SECTION III

GUIDELINES FOR INTRODUCTION OF UNIFORM EXAMINATION/ EVALUATION PATTERN.

Examination should include the internal assessment, conducted periodically, as well as the summative University examination. The internal assessment shall constitute 20% of the total marks for the University examination.

THEORY:

1. Attempts should be made to examine/ evaluate the different branches of Anatomy.

2. A. 80% of the total marks to be allotted to level 1 of the course content. Deserving students should be able to get even Distinction, by focusing their attention only to Level 1.
B. 15% of the total marks to be allotted to level 2 of the course content.
C. 5% of the total marks allotted to level 3 of the course content, for identification of the top student of the class for the sake of awarding prizes or awards.

3. Long answer question (LAQ) to be chosen from among the lecture topics outlined under Gross Anatomy only. However, subdivisions like histology, embryology and innervation etc., can form part of the LAQ.

4. Teaching time allotted for Histology, which is about 15% of the total teaching hours and 20 marks allotted for Histology practical examination is also approximately 15% of the total marks. Hence, separate question on histology can be avoided in the theory paper. This will help inclusion of more branches of Anatomy for evaluation.

5. Short answer questions (SAQ) and multiple choice questions can be prepared from all the three levels outlined in Section 2 - both the Theory and Practicals- keeping in mind guidelines 2 and 4 mentioned above.

PRACTICALS:

A. Attempts should be made to include all regions of the body, as far as possible for evaluation purposes.
B. Should be designed to examine the skills of the student to identify the structure in the body, and to test his competence in correlating with the applications.

VIVA VOICE/ ORALS:

The following components to be included for examination the knowledge as well as the communication skill of the student:

a. Osteology

b. Imaging Sciences
c. Surface marking/ Living Anatomy
d. Embryology.

6. The distribution of the university examination marks would be as follows:

WRITTEN EXAMINATION: : 200 marks

Two papers carrying 100 marks each.

Paper I: General Anatomy, General Histology, General Embryology, Genetics, Upper limb, Lower limb, Abdomen, Pelvis and Perineum, Including relevant Systemic Histology and Embryology.

Paper II: Thorax, Head, Neck, Brain, Neuroanatomy, including the relevant Systemic Histology and Systemic Embryology.

PRACTICAL EXAMINATION:	**:**	**80 marks**
Gross Anatomy Histology including genetics		
ORAL EXAMINATION (VIVA VOCE)	**:**	**40 marks**
Osteology, Imaging Sciences, Surface Anatomy and Embryology		
INTERNAL ASSESSMENT INCLUDING THE PRACTICAL RECORDS	**:**	**80 marks**
TOTAL	**:**	**400 marks**

The curriculum planning committee feels confident that, with practice, the teaching faculty would make good use of this document to frame questions to achieve the goal.

CURRICULUM PLANNING COMMITTEE;
ANATOMICAL SOCIETY OF INDIA.

Sample Questions

EMBRYOLOGY & GENETICS

Write short notes on:

1. Trisomy
2. Structural abnormalities of chromosome
3. Meiosis
4. mesonephric duct derivatives
5. sex chromatin (Barr bodies)
6. karyotyping of chromosomes

MCQ:

1. Karyotype of Turner's syndrome is

a) 45 XO
b) 47 XY
c) 46 XY
d) 46 XX

2. In Cridu Chat syndrome the affected chromosome is

a) No, 5
b) No. 21
c) No. 18
d) No. 13

3. In an embryo period of greatest sensitivity to teratogens

a) 0 - 3 weeks
b) 3 - 8 weeks
c) 9 - 20 weeks
d) 20 - 30 weeks

4. The non invasive prenatal screening technique is

a) amniocentesis
b) chorionic villi sampling
c) ventriculography
d) ultra sound

5. Primitive streak makes its appearance at

a) 1^{st} week
b) 3^{rd} week
c) 5^{th} week
d) 7^{th} week

6. Neural crest cells give rise to all except

a) suprarenal medulla
b) autonomic ganglia
c) melanoblast
d) microglia

7. Crossing over occurs in

a) metaphase
b) meiosis
c) telophase
d) mitosis

8. Embryonic period stretches from

a) 3^{rd} week to 8^{th} week of intrauterine life
b) 4^{th} week to 8^{th} week of intrauterine life
c) 5^{th} week to 9^{th} week of intrauterine life
d) 6^{th} week to 9^{th} week of intrauterine life

9. Viable age of foetus

a) 6^{th} calendar month
b) 7^{th} calendar month
c) 8^{th} calendar month
d) 9^{th} calendar month

10. Feature of phocomelia

a) absence of all four limbs
b) presence of rudimentary hands and feet
c) presence of supernumerary digits
d) short arm, forearm and hand

11. All are examples of autosomal recessive traits except

a) albinism
b) alkaptonuria
c) haemophilia
d) sickle cell anaemia

12. Optic nerve is developmentally associated with the

a) telencephalon
b) diencephalon

c) mesencephalon
d) metencephalon

13. Sixth pharyngeal arch mesoderm gives rise to
a) hyoid bone
b) thyroid cartilage
c) epiglottis
d) cricoid cartilage

14. First permanent molar teeth erupt usually in the
a) 5^{th} year
b) 6^{th} year
c) 7^{th} year
d) 8^{th} year

15. Sphenomandibular ligament is a derivative of
a) first pharyngeal arch mesoderm
b) second pharyngeal mesoderm
c) third pharyngeal arch mesoderm
d) fourth pharyngeal arch mesoderm

UPPER LIMB

1. Describe the lymphatic drainage of the mammary gland - 8
2. With the help of a labeled diagram, describe the formation of brachial plexus and its branches. Describe the applied aspects - 6+2=8
3. Describe the formation, ligaments and movements of the shoulder joint. Why inferior dislocation of shoulder is common? - 1+3+3+1=8
4. Mention the root value of median nerve. Describe the course relation and distribution of median nerve in hand. Write about applied importance. 1+5+2=8
5. Mention the root value of ulnar nerve. Describe the course relation and branches of deep branch of ulnar nerve. Add a note on its applied anatomy - 1+5+2=8
6. Name the joints in which supination and pronation movements take place. Describe the joints. Name the muscles responsible for the said movements and give their nerve supply - 8.

Write short notes on:

1. clavipectoral fascia
2. axillary lymph nodes
3. Erb`s paralysis
4. palmar spaces
5. synovial joint

MCQ:

1. The failure of development of a limb in human is called
   a) phocomelia

b) amelia
c) examphalos
d) meromelia

2. Breast develops from
   a) ectoderm
   b) endoderm
   c) ectoderm & mesoderm
   d) mesoderm

3. Cephalic vein
   a) pierces clavipectoral fascia
   b) enters through cervico axillary canal
   c) continues as axillary vein
   d) is a post axial vein

4. Branch of brachial plexus given of at root stage is
   a) nerve to subclavius
   b) suprascapular nerve
   c) thoracodorsal nerve
   d) long thoracic nerve

5. Following are the branches of the posterior cord except
   a) lower subscapular nerve
   b) axillary nerve
   c) dorsal scapular nerve
   d) thoracodorsal nerve

6. In crutch paralysis usually nerve affected is
   a) median
   b) ulnar
   c) radial
   d) axillary

7. Following are branches of axillary artery except
   a) posterior circumflex humeral artery
   b) thoraco acromial
   c) subscapular
   d) circumflex scapular

8. Suprascapular artery is a branch of
   a) subclavian artery
   b) axillary artery
   c) thyrocervical trunk
   d) subscapular artery

9. All of the following muscles originate in the scapula except
   a) deltoid
   b) teres major
   c) trapezius
   d) coracobrachialis

10. Quadrangular space is bounded by the following muscles except
   a) teres major
   b) long head of triceps
   c) surgical neck of humerus
   d) deltoid

11. Shoulder joint is supplied by the following except
   a) axillary nerve
   b) suprascapular nerve
   c) lateral pectoral nerve
   d) dorsal scapular nerve

12. Branches of the ulnar nerve are the following except
   a) nerve to flexor carpi ulnaris
   b) dorsal branch of ulnar nerve
   c) nerve to muscles of hypothenar eminence
   d) nerve to 1^{st} lumbrical

13. Injury to ulnar nerve causes (repeated)
   a) ape hand
   b) claw hand
   c) Dupuytren`s contracture
   d) Volkmann`s contracture

14. Supination of the forearm is brought about by
   a) biceps & brachialis
   b) biceps & supinator
   c) biceps & brachioradialis
   d) brachialis brachioradialis

15. Wrist joint is
   a) condyloid joint
   b) elipsoid joint
   c) pivot joint
   d) plane joint

16. Hypothenar eminence of the hand is formed by all except
   a) abductor digiti minimi

b) flexor digiti minimi
c) adductor digiti minimi
d) opponens digiti minimi

17. Which of the following carpal bones do not form the proximal row
a) scaphoid
b) capitate
c) lunate
d) triquetral

18. Following are true about carpal tunnel syndrome except (repeated)
a) the median nerve is compressed
b) there is pain and numbness on lateral 3 ½ fingers
c) thenar eminence shows wasting
d) there is sensory impairment over thenar eminence

19. Muscle that produces the adduction of the fingers
a) palmar interossei
b) dorsal interossei
c) lumbrical
d) none of the above

20. Metacarpophalyngeal joints are examples of
a) ellipsoid joint
b) saddle joint
c) ball and socket joint
d) plane joint - (condyloid joint)

21. Carpometacarpal joint of the thumb is
a) saddle joint
b) ball & socket joint
c) condylar
d) hinge

22. The prime flexors of metacarpophalangeal joint are:
a) lumbricals
b) interossei
c) flexor digitorum profundus
d) flexor digitorum superficialis

23. The nail bed of ring finger is supplied by
a) palmar digital branch of ulnar nerve
b) palmar digital branch of median nerve
c) dorsal digital branch of ulnar nerve

d) palmar digital branches of median & ulnar nerves

24. Nerve supply to nail bed of index finger is
a) radial nerve
b) median nerve
c) superficial branch of ulnar nerve
d) palmar cutaneous branch of ulnar nerve

25. Erb`s point is formed by
a) C4 & C5
b) C5 & C6
c) C6 & C7
d) C8 & T1

26. Skeletal muscle fibres
a) present cross striations
b) are spindle shaped
c) present intercalary disks
d) have centrally placed nucleus

27. Branches of ulnar nerve are the following except
a) nerve to flexor carpi ulnaris
b) dorsal branch of ulnar nerve
c) nerve to muscles of hypothenar eminence
d) nerve to 1st lumbrical

28. Shoulder joint is supplied by the following except
a) axillary nerve
b) suprascapular nerve
c) lateral pectoral nerve
d) dorsal scapular nerve

29. Carpal tunnel syndrome is due to loss of function of
a) median nerve
b) radial nerve
c) ulnar nerve
d) axillary nerve

30. Carpometacarpal joint of the thumb is
a) saddle shaped
b) ball and socket
c) condylar
d) hinge

31. Lumbrical muscles

a) extend the interphalangeal joint
b) flex theinterphalangeal joint
c) extend the metacarpophalangeal joint
d) rotate the interphalangeal joint

32. Nutrient artery to the clavicle is a branch of:
a) superior thoracic
b) acromio thoracic
c) supra scapular
d) lateral thoracic

33. Erb`s paralysis is due to injury of:
a) long thoracic nerve
b) supra scapular nerve
c) upper trunk of brachial plexus
d) nerve to subclavius

LOWER LIMB

1. Describe the sciatic nerve under the following headings - 1+2+1+2+2=8
a) root value
b) relations
c) distribution
d) surface anatomy
e) applied anatomy

write short notes on:

1. Great saphenous vein
2. Femoral triangle
3. Femoral sheath with its applied anatomy
4. Inguinal lymph nodes
5. Adductor canal / subsartorial canal
6. Profunda femoris artery
7. Nerve supply and actions of gluteal muscles
8. Popliteus muscle
9. Menisci of knee joint
10. Plantar aponeurosis
11. Inversion and eversion
12. Arches of foot
13. Draw a diagram and label the parts of a transverse section of right ankle joint

MCQ:

1. Root value of lumbosacral trunk is
a) L4

b) L4, L5
c) L4, L5, S1
d) L5, S1

2. Following are correct about great saphenous vein except
   a) it commences form the medial end of dorsal venous arch
   b) it ascends in front of medial malleolus
   c) it is accompanied by sural nerve
   d) it terminates in femoral vein

3. Floor of the femoral triangle is formed by the following muscles except
   a) pectineus
   b) adductor brevis
   c) adductor longus
   d) psoas major

4. Pectineus muscle is supplied by
   a) femoral nerve
   b) anterior division of obturator nerve
   c) posterior division of obturator nerve
   d) both by femoral & obturator nerve

5. Femoral nerve
   a) is inside the femoral canal
   b) is inside the femoral sheath
   c) is outside the femoral sheath
   d) arises from the ventral divisions of L2,3,4

6. Femoral nerve supplies the following muscles except
   a) pectineus
   b) sartorius)
   c) rectus femoris
   d) adductor longus

7. Medial boundary of femoral ring is formed by
   a) pectinate ligament
   b) reflected part of inguinal ligament
   c) lacunar ligament
   d) conjoint tendon

8. Adductor canal is bounded by the following muscles except
   a) adductor longus
   b) adductor magnus
   c) vastus medialis

d) vastus lateralis

9. Site of choice for intramuscular injection is (repeated)
   a) upper and lateral quadrant of gluteal region
   b) lower and lateral quadrant of gluteal region
   c) upper and medial quadrant of gluteal region
   d) lower and lateral quadrant of gluteal region

10. Extension of hip joint in the erect posture limited by
   a) quadratus femoris
   b) psoas muscle
   c) ilofemoral ligament
   d) centre of gravity

11. The hip joint movement that gets restricted in case of injury to superior gluteal nerve
   a) abduction
   b) adduction
   c) flexion
   d) extension

12. Strongest ligament of the hip joint is
   a) iliofemoral
   b) pubofemoral
   c) ischiofemoral
   d) ligament of head of femur

13. Strongest pair of ligaments is the following
   a) iliofemoral & sacroiliac
   b) iliofemoral & talocalcaneal
   c) iliofemoral & spring ligament
   d) iliofemoral & tibiofemoral

14. Lateral ligament of knee joint is phylogenetically degenerated tendon of
   a) biceps femoris
   b) peroneus longus
   c) popliteus
   d) plantaris

15. Unlocking muscle of knee joint is
   a) biceps femoris
   b) semimembranosus
   c) semitendinosus
   d) popliteus

16. Febella is a sesamoid bone in

a) lateral head of gastrocnemeus
b) medial head of gastrocnemeus
c) plantaris
d) peroneus longus

17. Lateral compartment of the leg has
a) anterior tibial artery
b) posterior tibial artery
c) peroneal artery
d) none of the above

17. The peroneal artery is a branch of
a) posterior tibial artery
b) anterior tibial artery
c) arcuate artery
d) popliteal artery

18. Chief evertor of the foot is
a) peroneus longus
b) tibialis anterior
c) tibialis posterior
d) peroneus tertius

19. Tibialis posterior is inserted in all tarsal bones except
a) talus
b) calcaneum
c) cuboid
d) medial cuneiform

20. Inferior tibiofibular joint is a
a) fibrous joint
b) synovial joint
c) secondary cartilagenous joint
d) does not contribute to ankle joint

21. Which is syndesmosis
a) first carpometacarpal joint
b) wrist joint
c) tarsometatarsal joint
d) inferior tibiofibular joint

22. Structure attached to the tuberosity of navicular bone
a) spring ligament
b) tendon of tibialis posterior
c) tendon of tibialis anterior

d) long plantar ligament

23. Only tarsal bone lacking muscular or tendinous attachment is
a) cuboid
b) talus
c) navicular
d) medial cuneiform

24. Spring ligament of foot is called
a) plantar calcaneonavicular ligament
b) deltoid ligament
c) plantar ligaments
d) interosseous tibiofibular ligament

25. Following statements are true except
a) foot drop results from damage of deep peroneal nerve
b) Hammer toe results due to paralysis of lumbricals
c) flat foot occurs when medial longitudinal arch drops
d) In hallux valgus there is medial deviation of big toe

26. Foot drop is caused by damage to (repeated)
a) tibial nerve
b) deep peroneal nerve
c) superficial peroneal nerve
d) deltoid ligament

27. Spring ligament of foot is called
a) plantar calcaneonavicular ligament
b) deltoid ligament
c) plantar ligaments
d) interosseous tibiofibular ligament

28. Femoral nerve supplies the following muscles except
a) pectineus
b) sartotrius
c) rectus femoris
d) adductor longus

29. Foot drop is due to paralysis of the
a) tibial nerve
b) superficial peroneal nerve
c) deep peroneal nerve
d) common peroneal nerve

30. Lateral compartment of the leg has

a) anterior tibial artery
b) posterior tibial artery
c) peroneal artery
d) none of the above

31. A tendon giving origin to a set of muscles and insertion to a muscle
a) flexor digitorium brevis
b) flexor digitorum longus
c) flexor hallucis longus
d) peroneus longus

32. Type of hernia caused by injury to conjoint tendon
a) medial direct inguinal hernia
b) lateral direct inguinal hernia
c) indirect inguinal hernia
d) femoral hernia

33. Plantar surface of cuboid bone is grooved by
a) peroneus tertius
b) peroneus brevis
c) peroneus longus
d) flexor hallucis longus

34. Muscle most used in tailors during work in squatting position
a) adductor longus
b) semitendinosus
c) gracilis
d) sartorius

ABDOMEN

1. Describe the testis under the following headings - 2+2+2+2=8
a) coverings
b) blood supply
c) microscopy
d) development

2. Describe the pancreas under the following headings - 1+4+2+1=8
a) parts
b) relations
c) microscopic structure
d) development

3. Describe the formation, tributaries, termination and development of portal vein - 1+3+1+3=8

4. What is the length of second part of duodenum ? Describe the relations and features of the second part of the duodenum. Write briefly the development of the second part of duodenum - 1+5+2=8

5. What are the coverings of the kidney? Describe the relations of the right kidney with the help of diagrams. Give the embryological explanation for the congenital polycystic kidney and add a note on its clinical importance - 8

Write short notes on:

1. Epiploic foramen
2. Development of inferior vena cava
3. Caecal recess
4. Inguinal triangle
5. Pelvic diaphragm
6. Segmental anatomy of liver
7. Development and developmental anomalies of kidney
8. Inguinal hernia
9. Microscopic structure of testis
10. Interior of anal canal
11. Portocaval anastamosis
12. Lymphatic drainage of stomach
13. Paraxial mesoderm
14. Barr body
15. Histology of large vein
16. Microscopic structure and development of suprarenal gland
17. Sites of portocaval anastamosis and their clinical significance
18. Relations of head of pancreas
19. Turner`s syndrome
20. Posterior abdominal wall
21. Rectus sheath
22. Broad ligament
23. Spermatic cord
24. Blood supply of stomach
25. Polycystic kidney
26. Splenic circulation
27. Microscopic anatomy of ureter
28. Lymphatic drainage of stomach
29. Vasectomy operation
30. Microscopic anatomy of suprarenal gland
31. Lesser omentum
32. Thoracolumbar fascia
33. Psoas major
34. Microscopic anatomy of pancreas
35. Applied anatomy of portal vein

MCQ:

1. Left kidney is related posteriorly to
   a) 11^{th} rib only
   b) 12^{th} rib only
   c) 10^{th} rib only
   d) both 11 & 12^{th} rib

2. Which of the following structures is not present in the lesser omentum
   a) portal vein
   b) hepatic artery
   c) bile duct
   d) inferior vena cava

3. Iliocolic artery is a branch of
   a) superior mesenteric artery
   b) inferior mesenteric artery
   c) abdominal aorta
   d) splenic artery

4. Which of the statements is not true in relation to spleen
   a) develops in dorsal mesogastrium
   b) retroperitoneal
   c) lies deep to 10^{th} and 11^{th} ribs
   d) related to tail of pancreas

5. Root value of pudendal nerve is
   a) L2,3,4
   b) L4,5 S1,2,3
   c) S2,3,4
   d) S1,2

6. Lymphatic drainage of posterior fornix of vagina is into
   a) internal iliac nodes
   b) external iliac nodes
   c) internal and external iliac nodes
   d) superficial inguinal nodes

7. Which of the following structures can not be palpated per rectal examination in male

a) urogenital diaphragm
b) anorectal ring
c) anterior surface of sacrum
d) ureter

8. Fructose, source of energy for spermatozoa is primarily found in secretions from the
a) bulbourethral gland
b) epididymis
c) prostate
d) seminal vesicles

9. Morphological remnant of left umbilical vein is
a) ligamentum venosum
b) ligamentum arteriosum
c) ligamentum teres of liver
d) median umbilical ligament

10. The hernia passing through the deep inguinal ring is
a) medial direct inguinal hernia
b) lateral direct inguinal hernia
c) indirect inguinal hernia
d) none of the above

11. The skin at the level of umbilical is supplied by spinal nerve
a) T9
b) T10
c) T11
d) T12

12. Uncinate process of pancrease developes from
a) ventral pancreatic bud
b) dorsal pancreatic bud
c) both ventral and dorsal, pancreatic buds
d) hepatic bud

13. Elastic fibres are
a) prominent in hyaline cartilage
b) formed from fibroblasts
c) prominent in superficial fascia

d) prominent in aponeurosis

14. Internal spermatic fascia is derived from
    a) external oblique muscle
    b) internal oblique muscle
    c) transversus abdominis
    d) fascia transversalis

15. Inferior epigastric artery is a branch of
    a) internal iliac artery
    b) external iliac artery
    c) femoral artery
    d) deep circumflex iliac artery

16. The following are 45 cms long except
    a) thoracic duct
    b) aorta
    c) ductus deferens
    d) ureter

17. Epidydimis is developed from
    a) meonephric duct
    b) paramesonephric duct
    c) epigenital tubules
    d) paragenital tubules

18. Left suprarenal vein empties into
    a) left renal vein
    b) left gonodal vein
    c) inferior vena cava
    d) portal vein

19. Length of male urethra is
    a) 10 cms
    b) 15 cms
    c) 20 cms
    d) 25 cms

20. Vertebral level of duodenojejunal flexure is

a) T 12
b) L 1
c) L2
d) L 3

21. Part of liver that forms roof of epiploic foramen is
a) left lobe
b) quadrate lobe
c) caudate lobe
d) caudate process

22. Smooth muscle tissue is seen in the microscopic structure of following organ except
a) prostate
b) testis
c) vasdeferens
d) epidydimis

23. Failure of ureteric bud to reach metanephric cap results in
a) a ureter without kidney
b) polycystic kidney
c) hydronephrosis
d) pan cake kidney

24. Which of the following is not the tributary of left renal vein
a) inferior phrenic vein
b) left gonodal vein
c) first lumbar vein
d) left suprarenal vein

25. Spermatic cord includes all the following except
a) testicular lymphatics
b) ejaculatory ducts
c) vasdeferens
d) testicular vessels

26. Meckel`s diverticulum
a) contains all the layers of the gut
b) represents the remains of urachus
c) receives blood supply from inferior mesenteric vessels

d) represents the junctional point of midgut and hindgut

27. Cremasteric artery is a branch of
a) external iliac artery
b) internal iliac artery
c) superior epigastric artery
d) inferior epigastric artery

28. Payer`s patches are present in
a) oesophagus
b) duodenum
c) ileum
d) caecum

29. In which one of the following organs submcosal glands are present
a) colon
b) anal canal
c) stomach
d) duodenum

30. The length of ureter is
a) 60 cm
b) 30 cm
c) 25 cm
d) 45 cm

31. Portal vein develops from the
a) umbilical vein
b) new venous channels that form a shunt through the liver
c) vitelline veins and their anastamosis
d) supracardinal veins and their anastamosis

32. Gall bladder is lined by
a) simple squamous epithelium
b) simple columnar epithelium
c) stratified columnar epithelium
d) stratified squamous epithelium

33. All the following organs have end arterial supply except

a) lung
b) kidney
c) liver
d) spleen

34. Which of the organs listed below receives blood through portal system

a) pancreas
b) liver
c) pituitary
d) parotid

35. The junction of transpyloric plane and the lateral margin of right rectus abdominis muscles surface marks

a) fundus of gall bladder
b) formation of portal vein
c) neck of pancreas
d) pyloric end of stomach

36. Coeliac axis

a) supplies derivatives of foregut
b) arises at the lumbar vertebra 1
c) arises at the lumbar vertebra 3
d) supplies the under surface of the diaphragm

37. Deep inguinal ring

a) is situated ¼ inch above and lateral to pubic tubercle
b) is an opening in the fascia transversalis
c) transmits ilioinguinal nerve
d) is an opening in the transverse abdominis muscle

38. Primitive foregut gives rise to all except

a) stomach
b) liver
c) spleen
d) third part of duodenum

39. Right gastric artery is a branch of

a) gastroduodenal artery
b) hepatic artery

c) supraduodenal artery
d) superior pancreatico duodenal artery

40. Penicilli (straight) vesicles seen in
a) thymus
b) lymph node
c) spleen
d) tonsil

41. Meckels`s diverticulum results from abnormal persistence of
a) yolk sac
b) herniated gut
c) allontois
d) ventral mesogastrium

42. Length of vas deferens is
a) 25 cm
b) 35 cm
c) 45 cm
d) 55 cm

43. Goblet cells are present in all except
a) ileum
b) bronchus
c) colon
d) stomach

44. Squamous cells are present in all except
a) alveoli of lung
b) endothelium
c) renal corpuscles
d) all of the above

45. All the branches of posterior division of internal iliac artey except
a) iliolumbar
b) lateral sacral
c) superior gluteal
d) inferior gluteal

46. Sensory nerves to the uterus are from

a) T8 - T10
b) T11 - T12
c) L1 - L2
d) L5 - S1

47. The lining epithelium of gall bladder

a) simple columnar
b) stratified columnar
c) pseudo stratified columnar
d) ciliated columnar

48. Secretary unit of permanent kidney develops from

a) metanephros
b) pronephros
c) mesonephros
d) paramesonephros

49. Portal vein is formed by the union of

a) superior and inferior mesenteric vein
b) superior mesenteric and splenic veins
c) superior mesenteric and inferior rectal vein
d) inferior mesenteric and splenic vein

50. Left gonodal vein is a tributary of

a) left renal vein
b) splenic vein
c) inferior vena cava
d) inferior mesenteric vein

51. Suprarenal medulla develops from

a) intermediate cell mass
b) primitive streak
c) notochord
d) neural crest

52. All are true for the ileum except

a) develops from midgut
b) villi is not always present

c) forms distal part of small intestine
d) Meckel1`s diverticulum present occasionally

53. Pain of appendicitis is referred around umbilicus because
a) they are supplied by the same segmental nerve
b) they develop from same source
c) appendix lies underneath the umbilicus
d) umbilicus is also affected

54. Following are layers of scrotum except
a) external spermatic fascia
b) cremasteric fascia
c) tunica vaginalis
d) tunica albuginea

55. Structure forming boundary of epiploic foramen
a) caudate process of liver
b) head of pancreas
c) pyloric part of stomach
d) bile duct

56. The rim of the superior aperture of the lesser pelvis is formed by the following except
a) pubic arch
b) pubic crest
c) pecten pubis
d) arcuate line of ilium

57. Position of the fundus of the gall bladder is at the costal margin of
a) 8^{th} costal cartilage
b) 9^{th} costal cartilage
c) 10^{th} costal cartilage
d) 11^{th} costal cartilage

58. Conjoint tendon is formed by the fusion of
a) external oblique and transversus abdominis
b) external oblique and internal oblique
c) external oblique and cremaster
d) internal oblique and transversus

59. Pampiniform plexus on the left side enters the
a) inferior vena cava

b) internal iliac vein
c) renal vein
d) common iliac vein

60. Edge of the lesser omentum contains the following except
a) portal vein
b) hepatic artery
c) bile duct
d) left gastric artery

61. Branches of the inferior mesenteric artery are the following except
a) left colic artery
b) right colic artery
c) sigmoid artery
d) superior rectal artery

62. Appendices epiploicae are present in the following except
a) ascending colon
b) sigmoid colon
c) caecum
d) transverse colon

63. Ligamentum teres is the remnant of
a) left umbilical vein
b) right umbilical vein
c) left umbilical artery
d) right umbilical artery

64. Juxta glomerular apparatus is formed from
a) distal convoluted tubule and proximal convoluted tubule
b) distal convoluted tubule and afferent glomerular arteriole
c) distal convoluted tubule and efferent glomerular arteriole
d) proximal convoluted tubule and afferent glomerular arteriole

65. Aortic hiatus of the diaphragm transmits the following except
a) aorta
b) thoracic duct
c) azygos vein
d) superior epigastric vessels

66. Superficial inguinal ring is in the
a) aponeurosis of external oblique
b) internal oblique
c) conjoint tendon
d) transversus abdominis

67. Structure which is not a constituent of spermatic cord
    a) genital branch of genito femoral nerve
    b) ilio inguinal nerve
    c) pampiniform plexus
    d) processus vaginalis testis

68. All are true for structures in the free border of lesser omentum except
    a) left gastric artery
    b) portal vein
    c) bile duct
    d) hepatic artery

69. Feature of Meckel`s diverticulum
    a) attached to mesenteric border of ilem
    b) attached to mesenteric border of jejunum
    c) represents persisting proximal part of vitello intestinal duct
    d) present in 25% of individuals

70. A factor incorrect in the descent of testis
    a) traction by gubernaculum testis
    b) intra abdominal pressure
    c) testicular hormone not helpful
    d) contraction of arched fibres of internal oblique muscle

71. Of the following one is not a tribuitary of inferior vena cava
    a) right gonadal vein
    b) renal veins
    c) lumbar veins
    d) left suprarenal vein

72. Derivatives of dorsal pancreatic bud. All except
    a) neck of pancreas
    b) body od pancreas
    c) tail of pancreas
    d) uncinate process of pancreas

THORAX

1. Describe the origin, relations, termination, area of drainage and development of thoracic duct - 1+2+1+2+2=8
2. Describe the blood supply to the heart. Discuss the applied aspects - 6+2=8
3. Describe the external features, internal features and development of right atrium - 1+5+2=8
4. Describe the bronchopulmonary segments - 8
5. Describe the formation, tributaries, relations and termination of the azygos vein - 1+3+3+1=8
6. Mention the beginning, course and termination of arch of aorta. Describe the relations of the

arch of aorta. Write briefly the development of arch of aorta - 2+4+2=8

7. Describe the parts, roots, lobes of the lung. Give the applied anatomy of the bronchopulmonary segments
8. Describe the origin, course, relations and branches of coronary arteries (right and left). Name the veins draining the heart. Give the applied anatomy of arterial supply. - 8

Write short notes on:

1. Allantois
2. Histology of lung
3. Typical intercostal nerve
4. Thoracic duct
5. Coronary arteries
6. Right atrium
7. Azygos vein
8. Sinus pericardium
9. Development of right atrium
10. Bronchopulmonary segments
11. Histology of aorta
12. Hemiazygos vein
13. Branches of thoracic portion of sympathetic chain
14. Formation and applied anatomy of intervertebral foramen

MCQ:

1. Sinoatrial node in heart principally receives its arterial supply from
   a) anterior interventricular branch of left coronary artery
   b) circumflex branch of left coronary artery
   c) posterior interventricular branch of right coronary artery
   d) right coronary artery

2. Phrenic arteries are branches of
   a) musculophrenic artery
   b) pericardiophrenic artery
   c) internal thoracic artery
   d) descending aorta

3. Left superior intercostal vein empties into
   a) left brachiocephalic vein
   b) azygos vein
   c) hemiazygos vein
   d) superior vena cava

4. Following are contained in posterior mediastinum except
   a) oesophagus
   b) trachea

c) azygos vein
d) hemiazygos vein

5. Ligament derived from 1st arch mesoderm is
   a) sphenomandibular ligament
   b) stylomandibular ligament
   c) stylohyoid ligament
   d) stylothyroid ligament

6. The germ cell that undergoes spermiogenesis is
   a) spermatogonia
   b) primary spermatocyte
   c) secondary spermatocyte
   d) spermatid

7. Sex chromosomal complement in Turner`s syndrome is
   a) XO
   b) XXY
   c) XYY
   d) YO

8. About histology of bone following are correct except
   a) Haversian canals are surrounded by concentric lamellae
   b) Haversian canals contain blood vessels and nerve fibres
   c) Haversian canals are connected by Volkmann`s canals
   d) Intertitial lamellae are seen between Haversian systems

9. Characteristic feature of all thoracic vertebrae is
   a) odontoid process
   b) costal facets
   c) foramen transversorium
   d) bifid spine

10. Ectopia cordis is associated with
   a) lens
   b) lung
   c) heart
   d) liver

11. Right bronchial vein opens into
   a) superior vena cave
   b) azygos vein
   c) hemiazygos vein
   d) none of the above

12. The strongest part of parietal pleura is the
    a) costal
    b) pulmonary
    c) mediastinal
    d) diaphragmatic

13. The bundle of His is supplied by
    a) right aortic sinus
    b) marginal artery
    c) right coronary artery
    d) left coronary artery

14. All are true about the left lung except
    a) has a cardiac notch
    b) has a lingula
    c) has an eparterial bronchus
    d) has no horizontal fissure

15. Conducting tissue of the heart is composed of
    a) connective tissue
    b) modified nerves
    c) modified heart muscle
    d) smooth muscle

16. Oesophagus is lined by
    a) columnar epithelium
    b) cuboidal epithelium
    c) pseudo stratified columnar epithelium
    d) transitional epithelium

17. All are true about arch of aorta except
    a) lies in the superior mediastinum
    b) gives blood supply to head, neck and upper limbs
    c) lies in front of trachea
    d) not related to oesophagus

18. White rami communicantes is
    a) found in all regions of the vertebral column
    b) post ganglionic fibre
    c) pre ganglionic fibre
    d) non myelinated

19. Lesser splanchnic nerve
    a) carries postganglionic sympathetic fibres
    b) carries preganglionic sympathetic fibres

c) enters abdomen through oesophageal orifice
d) enters abdomen through IVC opening

20. Secondary curvatures of the vertebral column is maintained by
a) inter vertebral disc
b) anterior longitudinal ligament
c) posterior longitudinal ligament
d) prevertebral muscles

21. Myelin in the CNS is produced by
a) astrocyte
b) oligodendrocyte
c) Schwann cell
d) microglia

22. Following structures pierce the diaphragm except
a) aorta
b) oesophagus
c) inferior vena cava
d) phrenic nerve

23. Costal cartilage is
a) hyaline cartilage
b) elastic cartilage
c) fibrocartilage
d) none of the above

24. Pleural aspiration in case of pleural effusion is usually carried out at mid axillary plane at the level of
a) 8^{th} intercostal space
b) 6^{th} intercostal space
c) 10^{th} intercostal space
d) 12^{th} intercostal space

25. Anterior cardinal vein drains into
a) right atrium
b) left atrium
c) coronary sinus
d) right ventricle

26. Posterior intercostal vein of the right 1^{st} intercostal space drains into

a) right subclavian vein
b) azygos vein
c) right superior intercostal vein
d) superior vena cava

27. Bronchopulmonary segment of the middle lobe of the lung is named
a) upper and lower
b) superior and inferior
c) anterior and posterior
d) lateral and medial

28. Sternal angle is between the
a) disc of T2 and T3
b) disc of T3 and T4
c) disc of T4 and T5
d) disc of T5 and T6

29. Apex of the heart lies at
a) 4^{th} left intercostal space
b) 5^{th} left intercostal space
c) 6^{th} left intercostal space
d) 7^{th} left intercostal space

30. Pulmonary valve are named
a) anterior, right and left
b) anterior, posterior and right
c) anterior, posterior and left
d) posterior, left and right

31. Superficial cardiac plexus is formed by one of the following nerves
a) superior cervical cardiac branch of the left sympathetic trunk
b) middle cervical cardiac branch of the left sympathetic trunk
c) inferior cervical cardiac branch of the left sympathetic trunk
d) superior cervical cardiac branch of left vagus

32. Thoracic duct receives the following except
a) left posterior intercostal lymph vessels
b) left jugular lymph trunk
c) left subclavian lymph trunk

d) right bronchomediastinal lymph trunk

33. Tributaries to the coronary sinus are the following except
a) great cardiac vein
b) middle cardiac vein
c) small cardiac vein
d) anterior cardiac vein

34. First costal cartilage joint with the manubrium is
a) synarthrosis
b) amphiarthrosis
c) diarthrosis
d) plane

35. The following intercostal nerves have a cutaneous branch except
a) first
b) second
c) third
d) fourth

36. Trabeculae carneae are seen in
a) right atrium
b) left atrium
c) ventricles
d) infundibulum

37. Angle of Luis` corresponds to all except
a) bifurcation of trachea
b) second costal cartilage
c) termination of arch of aorta
d) termination of superior vena cava

38. All are true for Fallot`s tetrology except
a) pulmonary stenosis
b) aortic orifice is displaced to right to override inter-ventricular septum
c) interatrial septal defect
d) patent interventricular septum

39. In pleural effusion, pleural fluid is aspirated in midaxillary line at the level of
    a) 6^{th} intercostal space
    b) 7^{th} intercostal space
    c) 8^{th} intercostal space
    d) 9^{th} intercostal space

HEAD AND NECK

1. Enumerate the muscles of mastication. Describe their origin, insertion, nerve supply and actions. 1+2+1+2+2=8
2. Enumerate the boundaries and contents of digastric triangle. Describe the relations, secretomotor nerve supply and histology of submandibular salivary gland - 2+2+2+2=8
3. Describe the boundaries, contents and applied anatomy of carotid triangle - 4+2+2=8
4. Describe the anatomy of the middle ear - 8
5. Describe the parts, relations blood supply, nerve supply and applied anatomy of the parotid gland - 1+2+1+2+2=8
6. Name the extrinsic muscles of tongue. Describe the lymphatic drainage and nerve supply Write in brief the development of tongue - 1+5+2=8
7. Describe the interior of larynx. Give its nerve supply and development - 8
8. Name the cranial nerves attached to the external surface of medulla oblongata. Describe the course, relations and branches of extracranial part of facial nerve. Add a note on its applied anatomy.

Write short notes on:

1. Microscopic structure of pituitary
2. Blood supply to internal capsule of brain
3. Digastric muscle
4. Development and microscopic structure of arch of aorta
5. Superficial cardiac plexus
6. Neuroglia
7. Medial lemniscus
8. Corpus callosum
9. Otic ganglion
10. Cleft lip
11. Meckel`s cartilage
12. Corpus callosum
13. Cricothyroid muscle
14. Superior orbital fissure
15. Central sulcus
16. Microscopic structure of palatine tonsil
17. Muscles of mastication

18. Superior orbital fissure
19. Ventral surface of brain stem
20. Ciliary ganglion
21. Somatic efferent column
22. Superior orbital fissure
23. Circle of willis
24. Facial vein
25. Histology of pituitary gland
26. Third pharyngeal pouch
27. Histology of cerebellar cortex
28. Superior oblique muscle of the eye ball
29. Section through superior colliculus of midbrain with the help of a diagram
30. Klinefelter`s syndrome
31. Histology of thyroid gland
32. Histology of parathyroid gland
33. Scalenus anterior
34. Dentate nucleus of cerebellum
35. Development of tongue
36. Choroid plexus of iv ventricle
37. Lateral pterygoid muscle
38. Fontenelles and their clinical significance
39. Arterial supply of internal capsule
40. Relations of cavernous sinus

MCQ:

1. Nerve supply to vocal cord is
   a) external laryngeal nerve
   b) internal laryngeal nerve
   c) recurrent laryngeal nerve
   d) internal and recurrent laryngeal nerves

2. Tympanic membrane develops from
   a) ectoderm
   b) endoderm
   c) mesoderm
   d) all germ layers

3. Posterior ethmoidal air sinus drains into
   a) middle meatus of lateral wall of nasal cavity
   b) inferior meatus of lateral wall of nasal cavity
   c) superior meatus of lateral wall of nasal cavity
   d) sphenoethmoidal recess

4. Which of the following muscle partly inserts into TM joint
   a) lateral pterygoid

b) medial pterygoid
c) temporalis
d) buccinator

5. Which of the following muscle is responsible for the protrusion of tongue
a) styloglossus
b) palatoglossus
c) hyoglossus
d) genioglossus

6. Thoracic duct terminates
a) at the junction of left subclavian and left brachiocephalic vein
b) into left subclavian vein
c) into left brachiocephalic vein
d) none of the above

7. Angina pectoris which can be explained on anatomic pathways is an example of
a) imaginary pain
b) referred pain
c) somatic pain
d) psychosomatic pain

8. Efferent cranial nerve develops from
a) roof plate
b) floor plate
c) basal lamina
d) alar lamina

9. Which of the following structures act as a vascular layer for the brain
a) arachnoidmater
b) piamater
c) duramater
d) galea aponeurotica

10. Fibres of optic tract terminates into
a) medial geniculate body
b) lateral geniculate body
c) inferior colliculus
d) superior colliculus

11. Molecular layer of cerebellar cortex contains which of the following cells
a) golgi cells
b) basket cells
c) purkinje cells
d) pyramidal cells

12. The branch of facial nerve that conveys secretomotor neurons involved in lacrimation is the
    a) chorda tympani
    b) deep petrosal
    c) greater superficial petrosal
    d) lesser superficial petrosal

13. Glossopharyngeal nerve passes through
    a) foramen ovale
    b) foramen spinosum
    c) jugular foramen
    d) petrotympanic fissure

14. Secretory product of the parafollicular cells of thyroid is
    a) protease
    b) thyroxine
    c) calcitonin
    d) tri-iodothyronine

15. Which of the following immunoglobulins is likely to be present in saliva
    a) Ig A
    b) Ig D
    c) Ig E
    d) none of the above

16. Adenohypophysis of pituitary develops from
    a) Rathke`s pouch
    b) 2^{nd} pharyngeal pouch
    c) floor of diencephalon
    d) pouch of douglas

17. One of the derivatives of neural crest is
    a) odontoblast
    b) epidermis of skin
    c) melanocytes
    d) follicular cells of thyroid gland

18. About the mastoid antrum the following are correct except
    a) it is an air sinus situated in the petrous part of the temporal bone
    b) its lateral wall corresponds to the suprameatal triangle
    c) its capacity in the adult is 1 mil
    d) it is absent at birth

19. Geniohyoid is supplied by
    a) hypoglossal nerve

b) glossopharyngeal nerve
c) branch from ventral ramus of C1
d) branch from ventral rami of C2 and C3

20. Membrana tectoria is the upward continuation of
a) anterior longitudinal ligament
b) posterior longitudinal ligament
c) apical ligament of dens
d) ligamentum nuchae

21. Following are correct about the auditory tube except
a) it is about 35 mm long
b) it is developed from tubotympanic recess
c) it gives attachment to levator palatini
d) it is lines by stratified squamous epithelium

22. Deep petrosal nerve is a branch of
a) facial nerve
b) glossopharyngeal nerve
c) tympanic plexes
d) sympathetic plexus

23. Nerve related to piriform recess is
a) internal laryngeal nerve
b) glossopharyngeal nerve
c) greater palatine nerve
d) external laryngeal nerve

24. Nasal septum is formed of the following except
a) vomer
b) perpendicular plate of ethmoid
c) perpendicular plate of palatine bone
d) septal cartilage

25. Venous sinuses related to the tentorium cerebelli are the following except
a) transverse sinus
b) superior petrosal sinus
c) inferior petrosal sinus
d) straight sinus

26. Cuneus and precuneus are separated by
a) collateral sulcus
b) calcarine sulcus
c) parieto occipital sulcus
d) lunate sulcus

27. Linea splendens is the thickening of
    a) duramater
    b) arachnoidmater
    c) piamater
    d) connective tissue

28. Parkinson`s disease is due to lesion of
    a) cerebellum
    b) basal nuclei
    c) reticular formation
    d) hypothalamus

29. Motor nuclei of VII cranial nerve is situated at
    a) upper part of pons
    b) lower part of pons
    c) basilar part of pons
    d) beneath facial colliculus in pons

30. Straight sinus is seen in
    a) falx cerebri
    b) tentorium cerebelli
    c) junction of falx and tentorium cerebelli
    d) none of the above

31. Dentate nucleus is a part of
    a) midbrain
    b) pons
    c) cerebellum
    d) medulla

32. The nerve involved in temporary huskiness of voice is
    a) external laryngeal
    b) internal laryngeal
    c) recurrent laryngeal
    d) phrenic

33. The following muscles are the abductors of the eye ball except
    a) inferior rectus
    b) inferior oblique
    c) superior oblique
    d) lateral rectus

34. Middle thyroid vein drains into
    a) internal jugular vein

b) external jugular vein
c) brachiocephalic vein
d) none of the above

35. The central prominent part of tympanic membrane is called
a) umbo
b) tegmen tympani
c) fovea centralis
d) uncus

36. The failure of closure of anteior neuropore may result in
a) meningocoele
b) anencephaly
c) meningomyelocoele
d) none of the above

37. Which of the muscle is supplied by the hypoglossal nerve
a) thyrohyoid
b) geniohyoid
c) styloglossus
d) hyoglossus

38. CSF is directly returned to venous system by means of
a) choroid plexus
b) cerebral veins
c) arachnoid villi
d) none of the above

39. Mastoid process begins to develop during
a) sixth month
b) second year
c) first year
d) ninth month

40. Which one of the following is not a branch of external carotid artery
a) occipital artery
b) superficial temporal artery
c) posterior cerebral artery
d) posterior auricular artery

41. Which one of the following is found in the mandibular canal
a) lingual nerve
b) lingual artery
c) mylohyoid nerve
d) inferior alveolar artery

42. Retina is an outgrowth of
   a) mesencephalon
   b) diencephalon
   c) telencephalon
   d) pons

43. In adults the spinal cord ends inferiorly at the level
   a) L5
   b) L3
   c) L1
   d) T12

44. Sensory supply to anterior 1/3 of the tongue is by
   a) hypoglossal nerve
   b) glossopharyngeal nerve
   c) chorda tympani
   d) lingual nerve

45. Nasolacrimal duct opens into the
   a) inferior meatus of the nose
   b) middle meatus of the nose
   c) superior meatus of the nose
   d) none of the above

46. Middle meningeal artery is branch of
   a) external carotid artery
   b) maxillary artery
   c) superficial temporal artery
   d) none of the above

47. Lateral pterygoid muscle
   a) elevates the mandible
   b) protracts the mandible
   c) depresses the mandible
   d) retracts the mandible

48. 2nd cervical vertebra is characterized by
   a) the presence of dens
   b) the presence of bifid spine
   c) the presence of two arches
   d) absence of foramen transversorium

49. Auditory tube opens into
   a) lateral wall of oropharynx

b) lateral wall of nasopharynx
c) lateral wall of laryngopharynx
d) none of the above

50. Lateral cricoarytenoid muscle
a) abducts the vocal cord
b) adducts the vocal cord
c) tenses the vocal cord
d) relaxes the vocal cord

51. Branches of vertebral artery supplies all except
a) medulla oblongata
b) pons
c) cerebellum
d) motor cortex

52. Nerve fibres connecting the two cerebral hemispheres are called
a) commissural fibres
b) projection fibres
c) short association fibres
d) long associaton fibres

53. All are true about the post central gyrus except
a) motor area
b) sensory area
c) supplied by anterior and middle cerebral arteries
d) body is represented upside down

54. Dural venous sinous that occupies the tentorium cerebelli
a) straight sinus
b) occipital sinus
c) inferior sagittal sinus
d) inferior petrosal sinus

55. Otic ganglion supplies parasympathetic post ganglionic fibres to
a) lacrimal gland
b) submandibular gland
c) sublingual gland
d) parotid gland

56. Myoepithelial cells are found in
a) mammary gland
b) lacrimal gland
c) salivary gland
d) all of the above

57. Collection of neurons (cell bodies) out side CNS is known as
   a) nuclei
   b) ganglion
   c) horns
   d) neuropil

58. Middle meningeal artery passes through
   a) foramen ovale
   b) foramen rotundum
   c) foramen spinosum
   d) foramen lacerum

59. Angle of mandible is supplied by
   a) greater auricular nerve
   b) lesser occipital nerve
   c) mandibular nerve
   d) maxillary nerve

60. Largest branch of vertebral artery is
   a) anterior spinal artery
   b) posterior spinal artery
   c) posterior inferior cerebellar artery
   d) anterior inferior cerebellar artery

61. Following structures are within carotid sheath except
   a) common carotid artery
   b) internal carotid artery
   c) vagus nerve
   d) sympathetic nerve

62. Filum terminale is the caudal prolongation of
   a) spinal cord
   b) pia mater
   c) arachnoid mater
   d) dura mater

63. Within CNS trigeminal nerve has
   a) two nuclei
   b) three nuclei
   c) four nuclei
   d) five nuclei

64. Secretion of sebaceous gland opens into
   a) surface of skin

b) root of hair follicle
c) sweat gland
d) all of the above

65. Occipital somites are supplied by
a) hypoglossal nerve
b) vagus nerve
c) glossopharangeal nerve
d) optic nerve

66. Cartilage of 2nd pharyngeal arch gives rise to all except
a) stapes
b) styloid process of temporal bone
c) greater cornu
d) lesser cornu

67. Following bones are partly formed in cartilage and partly in membrane except
a) maxilla
b) mandible
c) temporal
d) occipital

68. Ascending palatine artery is a branch of
a) tonsillar artery
b) lingual artery
c) facial artery
d) posterior auricular artery

69. Internal capsule of the cerebrum is a
a) projection fibre
b) association fibre
c) commissural fibre
d) all of the above

70. One of the following is not a branch of external carotid artery
a) stapedial artery
b) facial artery
c) posterior auricular artery
d) ascending pharyngeal artery

71. Superior nuchal line of occipital bone gives attachment to
a) digastric muscle
b) trapezius muscle
c) rectus capitis posterior major muscle
d) semispinalis capitis muscle

72. Glossopharyngeal nerve supplies
   a) styloglossus
   b) stylohyoid
   c) stylopharyngeus
   d) hyoglossus

73. The basophils of anterior pituitary secretes
   a) oxytocin
   b) thyrotropic hormone
   c) somatotropes
   d) mammotropes

74. All are true for facial colliculus at the floor of the fourth ventricle except
   a) present in the median eminence
   b) caused by facial nerve nucleus
   c) caused by medial longitudinal bundle
   d) caused by facial nerve fibres

75. The lowest limit of spinal cord in the new born is
   a) between L 1 and L 2 vertebrae
   b) between L 2 and L 3 vertebrae
   c) between L 3 and L 4 vertebrae
   d) between T 12 and L 1 vertebrae

76. One of the following is a sympathetic ganglion
   a) ciliary ganglion
   b) dorsal root ganglion
   c) trigeminal ganglion
   d) inferior cervical ganglion

77. All are true for the occulomotor nerve except
   a) it is a motor nerve
   b) it has a somatic efferent nucleus
   c) it supplies extra occular muscles
   d) it has special visceral efferent nucleus

78. Secretomotor fibres of the parotid gland reaches viz.
   a) auriculotemporal
   b) chorda tympani
   c) facial nerve
   d) glossopharyngeal

79. Homonymus hemianopia is caused due to injury of
   a) optic nerve

b) optic chiasma
c) optic tract
d) retina

80. Hassel`s corpuscle is a microscopic feature in
a) lymph node
b) cardiac muscle
c) thyroid
d) thymus

81. Posterior longitudinal ligament continues as
a) ligamentum flavum
b) membrana tectoria
c) apical ligament of dens
d) alar ligament

82. Specifically lumbar puncture is done between
a) L1 and L2
b) L2 and L3
c) L3 and L4
d) L4 and L5

83. Stapedius is supplied by
a) 5^{th} nerve
b) 6^{th} nerve
c) 7^{th} nerve
d) 8^{th} nerve

84. Taste fibres in the anterior $2/3^{rd}$ of tongue is by
a) chorda tympani
b) glossopharyngeal
c) superior laryngeal
d) hypoglossal

85. Abductor of the larynx is
a) thyroarytenoid
b) posterior cricoarytenoid
c) transverse arytenoid
d) lateral cricoarytenoid

86. Postganglionic parasympathetic fibres to the sphincter pupillae is from
a) ciliary ganglion
b) pterygopalatine ganglion
c) submandibular ganglion

d) otic ganglion

87. Maxillary sinus opens into the
a) superior meatus
b) middle meatus
c) inferior meatus
d) sphenoethmoidal recess

88. The following muscles of the soft palate are supplied by the glossopharyngeal / vagal complex
a) levator palati
b) palatoglossus
c) palatopharyngeus
d) tensor palati

89. Stylohyoid ligament is a remnant of
a) 1^{st} pharyngeal arch
b) 2^{nd} pharyngeal arch
c) 3^{rd} pharyngeal arch
d) 4^{th} pharyngeal arch

90. Retromandibular vein is joined by the following except
a) superficial temporal vein
b) middle temporal vein
c) maxillary vein
d) external jugular vein

91. Superior cervical sympathetic ganglion gives the following branches except
a) internal carotid nerve
b) thyroid branches
c) external carotid nerve
d) laryngopharyngeal branches

92. Tributaries to the sigmoid sinus are the following
a) posterior temporal diploic vein
b) occipital veins
c) suboccipital plexus
d) inferior petrosal sinus

93. Spinal accessory nerve supplies:
a) trapezius muscle
b) splenius capitis muscle
c) rhomboid muscle
d) levator scapulae muscle

94 Structures outside carotid sheath
a) vagus nerve
b) sympathetic trunk
c) common carotid artery
d) internal jugular vein

95. Adductor muscle of larynx
a) cricothyroid
b) transverse arytenoid
c) posterior crico-arytenoid
d) lateral crico-arytenoid

96. Blunt injury to the temple area of head may rupture
a) facial artery
b) superficial temporal artery
c) deep temporal artery
d) middle meningeal artery

97. Foramen spinosum is present in
a) lesser wing of sphenoid
b) greater wing of sphenoid
c) body of sphenoid
d) pterygoid process

98. Of the following one is not extrinsic muscle of larynx
a) sternohyoid
b) sternothyroid
c) cricothyroid
d) thyrohyoid

99. Triangular area between corpus callosum and fornix is occupied by
a) genu
b) uncus
c) insula
d) septum pallucidum

100. Most prominent muscle in the neck region
a) platysma
b) trapezius
c) splenius capitis
d) sternocleidomastoid

101.All are true for anencephaly except
a) prominent eyes bulging forwards
b) prenatal diagnosis is possible by ultrasonogram

c) usually associated with hydramnios
d) due to failure of closure of posterior neuropore

102. Optic canal transmits all except
a) optic nerve
b) ophthalmic nerve
c) ophthalmic artery
d) dural sheath