

GENESIS

(Post Graduation Medical orientation Centre)

Exam : Embryology_Class Test_FCPS_2020

Class/Chapter :

Question 26 to End is Based on Single Answers

Total Mark : 100
Pass Mark : 70

Time : 5400 Min
Date : 2020-10-05

1. Meiosis-1 characterized by-

- a). a) Homologous chromosome
- b). b) Pairing chromosome
- c). c) Reduces no of chromosome
- d). d) Formation of Barr body
- e). e) Occurs in somatic cell

TTTFF

3. Function of Sertoli cell

- a). a) Blood testis barrier formation
- b). b) Androgen binding protein formation
- c). c) MIF formation
- d). d) Inhibin formation
- e). e) All of the above

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5. Implantation

- a). a) Occurs 6-7 days after ovulation
- b). b) Occurs close to the fundus of the uterus
- c). c) Is completed within about 6 days
- d). d) Is associated with decidualisation of the endometrium
- e). e) Zone pellucida disappears before implantation

TTFTT

7. Amniotic fluid having following criteria -

- a). a) Recycles every 3 hours interval
- b). b) Never secreted from tracheobronchial tree of fetus
- c). c) 500ml at term
- d). d) Hypertonic to maternal serum
- e). e) Greenish yellow colour is normal

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9. Notochord

- a). a) Begins as a fold of endoderm
- b). b) Arises from lateral part of the primitive node
- c). c) Helps in formation of neural tube
- d). d) Growth is limited by buccopharyngeal membrane
- e). e) Closes as tube

FTTTT

11. In the fetal circulation

- a). a) The left umbilical vein drains into the ductus venosus
- b). b) The highest oxygen saturation is in the umbilical vein
- c). c) The right ventricular wall is thinner than the left ventricular wall
- d). d) Functional closure of the foramen ovale just after birth
- e). e) Ductus arteriosus closes 3 months following birth

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13. The oxygen concentration of fetal blood is

- a). a) Higher at 20 weeks of gestation than at term
- b). b) Higher in the carotid artery than in the abdominal aorta
- c). c) Higher in ductus arteriosus than the ductus venosus
- d). d) Higher in the thoracic inferior vena cava than the superior vena cava

2. About Spermatogenesis

- a). a) Formation of secondary spermatocytes from primary spermatocytes is known as spermatocytogenesis
- b). b) Maturation of spermatogonia to spermatozoa takes almost 4-5 weeks in human
- c). c) 1st meiosis forms primary spermatocytes after replication
- d). d) Secondary spermatocytes are haploid & double stranded
- e). e) Mature spermatozoa or sperm is about 20-30 µm in length which have two parts

FFFTF

4. Concerning oogenesis-

- a). a) The primary oogonia undergo mitotic divisions prior to meiosis
- b). b) The primary oocytes enter meiosis at puberty
- c). c) At birth primary oocytes have completed the first meiotic divisions
- d). d) DNA synthesis does not take place as part of second meiotic division
- e). e) Secondary oocytes complete the second meiotic division at ovulation

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6. After birth

- a). a) The allantois forms the median umbilical ligament
- b). b) The umbilical vein forms the medial umbilical ligament
- c). c) The umbilical artery forms the superior vesical artery
- d). d) The ductus venosus forms the ligamentum teres
- e). e) The ductus arteriosus forms the arch of the aorta

FTTFF

8. Fetal membranes are

- a). a) Trophoblast
- b). b) Chorion (Mesoderm)
- c). c) Amnion
- d). d) Yolk sac
- e). e) Umbilical cord

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10. Regarding development of heart-

- a). a) Pulmonary trunk develops from truncus arteriosus
- b). b) Bulbus cordis forms smooth part of both right and left ventricles
- c). c) Primitive atrium is the future trabeculated part of right atrium
- d). d) Sinus venosus forms the smooth part of both right and left atrium
- e). e) Coronary sinus is developed from sinus venosus

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12. Mixing may occur in the following places in

- a). a) Liver by mixture with a small amount of blood returning from the portal system
- b). b) In the inferior vena cava, which carries deoxygenated blood returning from the lower extremities, pelvis, and kidneys
- c). c) In the right atrium by mixture with blood returning from the head and limbs
- d). d) In the left atrium by mixture with blood returning from the lungs
- e). e) At the entrance of the ductus arteriosus into the descending aorta

TTTTT

14. Correct pairs about derivatives

- a). a) Microglia- Paraxial mesoderm
- b). b) Synovial membrane- paraxial mesoderm
- c). c) Lymphoid tissue- endoderm
- d). d) Gonadal cortex- Splanchnopleuric mesoderm

e). e) The main stimulus to initiation of respiration after birth
TTFTF

15. Correct statements are-

- a). a) Sciatic nerve is formed in the pelvis posterior to fibers of piriformis muscle
- b). b) Obturator nerve supplies pectineus muscle
- c). c) Common peroneal nerve is a branch of femoral nerve
- d). d) Femoral nerve injury produces loss of hip extension
- e). e) Femoral artery is formed behind the midpoint of the inguinal ligament

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18. Followings are derivatives of somatopleuric part of lateral plate mesoderm

- a). a) Blood vessels
- b). b) Lymph node
- c). c) Spleen
- d). d) Gonadal cortex
- e). e) Adrenal cortex

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20. At the time of ovulation-

- a). a) The first meiotic division has just occurred
- b). b) Expulsion of the first polar body has just occurred
- c). c) The Secondary oocyte is arrested in the second maturation division
- d). d) The zona pellucida has broken down
- e). e) Fertilization is not possible

TTTFF

23. Development source of interior venacava

- a). a) Anastomosis between supracardinal vein & supra cardinal vein
- b). b) Hepatocardiac channel
- c). c) Right posterior cardinal vein
- d). d) Right subcardinal vein
- e). e) Right vitelline vein

TTFTT

25. The following are developed from dorsal pancreatic bud

- a). a) Neck of pancreas
- b). b) Body of pancreas
- c). c) Tail of pancreas
- d). d) Head of pancreas
- e). e) Uncinate process of pancreas

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27. The following substance crossing the placenta by active transport

- a). a) Amino acid
- b). b) Calcium
- c). c) Vitamin
- d). d) Phosphorus
- e). e) Iron

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e). e) Dura matter- Ectoderm
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16. Ectodermal derivatives include

- a). a) The sweat glands
- b). b) Anterior lobe of pituitary gland
- c). c) Lining epithelium of pharynx
- d). d) Lining epithelium of whole urethra
- e). e) Lining epithelium of blood vessel

TTFFF

17. Fate of mesonephric duct

- a). a) Trigone
- b). b) Appendix of testis
- c). c) Prostatic utricle
- d). d) Lower vagina
- e). e) Nephron

TTFFT

19. Following are true

- a). a) Rotavirus has segmented genome.
- b). b) Rotavirus has single stranded (SS) DNA genome.
- c). c) All DNA viruses replicate in nucleus except pox & vaccinia viruses, both replicate in cytoplasm.
- d). d) All viruses have haploid genome except retrovirus family, which has diploid.
- e). e) Super Ag is produced only by herpesvirus family.

TTTTF

21. Which structure develop from definitive urogenital sinus

- a). a) Penile urethra
- b). b) Vestibule
- c). c) Hymen
- d). d) Uterus
- e). e) Uterine tube

TTTTF

22. parenchyma of these glands develops from endoderm

- a). a) Thyroid
- b). b) Parathyroids
- c). c) Liver
- d). d) Pancreas
- e). e) Spleen

TTTTF

24. 3rd aortic-arch derivatives

- a). a) Common carotid artery
- b). b) External carotid artery
- c). c) Subclavian artery
- d). d) Pulmonary artery
- e). e) Pulmonary trunk

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26. Regarding fetal circulation which vessels are contain most saturated blood

- a). a) Descending aorta
- b). b) Inferior venacava
- c). c) Pulmonary artery
- d). d) Right coronary artery
- e). e) Pulmonary vein

FFFTF

28. A young couple presents to your office for an infertility evaluation. They have been trying to conceive for one year. Initial evaluation of the female partner suggests normal ovulation occurring on the 14th day of the menstrual cycle. An oocyte isolated from the fallopian tube soon after ovulation would be in which of the following stages of gametogenesis

- a). a) Prophase of meiosis I
- b). b) Prophase of meiosis II
- c). c) Metaphase of meiosis II
- d). d) Telophase of meiosis II
- e). e) Metaphase of meiosis I

CCCCC

29. Primary oocyte : Meiosis I stunted at

- a). a) Leptotene
- b). b) Zygotene
- c). c) Pachytene
- d). d) Diplotene
- e). e) Diakinesis

DDDDD

31. In fetal circulation which is not true

- a). a) The foramen ovale permits blood to pass from the right to the left atrium
- b). b) The ductus arteriosus carries blood from the pulmonary artery to the aorta
- c). c) The ductus venosus carries blood to the inferior vena cava from the umbilical artery
- d). d) The ductus arteriosus is contractile
- e). e) The umbilical vein becomes the ligamentum teres of the adult

CCCCC

34. Derivative of Neural crest is

- a). a) CNS
- b). b) Neuron of motor nerve
- c). c) Cranial nerve ganglia
- d). d) Ependymal cells
- e). e) Optic nerve

CCCCC

36. Nerve to sixth arch

- a). a) Mandibular nerve
- b). b) Maxillary nerve
- c). c) Facial nerve
- d). d) Recurrent laryngeal nerve
- e). e) Glossopharyngeal nerve

DDDDD

38. Philtrum of upper lip is developed from the which prominence

- a). a) Frontonasal
- b). b) Maxillary
- c). c) Medial nasal
- d). d) Lateral nasal
- e). e) Mandibular

CCCCC

40. The following cell are derivatives of neural crest derivatives except

- a). a) Odonotoblast
- b). b) Melanocyte
- c). c) Hepatocyte
- d). d) Schwann cell
- e). e) Glial cell

CCCCC

42. Lower part of anal canal derived from

- a). a) Endodermal choaca
- b). b) Intermediate mesoderm
- c). c) Proctodeum
- d). d) Placode
- e). e) Stomatodaeum

CCCCC

44. True about derivatives of pharyngeal arch

- a). a) Muscles of facial expression from 3rd arch
- b). b) Stylopharyngeus from 4th arch
- c). c) Cricothyroid from 5th arch
- d). d) Stapedial artery from 2nd arch
- e). e) Intrinsic muscles of larynx from 5th arch

DDDDD

30. The following are criteria of amniotic fluid except

- a). a) Act as source nutrition of the embryo
- b). b) Helps in dilation of the cervix
- c). c) Prevent adherence
- d). d) Acidic PH
- e). e) Allow free fetal movement

DDDDD

32. Which one of the following is not a derivative of Ectoderm

- a). a) Ant pituitary
- b). b) Sweat gland
- c). c) Mammary gland
- d). d) Lens
- e). e) Tympanic membrane

EEEE

33. The notochord is replaced by the

- a). a) Ependyma
- b). b) Nucleus pulposus
- c). c) Spinal canal
- d). d) Dorsal roots
- e). e) Spinal cord

BBBBB

35. Sphenomandibular ligament develop from

- a). a) 1st pharyngeal arch
- b). b) 2nd pharyngeal arch
- c). c) 3rd pharyngeal arch
- d). d) 4th pharyngeal arch
- e). e) 6th pharyngeal arch

AAAAA

37. Foregut extends upto level of

- a). a) Gastroduodenal junction
- b). b) Superior duodenal flexure
- c). c) Duodenojejunal flexure
- d). d) Just cranial to major duodenal papilla
- e). e) Just caudal to major duodenal papilla

EEEE

39. The only dilation that does not become subdivided by a septum

- a). a) Sinus venous
- b). b) Primitive atrium
- c). c) Primitive ventricle
- d). d) Bulbus cordis
- e). e) Truncus arteriosus

AAAAA

41. The epithelium of most of the urinary bladder is derived from

- a). a) Allantois
- b). b) Yolk sac endoderm
- c). c) Coelomic epithelium
- d). d) Mesonephros
- e). e) Mesenchyme of genital ridge

BBBBB

43. Definitive urogenital sinus contribute to develop following structures except

- a). a) Membranous urethra
- b). b) Lower part of vagina
- c). c) Female urethra
- d). d) Hymen
- e). e) Posterior wall of urethra

EEEE

45. In the development of humans, the branchial arches develop during the fourth and fifth week in utero as a series of mesodermal outpouchings on the either sides of the developing pharynx. The second branchial arch gives rise to the:

- a). a) Anterior belly of the digastric muscle
- b). b) Incus
- c). c) Lesser horn of the hyoid bone

- d). d) Malleus
 - e). e) Mylohyoid
- CCCCC**

46. Mesonephric tubules are genital ridges next to the developing mesonephros in a fetus, mesonephric tubules give rise to

- a). a) Appendix of epididymis
- b). b) Appendix of testis
- c). c) Efferent ductules
- d). d) Rete testis
- e). e) Seminiferous tubules

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47. The following are developed from dorsal pancreatic bud except

- a). a) Neck of the pancreas
- b). b) Head of the pancreas
- c). c) Body of pancreas
- d). d) Tail of pancreas
- e). e) Neck of the pancreas

BBBBB

48. Derivatives of epidermis are all except-

- a). a) Mammary gland
- b). b) Sweat gland
- c). c) Enamel of teeth
- d). d) Hair follicle
- e). e) Nail

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49. The ductus deferens unites with ducts of seminal vesicle to form –

- a). a) Ampulla
- b). b) Efferent ductule
- c). c) Ejaculatory duct
- d). d) Paradidymis
- e). e) Prostatic utricle

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50. Which of the following derived from, third aortic arch?

- a). a) Maxillary artery
- b). b) Left subclavian artery
- c). c) Rt common carotid artery
- d). d) Left pulmonary artery
- e). e) Ductus arteriosus

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