
  2. **In frog's heart, there are "muscular ridges" which consists of fibres called**  
a) purkinje fibres    b) myonemes    c) telodendria    d) Columnae carnae
  3. **Liver of frog receive blood from**  
a) renal vein, hepatic, portal vein, anterior abdominal vein  
b) hepatic artery, anterior abdominal vein, coeliac vein  
c) renal vein, hepatic artery, hepatic dorsal vein  
d) hepatic artery, anterior abdominal vein, hepatic dorsal vein
  4. **Capillaries related to the alimentary canal form**  
a) dorsal aorta      b) hepatic portal vein  
c) hepatic portal artery      d) ventral aorta
  5. **Opening of rectum in frog is called**  
a) coccyx      b) cloaca      c) anus      d) none
  6. **Which artery is absent in frog?**  
a) Right systemic arch      b) Phrenic artery  
c) Carotid artery      d) Renal artery
  7. **Structure present in man but absent in frog**  
a) salivary gland    b) pancreas    c) adrenal gland    d) thyroid gland
  8. **In heart of frog, which of the following is considered as pacemaker?**  
a) Pylangium    b) Synangium    c) Sinus venosus    d) Truncus arteriosus
  9. **In frog, 'fenestra ovalis' is**  
a) the opening in auditory capsule which separates the middle ear from inner ear of  
b) the air filled cavity middle ear  
c) the communication between the pharynx and the tympanic cavity  
d) the external opening of tympanic cavity which is covered by the tympanic membrane
  10. **Vocal cord develop for the first time in**  
a) Anurans      b) Urodelans      c) Caecilians      d) None
  11. **Salientia is the alternate name of**  
a) Anura      b) Urodela      c) Apoda      d) none
  12. **The vein into which sciatic vein of frog pours its blood**  
a) Renal portal    b) Pelvic      c) Abdominal    d) Renal
  13. **Bidder's canal is found in**  
a) kidney of frog    b) testis of frog    c) liver of frog    d) ovaries of frog
  14. **Funnel-like ciliated pits on the ventral side of the kidney in frog are known as**  
a) nephridiopores    b) nephrostomes    c) neurotomes    d) coelomotome
  15. **The first spinal nerve of frog is called**  
a) brachial      b) hypoglossal    c) spinal accessory    d) sciatic
  16. **Harderian glands are found in**  
a) rabbit      b) frog      c) man      d) Pheretima
  17. **In frog, jelly around the eggs is deposited**  
a) in water after fertilization      b) in water during fertilization  
c) in oviduct      d) in the ovary
  18. **Total no. of cranial nerves in frog are**  
a) 10      b) 20      c) 24      d) 12
  19. **Different colours of frog skin are controlled by**  
a) hormones      b) melanocytes  
c) nervous system      d) both a & c
  20. **In frog, oviduct is formed by**  
a) Wolfian duct      b) Bidder's canal  
c) Metanephric duct      d) Mullerian duct
  21. **In frog, the ureter is a urinogenital duct in**  
a) male      b) female      c) male & female    d) male or female
  22. **Bidder's canal is meant for passage of**  
a) ova      b) urina      c) sperms      d) all of these
  23. **Anterior abdominal vein in frog is formed by union of**  
a) right and left pelvic vein      b) right and left sciatic vein  
c) right and left femoral vein      d) right & left dorsolumbar vein
  24. **The urinary bladder of frog opens into**  
a) ureter      b) uterus      c) urethra      d) cloaca
  25. **When electric shock is given to the leg of a pithed frog, it**  
a) blinks its eye      b) shows no response  
c) put out its tongue      d) none of these
  26. **The innominate vein in frog is formed by union of**  
a) lingual and mandibular      b) right & left pelvic vein  
c) internal jugular and subscapular      d) brachial and musculocutaneous
  27. **In frog, the surface of attachment of tongue is**  
a) palatine      b) sphenoid      c) pterygoid      d) hyoid apparatus
  28. **The second pair of lymph hearts in frog pumps the lymph into**  
a) femoral vein      b) subclavian vein  
c) subscapular vein      d) hepatic portal vein
  29. **In frog, kidneys are lodged in**  
a) cisterna magna      b) mediastinal space  
c) subcutaneous lymph in front of heat      d) subcutaneous lymph space above the vertebral column
  30. **If mouth of frog is kept open for sometime, it dies because it is unable to**  
a) eat      b) drink      c) breath      d) none
  31. **Which one is related to circulatory system of frog?**  
a) Bony labyrinth      b) Membranous labyrinth  
c) Caroid labyrinth      d) all
  32. **Hepatic artery in frog arise from**  
a) dorsal aorta    b) systemic    c) coeliac    d) anterior mesentric
  33. **Epiphysis cerebri is another name for**  
a) pituitary      b) pineal gland    c) thymus      d) thynoid
  34. **Upper eyelid of frog is**  
a) transparent and movable      b) thick and movable  
c) thick and immovable      d) transparent & immovable
  35. **Vertebrates other than mammal and birds can change the colour of skin to some extent because these possess**  
a) chromatophores      b) melanophores  
c) melanocytes      d) melanophages
  36. **Dorsal root of spinal nerves in frog has the cell bodies of**  
a) sensory neuron    b) motor neuron  
c) both sensory and motor      d) none of these
  37. **During pulmonary respiration of frog**  
a) mouth remain closed      b) mouth remain opened  
c) mouth opens and close alternately      d) none of the above
- Development of frog**
1. **No. of spiracles in frog's tadpole is**  
a) one      b) one pair      c) two pairs      d) three pairs
  2. **Select the correct statement from the following**  
a) eggs of hen are microlecithal  
b) eggs of frog are microlecithal and telolecithal  
c) eggs of reptiles are telolecithal  
d) eggs of amphioxus are mesolecithal and isolecithal
  3. **Which of the following lays cleidoic egg?**  
a) Hen      b) Frog      c) Toad      d) Snake
  4. **Blastopore develops into mouth in**  
a) frog      b) rabbit      c) leech      d) human
  5. **In an egg, the type of cleavage is determined by**  
a) size and location of nucleus      b) shape and size of sperm  
c) amount and distribution of yolk      d) number of egg membrane
  6. **Breaking of acrosome membrane is**  
a) activation      b) capacitation      c) cavitation      d) agglutination
  7. **Which of the following is primary egg membrane?**  
a) Vitelline membrane      b) Zona pellucida  
c) Zona radiata      d) all of these
  8. **Secondary oocyte is formed**  
a) before fertilization      b) after fertilization  
c) before maturation of ovum      d) after mitosis of germ cells
  9. **Morphogenetic movements occur in**  
a) cleavage stage    b) morula      c) blastula      d) gastrula
  10. **In frog, the first cleavage always bisects the grey crescent which forms opposite to the site of**  
a) yolk plug      b) blastopore      c) neural tube      d) sperm entry
  11. **Human eggs are**  
a) microlecithal    b) mediacleithal    c) macrolecithal    d) mesolecithal
  12. **At time of metamorphosis, frog's tadpole feeds upon**  
a) insects      b) algae      c) both a & b      d) nothing
  13. **Cytoplasm of ovum does not contain**  
a) golgi complex    b) centrosome    c) mitochondria    d) ribosome
  14. **In embryo, cleavage brings about**  
a) increased DNA content      b) increased mass of protoplasm  
c) increased size      d) change in shape and size
  15. **Which grouping correctly represents the germinal layers and the structures derived from it in frog?**  
a) Ectoderm – blood vessels      b) Ectoderm – liver  
c) Endoderm – brain      d) Mesoderm – skeleton
  16. **Ammion and allantois are found in**  
a) fish, frog and fowl      b) fish and frog  
c) fowl and fox      d) frog, fowl and fox
  17. **Human embryo is protected by**  
a) amniotic cavity      b) pleural cavity  
c) peritoneal cavity      d) allantois
  18. **What structure serve as a lung, digestive tract and kidney for the developing embryo?**  
a) Liver      b) Amnion      c) Placenta      d) Endometrium
  19. **Human embryo will be called as a "foetus" after**  
a) 2 months      b) 4 months      c) 6 months      d) 7 months
  20. **The placental barrier between the foetal and maternal blood is minimum in**  
a) goat      b) man      c) cow      d) pig
  21. **Placental barriers are maximum in**  
a) rabbit      b) man      c) pig      d) cat
  22. **Parasitic mode of nutrition occurs in.....embryo.**  
a) amphibian    b) reptilian    c) mammalian    d) avian
  23. **Umbilical cord contain**  
a) placenta      b) umbilicus  
c) allantoic artery and vein      d) discus proligerous
  24. **Acrosome reaction in sperm is triggered by**  
a) release of lysin      b) release of fertilization  
c) capacitation      d) influx of sodium into sperm
  25. **Animal pole of frog's egg in water remain upward because**  
a) it has no yolk      b) it absorbs light  
c) sperms enters from thin pole      d) it makes egg invisible to enemies by absorbing light
  26. **How many meiotic division require to produce 200 egg cells?**  
a) 50      b) 100      c) 200      d) 100