GENESIS

(Post Graduation Medical Orientation Centre)

Friday Mega Batch-3

Total Number- 100 | **Subject: Embryology** | **Time: 40 Min**

Pass Mark- 70 | Question 31-50 is based on Single answers | **Date: 31/01/20**

1. Placenta produces following hormone
a) Androgen
b) Testosterone
c) Progesterone
d) Estrogen
e) Somatomammotropin
FFTTT [Langman/13th /P-112-115]

2. Regarding fetal circulation oxygenated & deoxygenated blood mixes
a) Umbilical artery
b) Liver
c) Rt atrium
d) Lt Atrium
e) Umbilical vein
FTTTF [Selim/4th/P-168]

3. Fate of yolk sac
a) Primitive gut
b) Germinal epithelium
c) Allantois
d) Primordial germ cell
e) Blood vessels
TFTTF [Selim/4th/P-67]

4. Umbilical arteries
a) Distal portions form the medial umbilical ligaments
b) Proximal portions form the medial umbilical ligaments
c) Proximal portions persist as the vesicular arteries
d) Proximal portions persist as the internal iliac arteries
e) The inferior mesenteric arteries are derived from it
TFTTT [Lang/13th/p-212-215]

5. Prenatal diagnosis includes
a) Nuchal translucency by USG
b) Fetal serum a-fetoprotein (AFP)
c) Acetyl cholinesterase from amniotic fluid
d) Chorionic villous Sampling
e) Fetal abdominal circumference
TFTTT [Lang/13th/p-136-139]

6. Regarding placenta
a) Diameter: 15-20 cm
b) Thickness: 3 cm at the center
c) Weight: 500gm
d) Feto-placental ratio: 6:1
e) Chorio-desidual organ
TTTTT [Lang/13th/p-112-115]

7. The ductus venousus:
a) Connects the left branch of portal hepatic vein to the umbilical vein
b) Conveys blood to the inferior venacava before birth
c) After birth becomes ligamentum teres of the liver
d) Becomes the lateral umbilical ligament in adult
e) Runs between the attached layers of the lesser omentum
F (left umbilical vein with the hepatocardiac vein) T F (Ligamentum venosum) F T

8. In the fetal circulation
a) Pulmonary vascular resistance is low
b) Systemic vascular resistance is high
c) Highest oxygen saturation in the umbilical vein
d) Less than 10% blood enters into the lung
e) Umbilical vein drains in the ductus arterious
FFTTF [Lang/13th/p-214-215]

9. Vascular changes after birth
a) Closure of umbilical artery
b) Closure of umbilical vein
c) Closure of ductus venousus
d) Opening of pulmonary artery
e) Closure of oval foramen
TTTFT [Lang/13th/p-214-215]

10. During oogenesis, first meiotic division is completed at the time of
a) Ovulation
b) Fertilization
c) Implantation
d) Gastrulating
e) Modulation
TFFFF [Lang/13th/p-36, 37, 46]

11. Mitosis occurs in the
a) Primary spermatocyte
b) Somatic cells
c) Primary oocyte
d) Primordial germ cell
e) Spermatogonium
FTFTT [Langman/13th /P-15]

12. Derivatives of primordial germ cell
a) Primary oocyte
b) Follicular cell
c) Corpus luteal all
d) Spermatozoa
e) Mature ovum
TFFTT [Langman/13th /P-14]

13. The human spermatozoon
a) Is about 50-55 µm long
b) Has a head which consists mainly of the nucleus
c) Has a neck which contains the Golgi complex
d) Has an acrosomal cap which consists of the centriole
e) Has mitochondria along the whole length of its body and tail
TTFFF [Selim/4th /P-32]

14. Function of sertoli cell
a) Blood testes barrier formation
b) Androgen binding protein formation
c) MIF formation
d) Inhibin formation
e) All of the above
TTTTT [Ref: Janquiera /15th/448]

15. Female germ cell
a) Begins to mature at puberty
b) Begins to mature before puberty
c) 2 polar body formed
d) 2 daughter cell is formed
e) Occurs in ovary
F (Begins at intrauterine life) F(Begins at intrauterine life) F(3 polar body) F(1 daughter cell) T

16. Regarding barr body
a) Is genetically inactive
b) In mall no barr body
c) In contact with nuclear membrane
d) Found in buccal smear
e) Turner's syndrome- one barr body
TTTTF (Khaleque-77)

17. At the time of ovulation
a) The first meiotic division has just occurred
b) Expulsion of the first polar body has just occurred
c) The Secondary oocyte is arrested in the second maturation division
d) The zona pellucida has broken down
e) Fertilization is not possible
TTTFF [Lang/13th/p-34-36]

18. The results of fertilization are
a) Restoration of the diploid number of chromosomal
b) Determination of chromosomal sex
c) Capacitation
d) Acrosome reaction
e) Initiation of cleavage
TTF (Before fertilize) F (Before fertilize) T [Selim/4th /P-54-56]

19. Implantation
a) Occurs 6-7 days after ovulation
b) Occurs close to the fundus of the uterus
c) Is Completed within about 6days
d) Is associated with decidualisation of the endometrium
e) Zone pellucida disappears before implantation
TT (Posterior wall near the midline close to the funds of the uterus) F(10-12days) TT[Selim/4th /P-61]

20. Changes occurs in 3rd week of development
a) Formation of notochord
b) Formation of pericardial bar
c) Formation of cloacal membrane
d) Formation of amniotic cavity
e) Formation of hypoblast
TTTFF [Langman/13th/P-68]

21. The following times are correct
a) The dividing zygote (fertilized ovum) is in the uterine tube for about 3 days
b) The blastocyst embeds in the uterine wall about 15 days after fertilization
c) An ovum can be fertilized for 4 days after ovulation
d) The uterine cavity is obliterated by the fusion of the decidua capsularis and deciduas parietalis at about the 15th week of pregnancy
e) If pregnancy occurs the corpus luteum degenerates within 10 days of its formation
TFFTF [Lang/13th/p-36,37,46]

22. Cloacae gives rise to
a) Whole urinary bladder
b) Whole urethra in male & female both from dorsal part
c) Penile urethra from phallic part
d) Proximal 1/3rd of anal canal
e) Vestibule of female genital organ
FFTFT [Selim/4th /P-84]

23. Regarding endodermal cloaca following statements are correct?
a) Is the caudal end of hindgut.
b) Forms all the epithelium of the rectum
c) Forms all the epithelium of the prostatic urethra
d) Gives origin to the allantois
e) Forms all the epithelium of the bladder
TTFFF [Selim/4th /P-84]

24. Derivative of Para mesonephric duct
a) Trigone of urinary bladder
b) Ureteric bud
c) Prostatic utricle
d) Uterus
e) Uterine tube
FFTTT [Selim/4th /P-227]

25. Following are true
a) 2nd pouch =Auditory tube
b) 1st pouch =Middle ear cavity
c) 4th pouch =superior parathyroid
d) 5th pouch =ultimobranchial body
e) 3rd pouch =thymus
FTFTT [Langman/13th/P-279]

26. The Mullerian duct
a) Develops medial to the Wolffian duct
b) Is also known as the mesonephric duct
c) Stats to form at 4th week of embryonic life
d) Starts to disappear 6th week of embryonic life in male
e) Opens into the urogenital sinus in the female
F (Lateral) F(Para mesonephric duct) F(6th week) F(8-9th week) F (not open into sinus)

27. Veins that drain heart & open into coronary sinus
a) Venae cordis minimi
b) Anterior cardiac veins
c) Small cardiac vein
d) Oblique vein
e) Left marginal vein
FFTTF [Selim/4th /P-162]

28. Umbilical cord contains
a) Two umbilical artery
b) One umbilical vein
c) Allantois
d) Wharton's jelly
e) Fetal membrane
TTTTF [**Langman/13th /P-117-118**]

29. Development of face
a) Ala of Nose from intermediate nasal prominence
b) Lower lip from mandibular prominence
c) Cheeks from mandibular prominence
d) Lateral portion of upper lip from maxillary prominence
e) Bridge of nose from frontal prominence
FTFTT [**Langman/13th /P-296**]

30. **Which derivatives of pharyngeal arches not matched correctly?**
a) Styloid process from 2nd arch
b) Lesser horn and upper part of hyoid bone from 3rd arch
c) Common and internal carotid artery from 4th arch
d) Stapedial artery from 2nd arch
e) Lamina of thyroid cartilage from 4th arch
FT (2nd arch)T(3rd arch)FF*[Langman/13th /P-204]*

Each question below contains five suggested answers- choose the <u>one best</u> response to each question (31-50)

31. Which of the following statements regarding the development of the tongue is correct?
a) The copula and hypobranchial eminence give rise to the oral part of the tongue
b) The epithelial and mucosal tissues of the tongue develop from the occipital cervical somites
c) The median tongue bud appears in the fifth week of development
d) The mesenchyme of the pharyngeal arches forms connective tissue, and lymphatic and blood vessels of the tongue
e) The tongue is fully covered with ectodermal epithelium
D [500 SBA Anatomy/Embryology]

32. Derivatives of 6th pharyngeal arch all except
a) Superior laryngeal nerve of vagus
b) Recurrent laryngeal nerve of vagus
c) Pulmonary artery
d) Ductus arteriosus
e) Cricoids cartilage
A [Langman/13th /P-279]

33. The ovulated mammalian oocyte is arrested at
a) Prophase of meiosis-1
b) Metaphase of meiosis-1
c) Prophase of meiosis-2
d) Metaphase of meiosis-2
e) None of the above
D [Langman/13th /P-25-29]

34. For placental circulation true statement is
a) It consists of independent circulation
b) Basal artery invades myometrium
c) Pressure in umbilical artery 4o mm hg
d) Natural killer cell has role in process of invasion
e) Fetal capillary pressure 50 mm hg
A [Langman/13th /P-215]

35. True about somite
a) First cervical somite disappears later
b) Somites appear on 20th day at the occipital region
c) It proceeds cranio caudal direction
d) Last 3 coccygeal somites disappear later
e) Sclera developed from mesenchyme of sclerotome
C [Langman/13th /P-81]

36. From what germ layer are somites formed
a) Intermediate mesoderm
b) Somatopleuric mesoderm
c) Splanchnic mesoderm
d) Paraxial mesoderm
e) Ectoderm
D [Selim/4th /p-82]

37. The notochord is replaced by the
a) Ependyma
b) Nucleus pulposus
c) Spinal canal
d) Dorsal roots
e) Spinal cord
B [Langman /13th /p-81]

NEW
38. Sphenomandibular ligament develop from
a) 1st pharyngeal arch
b) 2nd pharyngeal arch
c) 3rd pharyngeal arch
d) 4th pharyngeal arch
e) 6th pharyngeal arch
A [Ref: Langman/14th/285]

39. Stylohyoid process is developed from
a) 1st pharyngeal arch
b) 2nd pharyngeal arch
c) 3rd pharyngeal arch
d) 4th pharyngeal arch
e) 6th pharyngeal arch
B [Ref: Langman /14th/ 285]

40. The cloaca is divided into the rectum and urogenital complex by the
a) Cloacal membrane
b) Urorectal septum
c) Urogenital ridge
d) Sinus bulbs
e) Genital ridge
B [Ref: Langman /13th/ 89]

41. A new born baby is noted to have a left unilateral cleft behaving no abnormalities –At the palate. The developmental defect accountable is
a) Failure of the lateral palatine process to fuse with the median palatine process
b) Failure of the left maxillary prominence to unit with left medium nasal prominence
c) Failure of the right & left medial nasal prominence to merge
d) Failure of the left maxillary process to fuse with the medial nasal process
e) Lip muscle to divide completely
B [Ref: Langman/14th/ 303]

42. Appendix of testis is developed from
a) Mesonephric duct
b) Paramesonephric duct
c) Pronephric duct
d) Mesonephric
e) Metanephron
B [Ref: Langman/14th/270]

43. The ectoderm is the outer most of the germ layer of the embryo. Which of the following organ is a derivative of the ectoderm?
a) Adrenal cortex
b) Gonad
c) Kidney
d) Adrenal medulla
e) Mesothelium
D [Ref: Langman/14th/73-76]

44. The following substance crossing placenta by active transport except
a) Amino acid
b) Calcium
c) Phosphorus
d) Iron
e) Zink
E [Ref: Langman/14th/117]

45. Chaismata appears in the following phase
a) Leptotene
b) Zygotene
c) Pachytene
d) Diplotene
e) Diakinesis
C [Ref: Langman/14th/17]

46. Sperm maturation occurs
a) Seminiferous tubules
b) Tubule recti
c) Reti testis
d) Efferent ductules
e) Epididymis
E [Ref: Langman/14th/29-31]

47. Hormone of pregnancy
a) Prolactin
b) Estrogen
c) Progesterone
d) Relaxin
e) Inhibin
C [Ref: Langman/14th/34-36]

48. Composition of menstrual blood except
a) Plasmin
b) Mucous
c) Glycogen
d) Unclotted blood
e) Fertilized ovum
E [Ref: Langman/14th/46-48]

49. Maturation of the lung period except
a) Pseudo alveolar period
b) Alveolar period
c) Terminal sac period
d) Canalicular period
e) Pseudo glandular period
A [Ref: Langman/14th/228]

50. The gland developed from endoderm
a) Parotid
b) Sebaceous
c) Mammary
d) Kidney
e) Thyroid
E [Ref: Langman/14th/231]