**1. Coagulative necrosis:**

1. resemble crumbly cheese
2. may develop as a result of ischemia
3. it is reversible
4. can maintain tissue functionality for 5-7 days
5. affects only extremities

**2. Identify the morphological variant of necrosis that occurs as a result of cerebral ischemia:**

1. coagulative
2. caseous
3. liquefactive
4. fat
5. post-atherosclerotic

**3. Caseous necrosis is characteristic for:**

1. peripancreatic calcinosis
2. gangrenous diabetic foot
3. myocardial infarction
4. abscess
5. pulmonary tuberculosis

**4. Which of the following describes hyperplasia:**

1. increase in the number of cells (mitosis) in an organ or tissue
2. decrease in the number of cells (mitosis) in an organ or tissue
3. increase in individual cell size in an organ or tissue
4. decrease in individual cell size in an organ or tissue
5. reversible change in which one adult cell is replaced by another adult cell type

**5. Which of the following describes hypertrophy:**

1. increase in the number of cells (mitosis) in an organ or tissue
2. decrease in the number of cells (mitosis) in an organ or tissue
3. increase in individual cell size in an organ or tissue
4. decrease in individual cell size in an organ or tissue
5. reversible change in which one adult cell is replaced by another adult cell type

**6. Which of the following describes metaplasia:**

1. increase in the number of cells (mitosis) in an organ or tissue
2. decrease in the number of cells (mitosis) in an organ or tissue
3. increase in individual cell size in an organ or tissue
4. decrease in individual cell size in an organ or tissue
5. reversible change in which one adult cell is replaced by another adult cell type

**7. Which of the following cell transformation is involved in respiratory tract cancer:**

1. squamous to columnar
2. squamous to cuboidal
3. columnar to squamous
4. columnar to cuboidal
5. cuboidal to squamous

**8. In Barrett esophagus, metaplasia occurs as a result of refluxed gastric juice. Which of the following epithelial transformation occurs:**

1. squamous to columnar
2. squamous to cuboidal
3. columnar to squamous
4. columnar to cuboidal
5. cuboidal to squamous

**9. Which of the following has a cheesy, yellow-white appearance at the area of**

**necrosis and is encountered most often in foci of tuberculous infection:**

1. coagulative necrosis
2. liquefactive necrosis
3. causeous necrosis
4. fat necrosis
5. gangrenous necrosis

**10. Which of the following would NOT be associated with metastatic calcification:**

1. increased secretion of parathyroid hormone (PTH)
2. atherocalcinosis
3. gallbladder lithiasis
4. renal failure
5. decreased secretion of parathyroid hormone (PTH)

**11. A 3500 gm liver from a 35-year-old female has a yellow, greasy cut surface. This appearance most likely resulted from:**

1. galactosemia
2. iron accumulation
3. tuberculous infection
4. alcoholism
5. hypoxia

**12. Which of the following can be** **myocardial infarction causes:**

1. ossification
2. angiospasm
3. petrification
4. thrombosis
5. embolism

**13. Which of the following are morphological necrosis types:**

1. paranecrosis
2. fat necrosis
3. protein necrosis
4. coagulative necrosis
5. caseous necrosis

**14. Which of the following are etiologic types of necrosis:**

1. lipidic type
2. vascular type
3. focal type
4. toxic type
5. infectious type

**15. Which of the following are microscopic characteristics of necrosis:**

1. meiosis
2. mitosis
3. plasmorexis
4. plasmochinesis
5. plasmolysis

**16. Necrosis unfavorable outcome is:**

1. organization
2. petrification
3. purulent lysis
4. encapsulation
5. sepsis

**17. Etiologic types of necrosis are:**

1. parenchymatous type
2. traumatic type
3. allergic type
4. caseous type
5. infectious type

**18. Which of** **the following are necrosis microscopic features:**

1. karyokinesis
2. karyorexis
3. karyolysis
4. karyomitosis
5. karyopyknosis

**19. In tuberculosis caseous necrosis is:**

1. coagulative
2. direct
3. indirect
4. wet
5. fibrinoid

**20. Which microscopic changes are characteristic of myocardial infarction:**

1. plasmorexis
2. plasmorrhagia
3. karyokinesis
4. karyolysis
5. cytolysis

**21. In myocardial infarction an important role is assigned to the following factors:**

1. arterial thrombosis
2. hypofunction of the organ
3. allergy
4. functional overload
5. insufficient collateral circulation

**22. The types of degeneration according on their locations are:**

a. parenchymatous type

b. mesenchymal type

c. mixed type

d. proteic type

e. lipidic type

**23. The types of degeneration according on metabolic disturbances are:**

1. carbohydrate degeneration
2. protein degeneration
3. fat degeneration
4. parenchimatous degeneration
5. mesenchymal degeneration

**24. Myocardial fatty degeneration can be detected by the following stain:**

1. hematoxilin-eosin
2. picrofuchsin
3. sudan-3
4. toluidine blue
5. kongo-red

**25. Clinical evidence of parenchymal lipidic degeneration of myocardium is:**

1. increased contractility
2. hypertention
3. decreased contractility
4. rupture of heart
5. hyperemia

**26. Liver steatosis is caused by:**

1. alcoholism
2. viral hepatitis B
3. hypertention
4. viral hepatitis A
5. intoxications

**27. Which of the following statements about lipomatosis of the heart are true:**

1. lipids are deposited under the endocardium
2. lipids are deposited under the epicardium
3. lipids are deposited in myocardial stroma
4. lipids are deposited in the cell cytoplasm
5. can lead to heart rupture

**28. Hemoglobinogenic pigments are:**

1. ferritin
2. hemosiderin
3. bilirubin
4. lipofuscin
5. melanin

**29. Mechanical jaundice is typical for:**

1. acute hepatitis
2. cholelithiasis
3. biliary atresia
4. hypoplasia of the bile ducts
5. hemolytic disease

**30. Brown induration of lungs is characterized by accumulation of:**

1. hydrochloric hematin
2. lipofuscin
3. bilirubin
4. coal dust
5. hemosiderin

**31. Which of the following** **statements regarding dystrophic calcification are true:**

1. it is predominantly local process
2. it is predominantly generalized process
3. it forms petrifications
4. calcium salts accumulates due to hypercalcemia

e. is a substrate for the formation of gouty tophi

**32. The followings are the causes of parenchymal jaundice:**

1. acute inflammation of the common bile duct
2. hepatocytes injury
3. hemolysis of erythrocytes
4. acute hepatitis
5. liver cirrhosis

**33. According to the mechanism of development jaundice is classified into:**

1. hemolytic jaundice
2. hypostatic jaundice
3. mechanical jaundice
4. parenchymal jaundice
5. biliary jaundice

**34. Metastatic calcification occurs in:**

1. destruction of bones by tumors
2. parathormone excess
3. calcitonin excess
4. hypocalcemia
5. parathormone insufficiency

**35. Dystrophic calcification is referred to:**

1. accumulation of calcium salts into unmodified gastric mucosa
2. calcareous metastases in the kidneys
3. calcification of necrosis foci
4. accumulation of calcium salts into unmodified lungs
5. accumulation of calcium salts into myocardium in condition of hypercalcemia

**36. Which of the following are the causes of infarction:**

1. calcification
2. angiospasm
3. thrombosis
4. embolism
5. necrosis

**37. Which of the following disorders is manifested by wet necrosis:**

1. tuberculosis of lung
2. rheumatic pericarditis
3. myocardial infarction
4. spleen infarction
5. ischemic infarction of brain

**38. Identify** **localization of gangrene:**

1. kidney
2. myocardium
3. soft tissues of the lower extremities
4. brain
5. intestine