ENTRANCE EXAMINATION FOR ADMISSION, MAY 2011.
M.Sc. (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 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 hapazhardly

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 't' 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 donor 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 sagittal sinus with straight sinus
   (B) Inferior sagittal 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) Ischiorectal 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) Laterallemniscus
(D) Tegmentum of pons
83. The following are true for pre-tecta 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

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 masonephric duct EXCEPT
(A) Ductus deferens (B) Epididymis
(C) Rete testis (D) Seminal vesicle