

Examples of Histology & Embryology questions – made for students, for practice during the course (H2)

1. At the end of the 4th week, closure of the ventral body wall is complete except in the region of:

- a) heart
- b) oropharyngeal membrane
- c) allantois
- d) connecting stalk
- e) head

2. Abnormal body wall closure in the pelvic region results in:

- a) ectopia cordis
- b) bladder and cloacal dystrophy
- c) physiological umbilical hernia
- d) pathological umbilical hernia
- e) septum transversum

3. Blood islands that appear bilaterally, parallel and close to the midline of the embryonic shield form:

- a) endocardium
- b) myocardium
- c) dorsal aortae
- d) venae cavae
- e) coronary capillaries

4. When aortic lumen is significantly narrowed below the origin of the left subclavian artery, this is:

- a) tetralogy of Fallot
- b) patent ductus arteriosus
- c) coarctation of aorta
- d) ectopia cordis
- e) aortic valvular stenosis

5. Respiratory diverticulum (lung bud) appears as an outgrowth from the:

- a) ventral wall of the foregut
- b) dorsal wall of the foregut
- c) ventral wall of the midgut
- d) dorsal wall of the midgut
- e) ventral wall of the hindgut

6. When duodenum is surrounded by pancreatic tissue, this is called:

- a) accessory pancreatic tissue
- b) annular pancreas
- c) atretic pancreas
- d) intrahepatic pancreas
- e) hypoplasia of the pancreas

7. Urorectal septum separates the region between:

- a) foregut and midgut
- b) midgut and hindgut
- c) allantois and hindgut
- d) allantois and midgut
- e) hindgut and fistula

8. During development of kidney, under the inductive influence of the tubule, cells of the metanephric tissue cap form:

- a) renal pelvis
- b) renal calyces
- c) ureters
- d) renal vesicles
- e) neurotrophic urinary tubules

9. Cancer of the kidneys that usually affects children by 5 years of age is:

- a) Denys-Drash tumor
- b) Multicystic tumor
- c) Potter tumor
- d) Renosarcoma
- e) Wilms' tumor

10. During development of vagina, sinovaginal bulbs proliferate and form a solid:

- a) vaginal fold
- b) vaginal tube
- c) vaginal cloaca
- d) vaginal plate
- e) vaginal sinus

11. If the genital tubercle splits, what may occur?

- a) micropenis
- b) epispadias
- c) hipospadias
- d) macropenis
- e) bifid penis

12. Meckel's cartilage forms:

- a) stapes
- b) incus and malleus
- c) hyoid arch
- d) trigeminal arch
- e) larynx

13. When the tongue is not freed from the floor of the mouth, this is:

- a) thyroglossal cyst
- b) midline tongue coarctation
- c) ankyloglossia
- d) glossal fistula
- e) Wilms' prominence

14. During the sixth week of development, semicircular canals appear as:

- a) two perilymphatic spaces
- b) two ridges
- c) flattened outpocketings of the utricular part of the otic vesicles
- d) five crura
- e) the lateral wall of the cochlear duct

15) What is true for congenital deafness:

- a) it may be caused by abnormal development of external ear
- b) in the most extreme cases, tympanic cavity and external meatus are present
- c) most forms of congenital deafness are caused by environmental factors
- d) rubella virus, affecting the fetus in the 28th week may cause it frequently
- e) it has been suggested that diabetes can cause congenital deafness

16. During eye development, the lips of the choroid fissure fuse and the mouth of the optic cup becomes the future:

- a) iris
- b) cornea
- c) retina
- d) pupil
- e) vitreous body

17. What is true for muscular arteries?

- a) they can not control blood flow
- b) their intima has a very thick subendothelial layer
- c) the internal elastic lamina is not present
- d) the tunica media may contain 1-2 layers of smooth muscle cells
- e) vasa vasorum are found in the adventitia

18. What is NOT true for valves in veins:

- a) most veins have valves
- b) valves are most prominent in large veins
- c) valves consist of four pairs of semilunar folds
- d) semilunar folds project across part of the lumen
- e) they are rich in elastic fibers

19. What is NOT true for platelets (thrombocytes)?

- a) they are nonnucleated, disklike clef fragments
- b) platelets promote blood clotting
- c) normal platelet counts range from 2 to 4 millions per microliter of blood
- d) platelets have a life span of about 10 days
- e) in stained blood smears, platelets often appear in clumps

20. Malignant clones of leukocyte precursors are:

- a) leukemias
- b) thrombus
- c) clots
- d) lymphomas
- e) aspirations

21. Which cells are included in the innate immune responses:

- a) neutrophils
- b) macrophages
- c) mast cells
- d) natural killer cells
- e) all of the above

22. What is true for thymus:

- a) thymus is a unilateral organ located in the mediastinum
- b) it attains its peak development during old age
- c) like bone marrow, it is considered a secondary lymphoid organ
- d) thymus has a capsule made of epithelial tissue
- e) none of the above

23. Unique protein that can be found in enamel is:

- a) integrin
- b) neurotrophin
- c) amelogenin
- d) ameloblastin
- e) prismin

24. Colonocytes are located in:

- a) mouth
- b) enamel
- c) esophagus
- d) small intestine
- e) large intestine

25. The exocrine portion of the pancreas is similar in structure to the:

- a) parotid gland
- b) submandibular gland
- c) sublingual gland
- d) liver
- e) pancreatic islets

26. What is NOT true for liver regeneration:

- a) liver has a strong capacity for regeneration
- b) liver has slow rate of cell renewal
- c) the loss of hepatic tissue triggers a mechanism by which healthy hepatocytes begin to divide
- d) hyperplasia continues until the original mass of tissue is doubled
- e) the regenerated liver tissue is usually well organized

27. A specialized olfactory epithelium is located in:

- a) superior conchae
- b) inferior conchae
- c) middle conchae
- d) nares
- e) vibrissae

28. Dust cells are:

- a) alveolar macrophages
- b) type I alveolar cells
- c) type II alveolar cells
- d) Clara cells
- e) pneumocytes

29. Juxtaglomerular granular cells in kidneys release:

- a) angiotensinogen
- b) angiotensin
- c) renin
- d) aldosterone
- e) plasmin

30. What is NOT true for urinary bladder?

- a) the bladder is a muscular sac
- b) the bladder is expandable as it fills with urine
- c) the bladder expands primarily upward
- d) the bladder becomes more oval in shape as it fills with urine
- e) the bladder in an average adults can hold 800-12000 mL of urine, with the urge to empty appearing at a volume of 400-600 mL

31. F or PP cells can be found in:

- a) pancreas
- b) thyroid gland
- c) parathyroid gland
- d) adrenal gland
- e) pituitary gland

32. What is NOT true for parathyroid glands:

- a) they are four small oval masses
- b) each parathyroid gland is contained within a capsule
- c) capsule of the gland sends septa into the gland
- d) two types of cells are present: chief and principal cells
- e) chief cells are small polygonal cells

33. The rete testis drains into:

- a) efferent ductules
- b) epididymis
- c) ductus deferens
- d) urethra
- e) none of the above

34. What is true for ductus deferens:

- a) it is a short straight tube
- b) it has a thin muscular wall
- c) it is characterized by narrow lumen
- d) its mucosa is not folded
- e) its mucosa is lined by columnar ciliated epithelium

35. Corpus luteum is located in:

- a) ovarian cortex
- b) ovarian medulla
- c) ovarian surface epithelium
- d) ampulla of Fallopian tubes
- e) cumulus oophorus

36. When breastfeeding is stopped, most alveoli that developed secretory properties during pregnancy:

- a) proliferate
- b) degenerate
- c) move deeper into the gland
- d) move towards the surface of the gland
- e) become inactive, but do not change in any way

37. Surrounding the fovea centralis is the:

- a) macula lutea
- b) macula minor
- c) macula centralis
- d) macula amacrina
- e) macula Muller

38. The vitreous body occupies the vitreous chamber behind the:

- a) cornea
- b) pupil
- c) Bruch's layer
- d) ganglion cells
- e) lens

39. The hair cells of the cristae ampullaris detect:

- a) linear acceleration
- b) gravity
- c) tilt of the head
- d) rotational or angular movements of the head
- e) vertical tilt of the head

40) What is NOT true for vestibular maculae and their cells:

- a) two sensory areas, the maculae, are located in the epithelial walls of the utricule and saccule
- b) both maculae are similar histologically
- c) both maculae contain mechanoreceptor cells called hair cells
- d) hair cells use gravity and endolymph movement to detect the orientation of the stationary head
- e) macular wall is composed of hair cells, supporting cells and endings of the cochlear branch of the eighth cranial nerve