

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

**1) Minor structural abnormalities in tissue sections are called:**

- a) ECM
- b) embeddings
- c) fixations
- d) artifacts
- e) serial sections

**2) What are the names of freezing techniques that can be combined with electron microscopy?**

- a) freeze fracture
- b) cryofracture
- c) freeze etched
- d) none of the above
- e) A+B+C

**3) When receptors are on cells very close to the hormone-secreting cells, this type of secretion is:**

- a) autocrine
- b) paracrine
- c) holocrine
- d) merocrine
- e) eccrine

**4) Stratified columnar epithelium can be found in:**

- a) epidermis
- b) conjunctiva
- c) urinary bladder
- d) sweat glands
- e) salivary glands

**5) Elastin contains two unusual amino acids:**

- a) elastase and desmoelastase
- b) desmosine and isodesmosine
- c) proline and lysine
- d) hydroxyproline and hydroxylysine
- e) elastase and proline

**6) Deficiency of collagen type III, characterized by ruptures in arteries and the intestine is:**

- a) Marfan's syndrome
- b) Ehlers-Danlos type IV disease
- c) Scurvy
- d) Osteogenesis imperfect
- e) Arteriosis imperfect

**7) Undifferentiated mesenchymal cells that differentiate as preadipocytes are transformed into:**

- a) fibroblasts
- b) chondroblasts
- c) lipoblasts
- d) osteoblasts
- e) macrophages

**8) ECM area immediately surrounding each chondrocyte is:**

- a) chondronectin
- b) lacuna
- c) territorial matrix
- d) interterritorial matrix
- e) perichondrium

**9) Disease in which bone mineralization is impaired is called:**

- a) osteitis fibrosa cystica
- b) osteogenesis imperfect
- c) Marfan syndrome
- d) Ehlers-Danlos syndrome
- e) osteomalacia

**10) The bone collar is produced during ossification in:**

- a) epiphysis
- b) epiphyseal plate
- c) Howship's lacuna
- d) diaphysis
- e) external circumferential lamella

**11) After the cut or injury of peripheral nerves, the newly growing axons may form a:**

- a) Schwannoma
- b) gapoma
- c) nervoma
- d) neuroma
- e) growoma

**12) Neural plasticity is controlled by growth factors called:**

- a) neuroma
- b) neurophins
- c) gliotrophins
- d) neurotrophins
- e) acetylcholins

**13) The source of regenerating cells in skeletal muscle are:**

- a) sarcomeras
- b) T-tubules
- d) isomeras
- e) myocytes
- d) satellite cells

**14) Smooth muscle in which only a few cells are innervated is called:**

- a) striated smooth muscle
- b) multiunit smooth muscle
- c) unitary smooth muscle
- d) non-innervated smooth muscle
- e) oligoinnervated smooth muscle

**15) Disappearance of melanocytes in the skin causes disorder:**

- a) melanoma
- b) melanoblastic disorder
- c) vitiligo
- d) fibroma
- e) melygo

**16) Epithelial tactile cells are commonly called:**

- a) Schwann cells
- b) Rufini cells
- c) Pacini cells
- d) Merkel cells
- e) Gauck cells

**17) What is true for meiosis?**

- a) meiosis takes place in the somatic cells
- b) during meiosis number of chromosomes is reduced to 22
- c) homologous chromosomes align in groups of 4 during meiosis I
- d) each gamete contains 46 chromosomes
- e) at the beginning of meiosis I male and female germ cells replicate their DNA

**18) Sometimes chromosomes break, and pieces of one chromosome attach to another. This is called:**

- a) translocation
- b) mosaicism
- c) nondisjunction
- d) Barr process
- e) cleft

**19) Infertility is a problem for:**

- a) 1% of couples
- b) 2% of couples
- c) 5% of couples
- d) 10% of couples
- e) 15% to 30% of couples

**20) Cortical and zona reactions prevent:**

- a) formation of cumulus oophorus
- b) polyspermy
- c) chemotaxia
- d) metabolic activation of the egg
- e) capacitation

**21) Sometimes blastocyst develops in the ovary proper, causing a:**

- a) rectouterine cavity
- b) pouch of Douglas
- c) primary ovarian pregnancy
- d) hidatiform mole
- e) omentum pregnancy

**22) Secondary yolk sac is also called a:**

- a) connecting stalk
- b) primitive yolk sac
- c) original exocoelomic cavity
- d) definitive yolk sac
- e) umbilical cord

**23) Sometimes remnants of the primitive streak may proliferate and form tumors known as:**

- a) primitivomas
- b) sacrococcygeal teratomas
- c) yolk sac tumors
- d) gastrulomas
- e) glabromas

**24) By the end of the third week of development, the villus is now known as:**

- a) primary villus
- b) secondary villus
- c) tertiary villus
- d) primordial villus
- e) Graafian villus

**25) What is NOT true for capillary hemangiomas:**

- a) They are abnormally dense collections of capillary blood vessels
- b) They form the most common tumors of infancy
- c) They occur in approximately 10% of all births
- d) They may occur only in craniofacial structures
- e) Facial lesions may be focal or diffuse

**26) Intermediate mesoderm temporarily connects paraxial mesoderm with:**

- a) endoderm
- b) ectoderm
- c) epiblast
- d) lateral plate
- e) neurotrophin

**27) A condition characterized by maternal hypertension, proteinuria and edema is called:**

- a) abortus imminens
- b) preeclampsia
- c) hydrops fetus
- d) omphalocela
- e) gestational diabetes

**28) At the time of birth, the weight of a normal fetus is:**

- a) 2,000 to 2,400 g
- b) 2,500 to 2,900 g
- c) 3,000 to 3,400 g
- d) 3,500 to 3,900 g
- e) 4,000 to 4,400 g

**29) Folate supplementation lowers the incidence of:**

- a) cretinism
- b) oligohydramnion
- c) neural tube defects
- d) hemangiomas
- e) premature birth

**30) Disturbances in carbohydrate metabolism during pregnancy in diabetic mothers may cause:**

- a) still births
- b) neonatal deaths
- c) abnormally large infants
- d) congenital malformations
- e) all of the above

**31) What is true for amniocentesis?**

- a) a needle is inserted transvaginally
- b) approximately 10 microliters of fluid is withdrawn
- c) the procedure may be performed before 5<sup>th</sup> week of gestation
- d) the risk of fetal loss as a result of the procedure is 0,006%
- e) needle location is identified by ultrasound

**32) What is formed when cell death in the apical ectodermal ridge (AER) separates this ridge?**

- a) lateral plates
- b) primary centers of ossification
- c) toes and fingers
- d) forehead
- e) cleft lip

**33) Partial absence of one or more of the extremities is called:**

- a) amelia
- b) meromelia
- c) micromelia
- d) minimelia
- e) nanomelia

**34) Atrophy of abdominal wall musculature causes:**

- a) Duchenne dystrophy
- b) Poland sequence
- c) prune belly syndrome
- d) arthrogryposis
- e) musculopetrosis

**35) A well-defined border between each somite and the parietal layer of lateral plate mesoderm is called:**

- a) lateral somitic frontier
- b) medial somitic frontier
- c) sagittal somitic frontier
- d) frontal somitic frontier
- e) primaxial somitic frontier

**36) Excessive hairiness is called:**

- a) ichthyosis
- b) atrichosis
- c) hypertrichosis
- d) dermatoglyphs
- e) hair shaft

**37) During the third and fourth months, the corium forms many irregular papillary structures called:**

- a) dermal papillae
- b) epidermal papillae
- c) papillomas
- d) lacunar papillae
- e) trichopapillae