

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2013.

M.Sc. (MEDICAL ANATOMY)

COURSE CODE : 501

Register Number :

*Signature of the Invigilator
(with date)*

COURSE CODE : 501

Time : 2 Hours

Max : 400 Marks

Instructions to Candidates :

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.
2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.
3. Read each of the question carefully and shade the relevant answer (A) or (B) or (C) or (D) in the relevant box of the ANSWER SHEET using HB pencil.
4. Avoid blind guessing. A wrong answer will fetch you -1 mark and the correct answer will fetch 4 marks.
5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.
6. Do not open the question paper until the start signal is given.
7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.
8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.
9. Use of Calculators, Tables, etc. are prohibited.

1. Which of the following is not correct?
 - (A) Tendon connects a bone to another bone
 - (B) Ligament consists of mainly collagen fibres and some elastic fibres
 - (C) Sprain is caused by excessive pulling of ligaments
 - (D) Tendons and ligaments are connective tissues

2. The correct statement is
 - (A) Cartilage is made up of chondrocytes
 - (B) Hyaline cartilage is the most abundant kind of cartilage
 - (C) Elastic cartilage is found in the wall of larynx, ear pinna, epiglottis and Eustachian tubes
 - (D) All of the above

3. Number of bones in the adult human body is

(A) 206	(B) 406	(C) 306	(D) 106
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4. Vertebral column of human body is made up of

(A) 33 vertebrae	(B) 45 vertebrae	(C) 52 vertebrae	(D) 23 vertebrae
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5. The joint of radio-ulna with the upper arm is

(A) Hinge joint	(B) Pivot joint	(C) Socket joint	(D) None of these
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6. Lactic acid is transported by blood to liver, where it is converted to glycogen through

(A) Lactic acid cycle	(B) Krebs cycle	(C) Calvin cycle	(D) Cori's cycle
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7. In human body, which one of the following is anatomically correct?

(A) Floating ribs-2 pairs	(B) Collar bones-3 pairs
(C) Salivary glands-1 pair	(D) Cranial nerves-10 pairs

8. Frog has

(A) Five fingers and four toes	(B) Four fingers and five toes
(C) Four fingers and four toes	(D) Five fingers and five toes

9. The major component of vertebrate bone is

(A) Calcium phosphate	(B) Calcium carbonate
(C) Magnesium phosphate	(D) Sodium chloride

10. The correct statement regarding muscular tissue is
- (A) Muscular tissue is mesodermal in origin
 - (B) Plasma membrane covering the muscle fibre is sarcolemma
 - (C) Sarcomere, the functional unit of myofibril is the region between two Z-lines
 - (D) All of the above
11. The muscle fatigue occurs due to excessive activity resulting in the accumulation of
- (A) Ethanol
 - (B) Lactic acid
 - (C) Propanol
 - (D) Citric acid
12. A fractured coracoids process would involve the
- (A) Clavicle
 - (B) Scapula
 - (C) Ulna
 - (D) Radius
13. The false pelvis is
- (A) Inferior to the true pelvis
 - (B) Found in the male only
 - (C) Narrower in the male than in the female
 - (D) Not really part of the skeletal system
14. Which one of the following is a skull bone?
- (A) Coracoid
 - (B) Arytaenoid
 - (C) Atlas
 - (D) Pterygoid
15. A fracture of the lateral malleolus would involve
- (A) The fibula
 - (B) The tibia
 - (C) The ulna
 - (D) A rib
16. Abductor muscle is antagonist of
- (A) Adductor
 - (B) Flexor
 - (C) Pronator
 - (D) Rotator
17. Bending of ankle joint is brought about by
- (A) Biceps
 - (B) Triceps
 - (C) Trapezius
 - (D) Gastrocnemius
18. Acetabulum forms .
- (A) Hip joint
 - (B) Shoulder joint
 - (C) Knee joint
 - (D) Elbow joint

19. Phalangeal/digital formula for human hand/foot is
 (A) 0,2,2,3,3 (B) 0,2,3,3,3 (C) 2,2,3,3,3 (D) 2,3,3,3,3
20. The number of carpals per limb of human beings is
 (A) 5 (B) 6 (C) 7 (D) 8
21. The contractile protein of skeletal muscle involving ATPase activity is
 (A) Tropomyosin (B) Myosin (C) α -actinin (D) Troponin
22. A facial bone that is not paired is
 (A) Maxilla (B) Lacrimal Bone (C) Vomer (D) Nasal Bone
23. Haemopoiesis would most likely take place in
 (A) The hyoid bone (B) A vertebra (C) The maxilla (D) The scapula
24. Which of the following bones is not the part of axial skeleton?
 (A) Hyoid bone (B) Sacrum (C) Sphenoid bone (D) Clavicle
25. The optic foramen is located within the
 (A) Ethmoid bone (B) Occipital bone
 (C) Palatine bone (D) Sphenoid bone
26. Which of the following bones articulates distally with the talus in the foot?
 (A) Navicular bone (B) First metatarsal bone
 (C) Calcaneus (D) First cuneiform bone
27. Muscle pump is
 (A) Beating of heart
 (B) Squeezing effect of muscle upon veins running through them
 (C) Peristaltic wave that travel along the alimentary canal
 (D) None of these
28. In the body, the membrane surrounding the bone is know as
 (A) Periosteum (B) Endosteum
 (C) Perichondrium (D) Chondrocytes

29. Foramen magnum and occipital condyles are found in
 (A) Fronto parietal bone (B) Occipital bone
 (C) Pro-otic bone (D) Squamosal bone
30. Muscle that brings the limb towards midline is called
 (A) Flexor (B) Abductor (C) Adductor (D) Pronator
31. The mastoid process is a structural prominence of
 (A) Sphenoid bone (B) Parietal bone
 (C) Occipital bone (D) Temporal bone
32. An example of a gliding joint is
 (A) Intercarpal joint (B) Radiocarpal joint
 (C) Intervertebral joint (D) Phalangeal joint
33. The mandibular fossa is a feature of which part of the temporal bone?
 (A) Squamous part (B) Petrous part
 (C) Tympanic part (D) Articular part
34. The superior and middle conchae are bony structures of which bone?
 (A) Palatine bone (B) Nasal bone (C) Ethmoid bone (D) Maxilla
35. A cricket player is fast chasing a ball in the field. Which one of the following groups of bones are directly contributing in this movement?
 (A) Femur, malleus, tibia, metatarsals (B) Pelvis, ulna, patella, tarsals
 (C) Sternum, femur, tibia, fibula (D) Tarsals, femur, metatarsals, tibia
36. Which of the following bones does not contain a paranasal sinus?
 (A) Frontal bone (B) Ethmoid bone
 (C) Vomer (D) Sphenoid bone
37. Teeth are supported by
 (A) Maxillae and mandible
 (B) Mandible and palatine bones
 (C) Maxillae and palatine bones
 (D) Maxillae, mandible and palatine bones

38. The number of tarsals per limb of human beings is
 (A) 5 (B) 6 (C) 7 (D) 8
39. The only movable bone in the skull is
 (A) Maxilla (B) Frontoparietal (C) Mandible (D) Nasal
40. Elbow joint is
 (A) Ball and socket joint (B) Hinge joint
 (C) Suture joint (D) Gliding joint
41. Sutures present between various bones of skull are
 (A) Cartilaginous joints (B) Synovial joints
 (C) Fibrous joints (D) Hinge joints
42. An acromian process is characteristically found in the
 (A) Pelvic girdle of mammals (B) Skull of frog
 (C) Pectoral girdle of mammals (D) Sperm of mammals
43. Which type of cartilage is the precursor to endochondrial bone?
 (A) Costal (B) Hyaline (C) Fibroelastic (D) Articular
44. Which suture extends from the anterior fontanel to the anterolateral fontanel?
 (A) Coronal suture (B) Lambdoidal suture
 (C) Squamous suture (D) Longitudinal suture
45. Cartilaginous joints
 (A) Permit slight movements (B) Are found in symphysis
 (C) Are found in the bodies of vertebrae (D) All of the above
46. Hinge joints
 (A) Are synovial joints (B) Permit movement in one direction
 (C) Are found in knee (D) All of the above
47. Which of the following is not the part of os coxae?
 (A) Acetabulum (B) Ischium
 (C) Pubis (D) Capitulum

48. Which of the following is not a function of the skeletal system?
- (A) Production of blood cells (B) Storage of carbohydrates
(C) Storage of minerals (D) Protection of vital organs
49. Mitosis resulting in elongation of bone occurs at the
- (A) Articular cartilage (B) Periosteum
(C) Epiphyseal plate (D) Dipole
50. Which one of the following pairs is correctly matched?
- (A) Cartilaginous joint-skull bones
(B) Hinge joint-between vertebrae
(C) Fibrous joint-between phalanges
(D) Gliding joint-between zygapophyses of the successive vertebrae
51. Which hormone-bone cell combination may result in osteoporosis?
- (A) Adrenal cortisol-osteoclast (B) Estrogen-osteoblast
(C) Thyroid hormone-osteoclast (D) Thyrocalcitonin-osteoblast
52. Synovial fluid that lubricates a synovial joint is produced by
- (A) A meniscus (B) The synovial membrane
(C) A bursa (D) The articular cartilage
53. A flattened or shallow articulating surface of a bone is called
- (A) A tubercle (B) A fossa (C) A fovea (D) A facet
54. Gorilla rib is
- (A) Extra floating rib (B) Extra false rib
(C) Extra true rib (D) First false rib
55. Olecranon fossa is found in
- (A) Humerus (B) Radius (C) Ulna (D) Tibia
56. Some vertebrae in birds fuse to form
- (A) Sacrum (B) Synsacrum (C) Coccyx (D) None of these

57. Collar bone is known as
 (A) Scapula (B) Coracoid (C) Patella (D) Clavicle
58. Glenoid cavity is found in
 (A) Humerus (B) Pectoral girdle
 (C) Pelvic girdle (D) Skull
59. The bones common to face and cranium are
 (A) Parietal (B) Frontal (C) Temporal (D) Palatine
60. Cheek bones are
 (A) Lacrimal (B) Zygomatic (C) Parietal (D) Ethmoid
61. Clavicle is a constituent of
 (A) Pectoral girdle (B) Fore limbs
 (C) Hind limbs (D) Pelvic girdle
62. Which of the following is not the locomotory organ of Protozoa?
 (A) Cilia (B) Flagella (C) Parapodia (D) Pseudopodia
63. A joint characterized by an epiphyseal plate is called
 (A) A synovial joint (B) A suture
 (C) A Symphysis (D) A synchondrosis
64. Which of the following bones is characterized by the presence of a diaphyses and epiphyses, articular cartilages and a medullary cavity?
 (A) Scapula (B) Sacrum (C) Tibia (D) Patella
65. Remodeling of bone is a function of
 (A) Osteoclasts and osteoblasts (B) Osteoblasts and osteocytes
 (C) Chondrocytes and osteocytes (D) Chondroblasts and osteoblasts
66. Long neck of camel or giraffe has
 (A) Numerous cervical vertebrae
 (B) Development of extra large intervertebral pads
 (C) Longer vertebrae
 (D) Development of extra bony plates between adjacent cervical vertebrae

67. Number of bones present in a leg of human being
 (A) 25 (B) 30 (C) 35 (D) 40
68. Bone formed by the ossification of tendons is called
 (A) Replacing bone (B) Sesamoid bone
 (C) Investing bone (D) None of these
69. Longest bone in lower arm is
 (A) Ulna (B) Radius (C) Tibia (D) Femur
70. Obturator foramen is found in
 (A) Interventricular septum (B) Pectoral girdle
 (C) Skull (D) Pelvic girdle
71. Six of the 206 bones of human skeleton occur in
 (A) Skull (B) Middle ear
 (C) Pectoral girdle (D) Pelvic girdle
72. Number of bones in human axial skeleton is
 (A) 80 (B) 100 (C) 106 (D) 126
73. ATPase enzyme needed for muscle contraction is located in
 (A) Actinin (B) Troponin (C) Myosin (D) Actin
74. On a skeleton positioned in the anatomical position, which of the following structures faces anteriorly?
 (A) Spinous process of the scapula (B) Subscapular fossa
 (C) Infraspinous fossa (D) Linea aspera of the femur
75. The sagittal suture is positioned between
 (A) The sphenoid and temporal bones (B) The temporal and parietal bones
 (C) The occipital and parietal bones (D) The right and left parietal bones

76. Which of the following bones lacks a styloid process?
 (A) Sphenoid bone (B) Temporal bones
 (C) Ulna (D) Radius
77. Surgical entry through the roof of the mouth to remove a tumour of the pituitary gland would involve.
 (A) Mastoid process (B) Pterygoid process
 (C) Styloid process (D) Sella turcica
78. Locomotory organs in starfish are
 (A) Tube feet (B) Tentacles (C) Cilia (D) Appendages
79. Correct order of ear ossicles in rabbit is
 (A) Incus, stapes, malleus (B) Malleus, incus, stapes
 (C) Malleus, stapes, incus (D) Incus, malleus, stapes
80. Muscle that bends one part over another is called
 (A) Extensor (B) Flexor (C) Abductor (D) Adductor
81. The cribriform plate is a specialized portion of which bone?
 (A) Sphenoid bone (B) Maxilla
 (C) Temporal bone (D) Ethmoid bone
82. Joints between carpals are
 (A) Fibrous joints (B) Cartilaginous joints
 (C) Angular joints (D) Gliding joints
83. Immovable joints are called
 (A) Synarthroses (B) Amphiarthroses
 (C) Diarthroses (D) None of these
84. In old age, stiffness of joints is due to the
 (A) Hardening of bones (B) Inefficiency of muscles
 (C) Decrease in synovial fluid (D) Enlargement of bones

85. Nucleus pulposus is found in
 (A) Brain (B) Nucleus
 (C) Intervertebral disc (D) Liver
86. Which of the following is important for muscle contraction and nerve impulse transmission?
 (A) Ca^{2+} ions (B) Ca^{2+} and Mg^{2+} ions
 (C) Mg^{2+} ions (D) Fe^{2+} ions
87. Coronary process is a part of
 (A) Upper jaw (B) Lower jaw
 (C) Hyoid apparatus (D) Cranium
88. A number of bones in the skull of man are
 (A) 10 (B) 18 (C) 206 (D) 23
89. Which of the following form thoracic cage of man?
 (A) Ribs, sternum and thoracic vertebra (B) Ribs and sternum
 (C) Ribs, sternum and lumbar vertebrae (D) Ribs and thoracic vertebrae
90. The joint formed between humerus and radius is
 (A) Gliding (B) Pivot (C) Hinge (D) Ball and socket
91. Total number of bones found in right upper limb is
 (A) 25 (B) 26 (C) 30 (D) 60
92. The main function of ligament is
 (A) Joining of two bones (B) Joining of muscles
 (C) Joining of muscles to bone (D) Joining of muscle to nerves
93. Glenoid cavity is found in
 (A) Pelvic girdle (B) Pectoral girdle
 (C) Sternum (D) Humerus

94. The parasphenoid bone in frog forms
 (A) Base of cranium (B) Floor of cranium
 (C) Dorsal side of cranium (D) Dorsolateral side of cranium
95. Flippers of seal are modified
 (A) Fins (B) Hind limb (C) Forelimb (D) Gills
96. Synsacrum of fowl consists of about
 (A) 29 Vertebrae (B) 3 Vertebrae
 (C) 16 Vertebrae (D) Single Vertebrae
97. Motor supply of the diaphragm is
 (A) Thoracodorsal nerve (B) Intercostal nerves
 (C) Phrenic nerve (D) Sympathetic nerves
98. All of the followings are true regarding the pudendal nerve, except
 (A) Sensory and motor
 (B) Derived from S2, 3, 4
 (C) Comes out through the lesser sciatic foramen
 (D) Main nerve supply of pelvic organs
99. In a post polio case, ilio-tibial tract contracture is likely to result in
 (A) Extension at the hip and knee (B) Extension at the hip
 (C) Flexion at the hip and the knee (D) Extension at the knee
100. All of the following are supplied by the facial nerve except
 (A) Lacrimal gland (B) Submandibular gland
 (C) Nasal glands (D) Parotid gland