

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2011.

M.Sc. (ANATOMY)

COURSE CODE : 501

Register Number :

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*Signature of the Invigilator*  
(with date)

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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 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. Reed Frost Model is a mathematical model of
  - (A) Infectious disease transmission and herd immunity
  - (B) Health insurance and community premium
  - (C) Infant mortality rate and life expectancy
  - (D) Consanguinity and congenital abnormalities
  
2. Allocation concealment is related to
  - (A) Cross sectional surveys
  - (B) Case control studies
  - (C) Prospective studies
  - (D) Randomized controlled trials
  
3. Berkson's Bias is a form of
  - (A) Selection Bias
  - (B) Observer Bias
  - (C) Classification Bias
  - (D) Recall Bias
  
4. Data cleaning is usually done
  - (A) At every data entry
  - (B) Before Master Chart preparation
  - (C) After Master Chart preparation
  - (D) If analysis points to outliers
  
5. One of the following is NOT an effect measure
  - (A) Attributable fractions
  - (B) Risk differences
  - (C) Rate ratios
  - (D) Exposure association
  
6. The distribution used to describe the occurrence of rare events in a large population is
  - (A) Log normal distribution
  - (B) Skewed distribution
  - (C) Geometric distribution
  - (D) Poisson distribution
  
7. Control group is used in experiments to reduce the impact of
  - (A) Randomization
  - (B) Methodological flaws
  - (C) Small sample size
  - (D) Extraneous variables
  
8. Which one is a measure of variation?
  - (A) Median
  - (B) Mode
  - (C) Mean
  - (D) Standard Deviation
  
9. What does 'P' in "P value" mean?
  - (A) Proportionate
  - (B) Probability
  - (C) Percentile
  - (D) Predetermined

10. Random allocation refers to assigning animals to different
- (A) Groups alternatively
  - (B) Treatments randomly
  - (C) Cages randomly
  - (D) Experiments hapazardly
11. Power of a study is calculated from
- (A) Level of significance
  - (B) Type 2 error
  - (C) Confidence interval
  - (D) Type 1 error
12. Frequency polygon is obtained by joining the mid-points of
- (A) Pie chart
  - (B) Simple bar chart
  - (C) Multiple bar chart
  - (D) Histogram
13. The following statements are true of null hypothesis EXCEPT
- (A) It states that the relationship predicted in the experimental hypothesis does not exist
  - (B) The results obtained are not due to consistent relationship between two variables
  - (C) The experimenter has to support this hypothesis to prove his prediction
  - (D) The null hypothesis is different from experimental hypothesis
14. All of the following conditions should be met before applying 'f test EXCEPT
- (A) The data should follow normal distribution
  - (B) Populations should have equal SO
  - (C) Samples must be chosen randomly
  - (D) The data must be nominal type
15. Incidental sampling technique
- (A) Is the same as random sampling
  - (B) Is difficult to do
  - (C) Easily accessible subjects are not selected
  - (D) Mayor may not be representative of the population
16. Which of the following is NOT a principle of medical ethics?
- (A) Ambiguity
  - (B) Beneficence
  - (C) Non maleficance
  - (D) Justice and equality

17. In a single blind study of a drug
- (A) The examiner does not know the treatment allocation
  - (B) The participant does not know the treatment allocation
  - (C) The principal investigator does not know the treatment allocation
  - (D) The funding agency does not know the treatment allocation
18. Which of the following is true regarding a case-control study?
- (A) A group of study subjects are followed up after recruiting
  - (B) Confounding factors can be controlled and there is no chance for bias
  - (C) Usually retrospective
  - (D) Very expensive and time consuming
19. How many genes constitute the human genome?
- (A) More than 1 million
  - (B) 4 Mb
  - (C) About 30,000
  - (D) 23 pairs
20. A discrete collection of gene fragments on a stamp-sized chip is called
- (A) Reference sequence
  - (B) SNP profile
  - (C) Gene microarray
  - (D) Semiconductor
21. Which one of the following veins is NOT a tributary of the portal vein?
- (A) Rt. Gastric vein
  - (B) Lt. Gastric vein
  - (C) Rt. Inferior phrenic vein
  - (D) Rt. Gastro-epiploic vein
22. The following structures develop from the first pharyngeal arch EXCEPT
- (A) Maxilla
  - (B) Zygomatic bone
  - (C) Malleus
  - (D) Stapes
23. The common carotid artery develops from the
- (A) First aortic arch
  - (B) Second aortic arch
  - (C) Third aortic arch
  - (D) Fourth aortic arch
24. The right bronchial artery is a branch of the
- (A) Thoracic aorta
  - (B) First right post. intercostal artery
  - (C) Second right post. intercostal artery
  - (D) Third right post. intercostal artery

25. The following glands contain the myoepithelial cells EXCEPT
- (A) Mammary gland (B) Sebaceous gland  
(C) Sweat gland (D) Salivary gland
26. The following eye muscles are supplied by oculomotor nerve EXCEPT
- (A) Sup. Rectus (B) Info Rectus  
(C) Medial rectus (D) Lateral rectus
27. Which one of the following arteries is NOT a branch of the ophthalmic artery?
- (A) Supraorbital (B) Supratrochlear  
(C) Superficial temporal (D) Dorsal nasal
28. Which one of the following structures is NOT embedded within the Parotid gland?
- (A) Stylomandibular ligament (B) Retromandibular vein  
(C) External carotid artery (D) Facial nerve
29. Which one of the following muscles of the tongue is supplied by the pharyngeal plexus?
- (A) Genioglossus (B) Myoglossus  
(C) Palatoglossus (D) Styloglossus
30. Which one of the following muscles is the abductor of the vocal folds?
- (A) Posterior cricoarytenoid (B) Lateral cricoarytenoid  
(C) Transverse arytenoid (D) Cricothyroid
31. The iliac bursa communicates with the synovial cavity of the hip joint between the
- (A) Iliofemoral and pubofemoral ligaments  
(B) Two limbs of iliofemoral ligament  
(C) Iliofemoral and ischiofemoral ligaments  
(D) Ischiofemoral and pubofemoral ligaments
32. The following structures pass below the piriformis muscle EXCEPT
- (A) The pudendal nerve (B) The obturator nerve  
(C) The nerve to obturator internus (D) The internal pudendal artery

33. Which one of the following statements is NOT true for the popliteus muscle?
- (A) It arises from the popliteal surface of the tibia
  - (B) Its tendon lies within the capsule of the knee joint
  - (C) It unlocks the knee joint
  - (D) It is supplied the common peroneal nerve
34. Which one of the following arteries supplies the cruciate ligaments of the knee joint?
- (A) Superior medial genicular artery
  - (B) Superior lateral genicular artery
  - (C) Middle genicular artery
  - (D) Inferior medial genicular artery
35. Which one of the following metatarsals is prone for "March Fracture"?
- (A) First                      (B) Second                      (C) Third                      (D) Fourth
36. The following arteries supply the rectum EXCEPT
- (A) Superior rectal artery                      (B) Inferior rectal artery
  - (C) Median sacral artery                      (D) Lateral sacral artery
37. The vesicoprostatic venous plexus drains into the
- (A) External iliac vein                      (B) Internal iliac vein
  - (C) Median sacral vein                      (D) Lateral sacral vein
38. Which one of the following is NOT a feature of the prostatic urethra?
- (A) Uvula vesicae                      (B) Seminal colliculus
  - (C) Urethral crest                      (D) Prostatic utricle
39. The following structures develop from the mesonephric duct EXCEPT
- (A) Ductus deferens                      (B) Ejaculatory duct
  - (C) Seminal vesicle                      (D) Rete testis
40. Most commonly used donar nerve in nerve grafting is
- (A) Medial popliteal nerve                      (B) Posterior interosseus nerve
  - (C) Great auricular nerve                      (D) Sural nerve
41. Sacral canal's volume is
- (A) 05 - 10 cc                      (B) 15 - 25 cc                      (C) 10 - 15 cc                      (D) 25 - 35 cc

42. Deltoid ligament is composed of all of the following parts EXCEPT
- (A) Tibio calcaneal (B) Tibio talar  
(C) Tibio fibular (D) Tibio navicular
43. CSF is partly absorbed by lymphatics around one of the following set of cranial nerves
- (A) I, II, VII, VIII (B) I, II, VI, VII  
(C) I, III, VII, VIII (D) I, II, VI, VIII
44. Chassaignac's tubercle lies at level of
- (A) Erb's point (B) Stellate ganglion  
(C) Atlas (D) Odontoid process
45. Tectal breaking is seen in
- (A) Dandy -walker malformation (B) Arnold -chiari malformation  
(C) Aqueductal stenosis (D) Third ventricular tumor
46. Great vein of Galen is formed by
- (A) Superior saggital sinus with straight sinus  
(B) Inferior saggital sinus with straight sinus  
(C) Internal cerebral veins  
(D) Basilar vein
47. Potent foramen ovale is due to failure of fusion of
- (A) Ostium primum with endocardial cushion  
(B) Ostium primum with Ostium secundum  
(C) Ostium primum with septum primum  
(D) Ostium primum with mitral valve
48. Double barr body is seen in which one of the following syndrome
- (A) XO (B) XXY  
(C) XXX (D) TRISOMY 21
49. Examphalos is a condition with defect in formation of
- (A) Umbilicus (B) Cervix  
(C) Abdominal wall (D) Urinary bladder

50. All of the following tissues / organs have lymphatics EXCEPT
- (A) Brain (B) Internal ear  
(C) Dermis (D) Eye
51. The largest ganglion in the neck is
- (A) Superior cervical ganglion (B) Middle cervical ganglion  
(C) Stellate ganglion (D) Second thoracic ganglion
52. Increased thickness of skull bone is seen in
- (A) Thalassemia (B) Renal Osteodystrophy  
(C) Osteomalacia (D) Sarcoidosis
53. After herniotomy loss of sensation on scrotum and root of penis is due to injury to
- (A) Ilio-inguinal nerve (B) Iliohypogastric nerve  
(C) Genito femoral nerve (D) Obturator nerve
54. Fascia of Gerota is
- (A) True capsule (B) Renal fascia  
(C) Fatty capsule (D) Thoraco-lumbar fascia
55. Buck's fascia is related to
- (A) Ischio-rectal fascia (B) Thigh  
(C) Neck (D) Penis
56. Superficial inguinal lymph node drain all of the following EXCEPT
- (A) Isthmus of uterine tube (B) Inferior part of anal canal  
(C) Big toe (D) Penile urethra
57. Internal carotid nerve is a branch of
- (A) Coeliac ganglion (B) Internal sympathetic chain  
(C) Vagus nerve (D) Phrenic nerve
58. Ana nephroni is lined by
- (A) Columnar epithelium (B) Squamous epithelium  
(C) Cuboidal and squamous epithelium (D) Stratified squamous epithelium

59. The following nerves are the branches of the posterior cord of the brachial plexus EXCEPT
- (A) Thoracodorsal nerve (B) Lag thoracic nerve  
(C) Axillary nerve (D) Radial nerve
60. Which one of the following statements is FALSE regarding deltoid muscle?
- (A) The anterior fibres are parallel bundles  
(B) The intermediate fibres are multipennate  
(C) The posterior fibres are bipennate  
(D) It is supplied by axillary nerve
61. Which one of the following is a sympathetic ganglion?
- (A) Ciliary (B) Coeliac  
(C) Otic (D) Submandibular
62. Which is not a type of epiphysis?
- (A) Atavistic (B) Friction  
(C) Pressure (D) Traction
63. Which of the following does NOT pass through the jugular foramen?
- (A) Glossopharyngeal nerve (B) Vagus nerve  
(C) Superior petrosal nerve (D) Inferior petrosal nerve
64. The juxtaglomerular cells are seen in the wall of the
- (A) Proximal convoluted tubule (B) Distal convoluted tubule  
(C) Afferent arteriole (D) Efferent arteriole
65. Which of the following supplies the cruciate ligament of knee joint?
- (A) Superior medial genicular artery (B) Inferior medial genicular artery  
(C) Superior lateral genicular artery (D) Middle genicular artery
66. The clavipectoral fascia is pierced by the following structures EXCEPT
- (A) Medial pectoral nerve (B) Lateral pectoral nerve  
(C) Cephalic vein (D) Thoracoacromial artery

67. Which of the following does NOT form the posterior relation of the kidney?  
 (A) Sympathetic trunk (B) Subcostal nerve  
 (C) Iliohypogastric nerve (D) Ilioinguinal nerve
68. The following develop from neural crest cells EXCEPT.  
 (A) Retina (B) Schwann cells  
 (C) Melanocytes (D) Spinal ganglia
69. Which one of the following does NOT develop from the endoderm?  
 (A) Kidney (B) Urinary Bladder  
 (C) Liver (D) Pancreas
70. Anterior pituitary gland develops from  
 (A) Sessel's pouch (B) Hypophyseal recess  
 (C) Craniopharyngeal canal (D) Infundibular sac
71. Fenestra vestibule receives  
 (A) Secondary tympanic membrane (B) Sinus tympani  
 (C) Base of stapes (D) Handle of malleus
72. Suprameatal triangle is related to  
 (A) Mastoid antrum (B) Aditus  
 (C) Epitympanic recess (D) Mastoid air cells
73. Nerves of Tympanic plexus lie on  
 (A) Promontory (B) Pyramid  
 (C) Processes cochleariformis (D) Fenestra vestibuli
74. Bilateral partial section of recurrent laryngeal nerve results in paralysis of  
 (A) Abductors of vocal cords (B) Tensors of vocal cords  
 (C) Adductors of vocal cords (D) Relaxors of vocal cords
75. The following are true about saccule of larynx EXCEPT  
 (A) Is a diverticulum of sinus of larynx  
 (B) Two in number  
 (C) Lies bet. Vestibular fold and cricoid cart  
 (D) Lies bet. Vestibular fold and thyroid cart

76. The root of mesentery crosses the following structures EXCEPT  
(A) Second part of duodenum (B) Abdominal aorta  
(C) Inferior vena cava (D) Right ureter
77. Posterior atlanto occipital membrane is a part of  
(A) Ligamentum flavum (B) Interspinous ligament  
(C) Anterior longitudinal ligament (D) Posterior longitudinal ligament
78. The following are true for posterior spino-cerebellar tract EXCEPT  
(A) Transmits impulses from lower half of body  
(B) Transmits impulses from upper half of body  
(C) Passes through inferior cerebral peduncle  
(D) Arises from cells of thoracic nucleus
79. Nucleus of tractus solitarius is connected with the following nerves EXCEPT  
(A) Facial (B) Glossopharyngeal  
(C) Vagus (D) Accessory
80. The following tracts / nuclei are involved in medial medullary syndrome EXCEPT  
(A) Pyramid (B) Medial Lemniscus  
(C) Hypoglossal nuclei (D) Nucleus ambiguus
81. The following are true for corticonuclear fibres EXCEPT  
(A) Connected with motor nuclei of cranial nerves  
(B) They are contralateral  
(C) Lies in whole of brain stem  
(D) Confined only to medulla oblongata
82. The fibres of ventral and dorsal cochlear nuclei decussate & give rise to  
(A) Trapezoid body  
(B) Trapezoid body and lateral lemniscus  
(C) Lateral lemniscus  
(D) Tegmentum of pons

83. The following are true for pre-tectal I nucleus EXCEPT
- (A) Receives fibres through superior brachium
  - (B) Receives fibres from occipital and preoccipital cortex
  - (C) From lateral root of optic tract
  - (D) Efferent fibres pass through occipital motor nucleus of same side
84. Island of Reil refers to
- (A) Occipital lobe
  - (B) Frontal lobe
  - (C) Temporal lobe
  - (D) Insular lobe
85. Arnold chiari malformation include all EXCEPT
- (A) Herniation of tonsil of cerebellum
  - (B) Hydrocephalus
  - (C) Craniovertebral anomalies !
  - (D) Vascular malformations 1
86. Mesencephalic nucleus of trigeminal nerve convey
- (A) Proprioceptive impulses
  - (B) Light touch and temperature
  - (C) Pain
  - (D) Light touch only
87. The following structures are embedded within the lateral wall of the cavernous sinus EXCEPT
- (A) Oculomotor nerve
  - (B) Trochlear nerve
  - (C) Ophthalmic nerve
  - (D) Mandibular nerve
88. The following structures are derived from the investing layer of the deep cervical fascia EXCEPT
- (A) Axillary sheath
  - (B) Parotid sheath
  - (C) Stylomandibular ligament
  - (D) Mandibulostylohyoid ligament
89. Which one of the following arteries is NOT a branch from the first part of the maxillary artery?
- (A) Inferior alveolar artery
  - (B) Greater palatine artery
  - (C) Middle meningeal artery
  - (D) Accessory meningeal artery

90. The following arteries form the Kieselbach's plexus EXCEPT
- (A) Sphenopalatine artery (B) Anterior ethmoidal artery  
(C) Superior labial artery (D) Greater palatine artery
91. Which one of the following is the hardest calcified part of the tooth?
- (A) Dentine (B) Enamel  
(C) Cementum (D) Neck
92. Which one of the following muscles produces the "Blinking Reflex"?
- (A) Levator palpebrae superioris  
(B) Superior oblique  
(C) Palpabral fibres of orbicularis oculi  
(D) Orbital fibres of orbicularis oculi
93. The following muscles are supplied from the accessory (Edinger-Westphal) part of oculomotor nucleus by short ciliary nerves EXCEPT
- (A) Radial fibres of ciliary muscle  
(B) Circular fibres of ciliary muscle  
(C) Sphincter pupillae  
(D) Dilator pupillae
94. The following statements are true for the prostatic venous plexus EXCEPT
- (A) It is present between prostate and true capsule  
(B) It joins the vesicoprostatic plexus  
(C) It receives the deep dorsal vein of the penis  
(D) It drains into the internal iliac vein

95. Juxtamerular cells are seen in the wall of the  
(A) Proximal convoluted tubule J:                      (B) Distal convoluted tubule  
(C) Afferent arteriole                                      (D) Efferent arteriole
96. The following glands contain the myoepithelial cells EXCEPT  
(A) Mammary glands                                      (B) Salivary glands  
(C) Sebaceous glands                                      (D) Sweat glands
97. The hyaline cartilage of the following structures has the perichondrium EXCEPT  
(A) Trachea    (B) Bronchii  
(C) Costal cartilage                                      (D) Articular cartilage
98. Which one of the following ligaments represents the third head of the coracobrachialis muscle?  
(A) Struther's ligament                                      (B) Ulnar collateral ligament  
(C) Radial collateral ligament it                              (D) Annular ligament
99. The coronary sinus develops from the  
(A) Right common cardinal vein                              (B) Left common cardinal vein  
(C) Right horn of sinus venosus                              (D) Left horn of sinus venosus
100. The following structures develop from the mesonephric duct EXCEPT  
(A) Ductus deferens    (B) Epididymis  
(C) Rete testis    (D) Seminal vesicle
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