



Archive

Pathology

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Collected by



1) Which of the following granulomatous conditions is associated with numerous neutrophils?

Select one:

- a. Tuberculosis.
- b. Cat scratch disease.
- c. Crohns disease.
- d. Syphilis.
- e. Sarcoidosis.

Answer: b

2) All the following are correctly combined, except? غير مطلوب

Select one:

- a. Comminuted fracture: the bone communicates with the skin surface.
- b. Greenstick fracture: extending only partially through the bone, common in infants when bones are soft.
- c. Stress fracture: a slowly developing fracture that follows a period of increased physical activity in which the bone is subjected to repetitive loads.
- d. Pathologic: involving bone weakened by an underlying disease process, such as a tumor.
- e. Simple fracture: the overlying skin is intact.

Answer:

3) All the following statement are true regarding the Healing, except?

Select one:

- a. by Regeneration: replacement of the damaged components by the same original tissue.

- b. Regeneration and scar formation are contribute in varying degrees to the ultimate repair.**
- c. The type of repair is determined by the tissue capacity for proliferation and severity of the injury.**
- d. The difference between primary and secondary union are qualitative, not quantitative.**
- e. Healing by Fibrosis: replacement of the injured tissues by extensive deposition of collagen fibers.**

Answer: d

4) What colour does the wear-and-tear pigment give on the routine hematoxylin and eosin stain?

Select one:

- a. Colourless.**
- b. Blue**
- c. Pink.**
- d. Black.**
- e. Brownish-yellow**

Answer: e

5) All the following are correctly combined, except?

Select one:

- a. Rolling: Selectin.**
- b. Complement system: Mannose binding lectin.**
- c. Transmigration of leukocytes: CD30.**
- d. Phagocytosis : Opsonization**

e. Adhesion of leukocyte: Integrin.

Answer: c

6) Considering detecting tissue-specific proteins in blood or serum samples, ONE of the following pairs is wrongly matched?

Select one:

a. Cardiac muscle: Creatine kinase isoform.

b. Cardiac muscle: Troponin.

c. Hepatic bile duct epithelium: Alkaline phosphatase.

d. Hepatic bile duct epithelium: Creatine kinase isoform.

e. Hepatocytes: Transaminases.

Answer: d

7) One of the following is true regarding complement system?

Select one:

a. The alternative pathway including attachment to the antibody.

b. C3b recruits and activates the leukocytes

c. Phagocytosis is done by the recognition of bound C3b by phagocyte C3b receptor.

d. It is consider as cell-derived mediator.

e. The classic pathway including attachment with the microbe.

Answer: c

8) All of the following are examples of physiologic apoptosis EXCEPT?

Select one:

a. Hormonal dependent tissue involution.

- b. Separation of digits in limb during embryogenesis.*
- c. Proliferative tissue turnover.*
- d. Death of cell after accumulation of misfolded protein.*
- e. Decline of leukocytes number at the end of inflammation.*

Answer: d

9) Which of the following cases would most likely present with caseous necrosis?

Select one:

- a. Pulmonary Tuberculosis.*
- b. Severe hypertension.*
- c. Acute pancreatitis.*
- d. Hypoxic and death of cells within the central nervous system.*
- e. Myocardial infarction.*

Answer: a

10) All the following are features of Serous inflammation, except?

Select one:

- a. Characterized by the outpouring of a protein-poor fluid secreted by mesothelial cells.*
- b. Fluid in a serous cavity is called an effusion.*
- c. Increased vascular permeability lead to exudation of large molecules.*
- d. End with respiratory or cardiac impairment.*
- e. The skin blister resulting from a burn or viral infection is a good example.*

Answer: c

11) The state of constant/stable internal environment in which the cell is capable of doing its function properly is called?

Select one:

- a. Hemostasis.**
- b. Apoptosis.**
- C. Homeostasis.**
- d. Autophagy.**
- e. Reversibility.**

Answer: c

12) All of the following is correct about hypoxia and ischemia EXCEPT?

Select one:

- a. They are both among the most common causes of cell injury.**
- b. Hypoxia can also be caused variety of diseases affecting the lung.**
- C. Arterial obstruction is the most common cause of ischemia.**
- d. Every case of ischemia is associated with hypoxia.**
- e. Anemia is the most common cause of hypoxia.**

Answer: e

13) One of the following is correct about necrosis?

Select one:

- a. If a necrotic tissue is not phagocytized it attracts calcium salts.**
- b. Necrosis never elicits a local host reaction or inflammation.**
- C. Necrosis is regulated by specific signals or biochemical mechanisms.**
- d. A form of cell death in which the cell membrane is kept intact.**

e. Necrosis is sometimes called suicidal cell death.

Answer: a

14) A 57-year-old male patient has been smoking 2 packs per day for 25 years. Now presented with chronic productive cough for the past year, during investigations a biopsy from trachea and bronchi showed extensive replacement of the normal ciliated columnar epithelial cells by stratified squamous epithelial cells. Which of the following best describes the changes seen in the patients biopsy?

Select one:

- a. Infarction.*
- b. Metaplasia.*
- c. Hyperplasia.*
- d. Hypertrophy.*
- e. Dysplasia.*

Answer: b

15) All the following are different characteristics between monocytes and macrophages, except?

Select one:

- a. Macrophages are larger in size than monocytes.*
- b. Macrophages have greater ability to kill ingested organisms than monocytes.*
- c. Macrophages are shorter half-lives than monocytes.*
- d. Macrophages exhibit more active metabolism than monocytes.*
- e. Macrophages show increased content of lysosomal enzymes than monocytes.*

Answer: c

16) One of the following is not among the morphologic features of apoptosis?

Select one:

- a. Retains an intact plasma membrane.**
- b. Elicits Inflammation.**
- c. Apoptotic bodies phagocytized by macrophages.**
- d. Cells shrinkage.**
- e. Formation of cytoplasmic buds.**

Answer: b

17) All the following are characteristics for acute inflammation, except?

Select one:

- a. it is immediate response of living body to injury.**
- b. It is a specific reaction and may be evoked by any injury of short duration.**
- c. Occurs before the immune response becomes established.**
- d. Occurs to limit the extent of tissue damage.**
- e. Associated by marked outflow of blood content and edema formation.**

Answer: b

18) All the following are true regarding stem cells, except?

Select one:

- a. It is an original embryonic cells that have the inherent property of proliferation.**
- b. Characterized by prolonged self-renewal capacity.**
- c. Permanent tissues regenerate after injury as long as the pool of stem cells is present.**
- d. After cell division, one cell will differentiate while other cell remains undifferentiated.**

e. They have very wide differentiation capabilities.

Answer: c

19) A 53-year-old female has experienced severe chest pain for the past 6 hours. Laboratory studies show elevated serum troponin. The electrocardiogram changes suggest an irreversible injury to myocardial fibers. Which of the following pathologic processes has most likely occurred in her heart?

Select one:

- a. Apoptosis.*
- b. Coagulative necrosis.*
- C. Fat necrosis.*
- d. Fibrinoid necrosis.*
- e. Liquefactive necrosis.*

Answer: b

20) Which type of the following infections caused Leukopenia?

Select one:

- a. Typhoid fever.*
- b. Staphylococcus.*
- c. Streptococci.*
- d. Candidia.*
- e. E.coli*

Answer: a

21) Rapid wounds healing occurs in all the following circumstances, except?

Select one:

- a. *Surgical and clean wound.*
- b. *Small-sized wound.*
- c. *In richly vascularized areas.*
- d. *Zinc sufficiency.*
- e. *Septic wound.*

Answer: e

22) A 46-year-old female patient visiting her family physician for routine checkup. She has no major complain and she goes to her job normally, but she reported a problem of chronic alcohol abuse for the last 5 years. No abnormal findings on physical examination or laboratory studies. Which of the following microscopic findings is most likely to be present in her liver?

Select one:

- a. *Excessive intracellular glycogen.*
- b. *Coagulative necrosis.*
- c. *Hemochromatosis.*
- d. *Steatosis.*
- e. *Apoptosis.*

Answer: d

23) All the following can cause vasoconstriction, except? Select one:

- a. *Leukotriene C4.*
- b. *Leukotriene D4.*
- c. *Thromboxane A2.*
- d. *Leukotriene E4.*

e. Thromboxane B2.

Answer: e

24) All the following statements are true regarding granulation tissue and scar, except?

Select one:

- a. Granulation tissue is minimally vascularized.**
- b. The scar is pale and avascular.**
- c. Granulation tissue contains minimal mature collagen.**
- d. The scar contains dense collagen,**
- e. As the scar matures, there is progressive vascular regression.**

Answer: a

25) The definition of Emigration is?

Select one:

- a. Movement of WBC in the interstitial tissues toward chemotactic stimuli.**
- b. Movement of leukocytes across the endothelium.**
- c. Engulfment of invading microorganism.**
- d. Adhesion of leukocyte to the endothelium.**
- e. Movement of leukocytes along the periphery of the blood vessels.**

Answer: a

26) Acute inflammation may progress to chronic inflammation in all the following causes, except?

Select one:

- a. The offending agent is not removed.**

- b. There is minimal initial tissues injury.*
- C. There is decreased capacity of the affected tissue to re-grow.*
- d. Interference of normal healing process.*
- e. Persistence of the injurious agent.*

Answer: b

27) Ultra-Structural changes of reversible cell injury can be identified through electron microscopy, One of the following is not observed in reversible cell injury change?

Select one:

- a. Clumping of nuclear chromatin.*
- b. Disintegration of the DNA.*
- C. Blebbing and blunting of plasma membrane.*
- d. Cytoplasmic myelin figures.*
- e. Dilation of Endoplasmic Reticulum.*

Answer: b

28) One of the following is true regarding Histamine?

Select one:

- a. It causes arteriolar vasoconstriction and rapidly increases vascular permeability.*
- b. Soon after its release, histamine is activated by histaminase.*
- C. Histamine is produced by only one cell (mast cells).*
- d. It acts by inducing venular endothelial relaxation and formation of interendothelial gaps*

e. Preformed histamine is released from mast cell granules in response to Neuropeptides.

Answer: e

29) One of the following is CORRECT about the study of pathology?

Select one:

a. Morphological changes are only observed through microscopy.

b. Etiology is defined as the mechanism through which diseases develop and progress.

c. Pathology is a branch of Histology.

d. Morphology: The basic structural and functional changes associated with disease.

e. Histopathology is a sequence of events that leads from structural abnormalities to clinical manifestations.

Answer: d

30) One of the following does not belong to this group of Medical Sciences?

Select one:

a. Orthopedics.

b. Biochemistry.

c. Surgery.

d. General Medicine.

e. Radiology.

Answer: b

31) How much time does it usually takes for a dead cell nucleus to completely disappear ?

Select one :

- a . 12 hours .**
- b . One week**
- C. 1 to 2 days .**
- d . 2 minutes .**
- e . 20 minutes**

Answer: c

32) The correct consequence of leukocytes recruitment is ?

Select one :

- a . Margination , Adhesion , Rolling , Transmigration and Emigration**
- b . Rolling , Margination , Adhesion , Transmigration and Emigration .**
- C. Emigration , Margination , Rolling , Adhesion and Transmigration**
- d . Margination , Rolling , Adhesion , Transmigration and Emigration .**
- e . Transmigration , Emigration , Margination , Rolling and Adhesion .**

Answer: d

33) Which of following parenchymal organs whose cells have the highest proliferative capacity ?

Select one :

- a . Liver**
- b . Pancreas**
- c . Thyroid gland .**
- d . Adrenal gland**
- e . Lung**

Answer: a

34) A 25 - year - old female gave birth to a healthy baby boy and initiated breastfeeding within the first hour of birth . Which of the following processes that occurred in her breasts during pregnancy enables her to breastfeed the infant ?

Select one

- a . Glandular dysplasia**
- b . Stromal hypertrophy**
- c . Glandular hyperplasia .**
- d . Ductal metaplasia .**
- e . Fatty changes**

Answer: c

35) A 40-year-old woman presents to the hospital with the sudden onset of severe abdominal pain and vomiting. On examination she is hypotensive and in shock. Laboratory studies show elevated serum lipase. Eventually she was found to have acute pancreatitis. Which of the following changes is most likely to be present in the mesentery of this patient?

Select one:

- a. Anthracotic pigment**
- b. Cheeselike friable yellow-white material.**
- C. Chalky white changes on gross examination.**
- d. Bright pink, amorphous material on routine microscopic examination.**
- e. Dystrophic calcification.**

Answer: c

36) Atrophy is shrinkage in the size of cells by the loss of cell substance. Which of the following causes of atrophy is a normal physiologic process?

Select one:

- a. Immobilization of a limb to permit healing of a fracture.**
- b. Loss of innervation after a spinal injury.**
- c. Atherosclerotic disease affecting the cerebral arteries.**
- d. Inadequate nutrition in an anorexic patient.**
- e. Loss of hormone stimulation in menopause.**

Answer: e

37) One of the following is Incorrect about fatty changes observed in cellular injury?

Select one:

- a. Occurs mainly in hypoxic injury.**
- b. Seen in organs that involved in fat metabolism.**
- c. It results from failure of the sodium potassium pump.**
- d. Most common site is the liver.**
- e. Manifested by triglyceride containing lipid vacuoles in the cytoplasm.**

Answer: c

38) Which of the following changes and consequences that follow cellular injury usually come first?

Select one:

- a. Cell death.**
- b. Loss of function.**

- c. Ultra-Structural changes.
- d. Gross morphologic changes.
- e. Light microscopic changes.

Answer: b

39) Which one of the following is a pro-apoptotic protein?

Select one:

- a. Bax.
- b. BCL-2.
- c. BCL-XL
- d. Inflammasome.
- e. Transaminases

Answer: a

40) All the following is true regarding bone healing, except? غير مطلوب

Select one:

- a. The remodeling reduces the size of the callus.
- b. Soft callus is a mass of predominantly uncalcified tissue presented at the end of the first week of fracture.
- c. After approximately 2 weeks, the soft callus is transformed into a bony callus.
- d. The activated osteoprogenitor cells deposit woven bone.
- e. The healing process is complete with restoration of the periosteum.

Answer:

41) Which of the following mechanisms is responsible for Elimination of potentially harmful self-reactive lymphocytes to prevent reactions against one's own tissue?

Select one:

- a. Coagulative necrosis.**
- b. Hypertrophy.**
- C. Atrophy.**
- d. Pathologic apoptosis.**
- e. Physiologic apoptosis.**

Answer: e

42) Slow wounds healing occurs in the following conditions, except?

Select one:

- a. Prolonged inflammation.**
- b. Excessive exercise.**
- C. Exposure of wounds to ultraviolet light.**
- d. Exposure of wounds to ionizing radiation.**
- e. Vitamin C deficiency.**

Answer: c

43) One of the following statements is incorrect?

Select one:

- a. Transudate is an extra-vascular fluid with low protein content.**
- b. Exudate is an inflammatory extravasation of fluid that cellular debris with low specific gravity.**
- c. Transudate is an extra-vascular fluid with low specific gravity.**
- d. Exudate is an extravascular fluid that has a high protein concentration.**
- e. Edema is excessive fluid in the interstitial tissue which is exudate or transudate.**

Answer: b

44) All of the following are effects of Bradykinin, except?

Select one:

- a. Increase vascular permeability.**
- b. Vasodilatation.**
- c. Platelets aggregation.**
- d. Smooth muscle contraction.**
- e. Pain.**

Answer: c

45) All the following are components of the interstitial matrix, except? غير مطلوب

Select one:

- a. Fibrillar collagen.**
- b. Laminin.**
- c. Proteoglycan.**
- d. Elastin.**
- e. Hyaluronan.**

Answer:

46) All the following is true regarding Excessive Scarring, except?

Select one:

- a. Keloid represents a scar tissue that grows at the same level of the boundaries of the original wound.**
- b. Hypertrophic scars generally develop after thermal or traumatic injury**
- c. More common in blacks.**

d. Keloid represents a scar tissue that regress.

e. Hypertrophic scars associated with injury that involves the superficial layers of the dermis.

Answer:

47) All the following Mediators are correctly paired with their effect, except?

Select one:

a. Reactive Oxygen Species: Destruction of necrotic cells.

b. Neuropeptides: Regulate vessel tone.

c. Prostacyclin: Inhibition of platelet aggregation.

d. Nitric Oxide: Stimulation of acute inflammation.

e. TGF-B: Termination of the inflammation.

Answer: d

48) The Kupffer cells are macrophages that located in?

Select one:

a. Spleen.

b. Lymph nodes.

c. Central nervous system.

d. Liver.

e. Lungs.

Answer: d

49) All the following is true regarding the process of angiogenesis, except?

Select one:

a. Increased permeability induced by VEGF.

- b. PDGF and FGF-B participate in the stabilization process.**
- c. Separation of pericytes and breakdown of the basement membrane to allow formation of a vessel sprout.**
- d. Migration of endothelial cells toward the area of tissue injury.**
- e. Recruitment of periendothelial cells to form the mature vessel.**

Answer: b

50) A woman presented with respiratory symptoms. Her lung biopsy revealed numerous granulomas without any necrosis. The histological examination to rule out infections is negative by using specific stains, the proper diagnosis is?

Select one:

- a. Tuberculosis.**
- b. Cat scratch disease.**
- c. Crohns disease.**
- d. Syphilis.**
- e. Sarcoidosis.**

Answer: b

51) Which of the following is a physician who introduced the correlation of clinical findings (signs, symptoms) with findings at posmortem examination?

Select one:

- a. Adolf Hitler.**
- b. Rudolf Virchow.**
- c. Giovanni Morgagni.**
- d. Gianluigi Buffon.**

e. Giovanni de Medici.

Answer: b

52) One of the following pathways of Cell Death is used as a survival mechanism in states of nutrient deprivation?

Select one:

a. Necroptosis.

b. Apoptosis.

c. Pyroptosis.

d. Autophagy.

e. Necrosis.

Answer: d

53) All the following is true regarding the scar formation, except?

Select one:

a. Wound strength increases because of cross-linking of collagen and increased size of collagen fibers.

b. Myofibroblasts serve to close the wound by pulling its margins toward the center.

c. Fibroblasts enter the wound from the edges and migrate toward the center.

d. Fibroblasts contain smooth muscle actin and have increased contractile activity.

e. The major component of the fully developed scar is Collagen type I.

Answer: d

54) A 56 year old male experienced sudden onset of severe sharp chest pain and shortness of breath; he was rushed to the hospital where Electrocardiographic changes suggest the possibility of myocardial infarction (MI). Laboratory studies

show elevated serum troponin, If this patient does not survive this MI, when do you expect to see morphologic features indicative of the death of ischemic myocytes with your Naked eye at an autopsy? غير مطلوب

Select one:

- a. In 20 minutes.**
- b. In less than 12 hours.**
- C. Not before 12-24 hours of death.**
- d. Not before a month of death.**
- e. They are visible grossly in 2 minutes of death.**

Answer: c

55) All the following is true regarding fibrosis except?

Select one:

- a. Fibrosis is a pathologic process induced by persistent injurious stimuli.**
- b. It is typically associated with loss of tissue**
- C. Myofibroblasts are the main source of collagen producers in liver cirrhosis.**
- d. It may be responsible for substantial organ dysfunction and even organ failure.**
- e. Fibrosis induced by chronic infections.**

Answer: c

56) All the following are correctly combined, except?

Select one:

- a. Suppurative Inflammation: Diphtheria.**
- b. Serous Inflammation: Ascites.**
- C. Fibrinous Inflammation: Pericardial exudate.**

d. Purulent inflammation: Staphylococci.

e. Pseudomembranous inflammation: pseudomembranous colitis.

Answer: a

57) All the following are correctly combined except?

Select one:

a. Diabetic ulcers affect the lower extremities,

b. Keloid contains abundant, thick and irregular collagen bundles.

c. Arterial ulcers contain deposits of iron pigment.

d. Exuberant granulation is characterized by blocks reepithelialization.

e. Contractures are commonly seen after serious burns.

Answer: c

58) All of the following is correct concerning intracellular accumulations EXCEPT?

Select one:

a. Iron is normally stored within cells in association with apoferritin.

b. They are always harmful and cause varying degrees of injury.

c. They can result from excessive production of an endogenous substance.

d. They can result deposition of an abnormal exogenous material.

e. Cholesterol is a key component of cell membrane.

Answer: b

59) What are the components of granulation tissue?

Select one:

a. Plasma cells, blood vessels and fibroblasts.

- b. Macrophages, new blood vessels and epithelioid cells.*
- C. Monocytes, giant cells and fibroblasts.*
- d. Macrophages, new blood vessels and fibroblasts.*
- e. Lymphocytes, caseation necrosis and multinucleated giant cells.*

Answer: d

60) Hyperplasia is an increase in the number of cells in an organ that stems from increased proliferation. All of the following is correct about hyperplasia EXCEPT?

Select one:

- a. It may occur concurrently with hypertrophy.*
- b. It takes place in tissue contains cells capable of replication.*
- c. In the liver cells begin compensatory hyperplasia as early as 12 hours after resection.*
- d. Growth control mechanisms are ineffective in hyperplasia just like in cancer.*
- e. Pathologic hyperplasia constitutes a fertile soil in which cancers may eventually arise.*

Answer: d

Q1: All the following are true regarding stem cells. except?

- a. It is an original embryonic cells that have the Inherent property of proliferation*
- b. Characterized by prolonged self-renewal capacity*
- c. Labile tissue regenerate after injury as long as the pool of stem cells is present*
- d. After cell division, one cell Will differentiate while Other cell remains undifferentiated*
- e. They have very limited differentiation capabilities*

Answer: e

Q2: ONE of the following is correct concerning intracellular accumulations?

- a. They are always harmful and cause varying degrees of Injury**
- b. Hemosiderin is the most common exogenous pigment**
- c. When Lipofuscin present in large amounts it is called Anthracosis**
- d. Iron is normally stored within cells in association with apoferritin**
- e. Toxins are the most common causes of fatty change in the liver**

Answer: d

Q3: What are the components of granulation tissue?

- a. Plasma cell, blood vessel and fibroblasts**
- b. Macrophage, new blood vessels and epithelial cells**
- c. Monocyte, giant cells and fibroblasts**
- d. Macrophages, new vessels and fibroblasts**
- e. Lymphocytes, caseation necrosis and multinucleated giant cells**

Answer: d

Q4: All the following Mediators are incorrectly paired with their effect, except?

- a. Lipoxin: stimulate neutrophil adhesion**
- b. Leukotriene E4: Bronchospasm**
- c. Thromboxane: Inhibition of platelet aggregation**
- d. Nitric oxide: Stimulation of acute inflammation**
- e. TGF-B: initiation of the inflammation**

Answer: b

Q5: Which one of the following is an anti-apoptotic protein?

- a. BCL-2**
- b. Bax**
- c. Bak**
- d. Cytochrome C**
- e. Tumor necrosis factor (TNF) receptor**

Answer: a

Q6: One of the following is anaphylatoxin?

- a. C5a**
- b. C4a**
- c. C5b**
- d. C2a**
- e. C3b**

Answer: a

Q7: All the following are components of the interstitial matrix, except? غير مطلوب

- a. Fibrillar collagen**
- b. Elastin**
- c. Proteoglycan**
- d. Laminin**
- e. Hyaluronan**

Answer:

Q8: Rapid wounds healing occur in all the following circumstances, except?

- a. Surgical and Clean wound**
- b. Small-sized wound**
- c. In richly vascularized areas**
- d. When the wound is produced by blunt trauma**
- e. Aseptic wound**

Answer: d

Q9: The Kupffer cells are macrophages that located in?

- a. spleen**
- b. Lymph**
- c. Central nervous system**
- d. Liver**
- e. lung**

Answer: d

Q10: All the following are correctly combined, except?

- a. Rolling: Selectin**
- b. Complement system: Mannose binding lectin**
- c. Transmigration of leukocytes: CD30**
- d. Phagocytosis: Opsonization**
- e. Adhesion of leukocyte: Integrin**

Answer: c

Q11: one of the following is true regarding 3-Platelet-Activating factor?

- a. It is generated from the membrane phospholipids of one type of cell*
- b. It acts on target cells through the effects of a specific G protein-coupled receptor*
- c. It inhibits platelets.*
- d. It acts as bronchodilation*
- e. It causes vasoconstriction*

Answer: b

Q12: One of the following Inflammatory patterns is associated with the exudation of large molecules?

- a. Serous Inflammation*
- b. Fibrinous Inflammation*
- c. Suppurative Inflammation*
- d. Membranous Inflammation*
- e. Purulent Inflammation*

Answer: b

Q13: All the following statements are true regarding granulation tissue and scar except?

- a. Granulation tissue is highly vascularized*
- b. The scar is pale and vascular*
- c. Granulation tissue contains minimal mature collagen*
- d. The scar contains dense collagen*
- e. As the scar matures there is progressive vascular regression*

Answer: b

Q14: BH3 proteins are sensors that activate the mitochondrial pathway, All of the following activate the BH3 sensors except?

- a. Cells deprived of survival signals**
- b. Cells deprived of growth factors**
- c. Damaged DNA**
- d. Viral infection**
- e. Accumulation of misfolded proteins**

Answer: d

Q15: One of the following does not belong to this group Of Medical Sciences?

- a. Biochemistry**
- b. Pharmacology**
- c. Psychiatry**
- d. Physiology**
- e. Histology**

Answer: c

Q16: The definition of Margination is?

- a. Movement of WBC in the interstitial tissues toward chemotactic stimuli**
- b. Movement of leukocytes across the endothelium**
- c. Engulfment of invading microorganism**
- d. Adhesion of leukocyte to the endothelium.**
- e. Movement of leukocytes along the periphery of the blood vessels**

Answer: e

Q17: One of the following is incorrect about the mitochondrial pathway of apoptosis?

- a. It is also called the intrinsic pathway**
- b. Bax and Bak dimerize and form channels to aid cytochrome C release**
- c. It activates apoptosis through triggering caspase 8**
- d. BCL-2 is an antiapoptotic protein that maintains the integrity of mitochondrial membranes**
- e. it is activate in most physiologic and pathologic apoptosis**

Answer: c

Q18: All the are true regarding characteristic features between acute and chronic inflammation except?

- a. Chronic Inflammation longer duration than acute inflammation**
- b. Chronic inflammation associated with tissue destruction lesser than acute inflammation**
- c. The Inflammatory infiltrate chronic inflammation is a mixture of mononuclear cells**
- d. Chronic inflammation is productive**
- e. Acute inflammation is exudative**

Answer: b

Q19: Which of the following is a physician who emphasized that all diseases originate at the cellular level and he is known to be the Father of Modern Pathology

- a. Adolf Hitler**
- b. Rudolf Virchow**

- c. Giovanni Morgagni
- d. Robert Koch
- e. Robert Hooke

Answer: b

Q20: A 34-year-old male has been complaining of epigastric pain for 2 years, After the clinical diagnosis of chronic gastric reflux, an endoscopy was performed Which showed no masses or ulcer but the microscopic examination of an esophageal biopsy revealed intestinal-type columnar epithelium, Which of the following best describes the changes seen in the patients biopsy?

- a. Infarction
- b. Hypertrophy
- c. Hyperplasia
- d. Metaplasia
- e. Dysplasia

Answer: d

Q21: One Of the following statements is correct?

- a. Transudate is an extra-vascular fluid with high protein content
- b. Exudate is an inflammatory extravasation of fluid that cellular debris with low specific gravity
- c. Transudate is an extra-vascular fluid with high specific gravity
- d. Exudate is an extravascular fluid that has a high protein concentration
- e. Edema excessive fluid in the interstitial tissue which is only exudate in type

Answer: d

Q22: All the following are true regarding complement system, except?

- a. The alternative pathway Including attachment with the microbe*
- b. C3a recruits and activates the leukocytes*
- c. phagocytosis is done by the recognition of bound C5b by phagocyte C5b receptor*
- d. it is consider as plasma protein-derived mediator*
- e. the classic pathway Including attachment to the antibody*

Answer: c

Q23: 50-year-old man has a 2-year history of left chest pain that occur during exercise, His Doctor diagnosed him with Coronary artery disease due to atherosclerosis. Accumulation of Which of the following substances has the main role in the pathogenesis of atherosclerosis?

- a. intracellular glycogen*
- b. Cholesterol*
- c. Proteins*
- d. Triglycerides*
- e. Lipofuscin*

Answer: b

Q24: All the following is true regarding the process of angiogenesis, except?

- a. Vasodilation in response to NO and increased permeability induced by VEGF*
- b. PDGF and FGF- β participate in the stabilization process*
- c. Separation of pericytes and breakdown of the basement membrane to allow formation of vessel*
- d. Migration of endothelial cells toward the area of tissue injury*
- e. proliferation of endothelial just behind the leading front (tip) of migration cells*

Answer: b

Q25: Prussian blue is special histochemical stain used to highlight which of the following accumulated pigments?

- a. Hemosiderin**
- b. Melanin**
- c. Lipofuscin**
- d. Carbon**
- e. Glycogen**

Answer: a

Q26: A 72-year-old man presented to the emergency with loss of consciousness, after gaining his consciousness 30 minutes later, he could not speak or move his left arm, six weeks later, a brain CT scan showed a large cystic area in the right parietal lobe, WHICH of the following pathologic processes has most likely occurred in her brain?

- a. Apoptosis**
- b. Coagulative necrosis**
- c. Fat necrosis**
- d. Fibrinoid necrosis**
- e. Liquefactive necrosis**

Answer: e

Q27: one of the following is correct about hypoxia and ischemia?

- a. they are both among the most common causes of cell injury**
- b. carbon monoxide poisoning is the most common cause hypoxia**
- c. venous obstruction is the most common cause of ischemia**

d. every case of hypoxia is associated with ischemia

e. anemia is the most common cause of hypoxia

Answer: a

Q28: A 56 year old male experienced sudden onset of severe sharp chest pain and shortness of breath, he has rushed to the hospital where on physical examination he has tachycardia and the Electrocardiographic changes suggest the possibility of myocardial infarction, Which of the following laboratory tests on the patients serum is most useful in this situation?

a. Adrenaline

b. Troponin

c. Bilirubin

d. Alkaline phosphate

e. Transaminases

Answer: b

Q29: Which of following parenchymal organs whose cells have the highest proliferative capacity?

a. Liver

b. Pancreas.

c. Thyroid gland.

d. Adrenal gland.

e. Lung

Answer: a

Q30: One of the following is INCORRECT about Homeostasis?

a. A state of constant internal environment

- b. A state in which intracellular milieu is normally tightly regulated*
- c. It is important to cell to function*
- d. It is process to stop and prevent bleeding*
- e. Body temperature is an example of body homeostasis*

Answer: d

Q31: Which Of the following cases would most likely present with fat necrosis?

- a. Myocardial Infarction*
- b. Severe hypertension*
- c. Acute pancreatitis*
- d. hypoxic and death of cells within the central nervous system*
- e. Pulmonary Tuberculosis*

Answer: c

Q32: hyperplasia is described as an increase in the number of cells in an organ through proliferation, which can be physiologic or pathologic. ONE of the following pairs is wrongly matched?

- a. Breast glandular epithelium proliferation at puberty...physiologic hyperplasia*
- b. Papillomaviruses skin warts ... pathologic hyperplasia*
- c. Benign prostatic hyperplasia... Physiologic hyperplasia*
- d. Endometrial hyperplasia... Pathologic hyperplasia.*
- e. Restoring the liver normal size after resection... Physiologic hyperplasia*

Answer: c

Q33: Which Of the following is not among the nuclear change of a necrotic cell?

- a. Break down of DNA*

- b. Mitosis**
- c. Pyknosis**
- d. Karyorrhexis**
- e. Karyolysis**

Answer: b

Q34: Which of the following granulomatous condition is associated with numerous neutrophils?

- a. tuberculosis.**
- b. Cat scratch disease**
- c. Crohns disease**
- d. Syphilis**
- e. Sarcoidosis**

Answer: b

Q35: A 29-years old male presented with two months history of night fever and sweating, cough and associated chest pain, chest X-ray showed upper lobes infiltration along with cavity lesions. Weeks later, his sputum cultures are positive for acid-fast bacilli confirming a tuberculous infection. Which of the following changes is most likely to be present in the patients cavity lesion?

- a. Anthracotic pigment**
- b. Cheese like friable yellow-white material**
- c. Chalky white changes on gross examination**
- d. Bright pink. Amorphous material on routine microscopic examination**
- e. Dystrophic calcification**

Answer: b

Q36: All the following statements are true regarding the healing process, except?

- a. By regeneration the replacement of the damaged components by the same original tissue**
- b. Regeneration and scar formation contribute in varying degrees to ultimate repair**
- c. The type of repair is determined only by the tissue capacity to proliferation**
- d. The difference between primary and secondary union are quantitative and qualitative**
- e. Healing by fibrosis: the replacement of the injured tissue by extensive deposition of collagen**

Answer: c

Q37: One of the following is correct about cellular swelling observed in cellular injury?

- a. Occurs mainly in metabolic liver injury**
- b. Changes are easier to identify through light microscopy than the naked eye**
- c. It is irreversible**
- d. It results from failure of the sodium potassium pump due to ATP depletion**
- e. manifested by triglyceride containing vacuoles in the cytoplasm**

Answer: d

Q38: one of the following pathways of cell death is characterized by activation of a cytosolic danger sensing protein complex called the inflammasome?

- a. Necroptosis**
- b. Apoptosis**

- c. pyroptosis
- d. Autophagy
- e. Necrosis

Answer: c

Q39: All the following are correctly combined, except? غير مطلوب

- a. Comminuted fracture: the bone is fragmented
- b. Greenstick fracture: extending only partially through the bone, common in infants when bones are soft
- c. Stress fracture: a quickly developing fracture that follows a period of increased physical activity in which the bone
- d. displaced fracture: the end of the bone at the fracture site are not aligned
- e. Simple fracture: the overlying skin is intact

Answer:

Q40: A woman presented with diarrhea. Her colonic biopsy revealed numerous granulomas, without any necrosis and the histological examination to rule out infection is negative by using specific stains. The proper diagnosis is?

- a. Tuberculosis
- b. Cat scratch disease
- c. Crohns disease.
- d. Syphilis
- e. Sarcoidosis

Answer: c

Q41: All the following are incorrectly combined. except?

- a. Suppurative Inflammation: Sarcoidosis*
- b. Serous Inflammation: TB*
- c. Fibrinous Inflammation: Pericardial exudate*
- d. Purulent inflammation: Diphtheria*
- e. Pseudomembranous inflammation: staphylococci*

Answer:

Q42: All the following are characteristic for acute inflammation, except?

- a. its immediate response of living body to injury*
- b. it's a nonspecific reaction and may be evoked by any injury of long duration*
- c. occurs before the immune response become established*
- d. occurs to limit the extent of tissue damage*
- e. associated by marked outflow of food content and edema formation*

Answer: b

Q43: All the Following consider as cell derived mediator, except?

- a. Histamine*
- b. Bradykinin*
- c. Serotonin*
- d. nitric oxide*
- e. neuropeptides*

Answer: b

Q44: if you put the sequence of events following the onset of ischemia in myocardial infarction in order, which of the following represent the correct sequence?

- a. loss of function - cell death - ultrastructural change - light microscopic - changes-grossly morphologic changes**
- b. loss of function - ultrastructural change - light microscopic changes - changes-grossly morphologic - cell death**
- c. cell death - loss of function - ultrastructural change - light microscopic changes - changes-grossly morphologic**
- d. cell death - ultrastructural change - loss of function - changes-grossly morphologic - light microscopic changes**
- e. loss of function - cell death - changes-grossly morphologic - ultrastructural change - light microscopic changes**

Answer: c

Q45: All the following is correct about necrosis EXCEPT?

- a. if a necrotic tissue is not phagocytized it attract calcium salts**
- b. necrotic cells usually disappear due to enzymatic digestion and phagocytosis**
- c. necrosis is regulated by specific signals or biochemical mechanism**
- d. severe disturbances like hypoxia and ischemia cause necrosis**
- e. necrosis is something called accidental cell death**

Answer: c

Q46: Acute inflammation may progress to chronic inflammation in all the following causes, except?

- a. The offending agent is not removed**
- b. There is minimal Initial tissues injury**
- c. There is decreased capacity of the affected tissue to re-grow**
- d. Interference of normal healing process**

e. persistence of the injurious agent

Answer: b

Q47: ultrastructural change of reversible cell injury can be identified through electron microscopy, all the following can be observed in reversible cell injury change EXCEPT?

- a. clumping of nuclear chromatin*
- b. cytoplasmic myelin figures*
- c. blebbing and blunting of plasma membrane*
- d. disintegration of the DNA*
- e. dilation of endoplasmic reticulum*

Answer: d

Q48: The correct consequence of leukocytes recruitment is?

- a. Margination. Adhesion, Rolling. Transmigration and Emigration.*
- b. Rolling. Margination, Adhesion. Transmigration and Emigration*
- c. Emigration. Margination. Rolling. Adhesion and Transmigration.*
- d. Margination. Rolling, Adhesion. Transmigration and Emigration*
- e. Transmigration, Emigration. Margination. Rolling and Adhesion*

Answer: d

Q49: One of the following can cause vasodilation?

- a. Leukotriene B4*
- b. Prostaglandin D2*
- c. Thromboxane A2*
- d. Prostaglandin E4*

e. Thromboxane B2

Answer: b

Q50: All the following is true regarding Excessive Scaring except?

- a. The basic mechanisms of fibrosis are the same as those of scar*
- b. hypertrophic scar generally developed after thermal or traumatic injury*
- c. More Common in black*
- d. Keloid represents a scar tissue that does not regress*
- e. hypertrophic scars associated with injury that involves the superficial layers of the dermis*

Answer: e

Q51: Hypertrophy is an increase in the of cells resulting in an increase in the size of the organ, All the following is correct about hypertrophy EXCEPT?

- a. Hypertrophy can be physiologic or pathologic*
- b. It Can progress to functionally significant cell injury the stress is not relieved*
- c. Muscle hypertrophy develops by synthesis of more proteins and myofilaments per cell*
- d. Chiseled physique of weightlifter stems only from the hypertrophy*
- e. in some cases it occurs together with hyperplasia like in cardiac muscles*

Answer: e

Q52: All the following is true regarding the healing, except? غير مطلوب

- a. The remodeling reduces the size of the callus.*
- b. Soft Callus is a mass of predominantly calcified tissue presented at the end of the first week of fracture*

- c. After approximately 2 weeks, the callus is transformed into a bony callus*
- d. The activated osteoprogenitor cells deposit woven bone*
- e. The healing process is complete with restoration of the medullary cavity*

Answer:

Q53: Slow wounds healing occurs in the following conditions, except?

- a. When the wound is produced blunt trauma*
- b. Older age*
- c. Wounds on the face*
- d. foreign body*
- e. Zinc deficiency*

Answer: c

Q54: All the Following is true regarding the scar formation. except?

- a. Wound strength increases because of cross-linking of collagen and increased size of collagen fiber*
- b. Myofibroblasts serve to close the wound by pulling its margins toward the center*
- c. Fibroblasts enter the wound from the edges and migrate toward the center*
- d. Myofibroblasts contain smooth muscle actin and have increased contractile activity*
- e. The major component of the fully developed scar is collagen type III*

Answer: e

Q55: All the following are correctly combined except?

- a. diabetic ulcers affect the lower extremities*

- b. Keloid contains abundant, thin and regular bundles*
- c. Venous leg ulcers contain deposit of iron pigment*
- d. exuberant granulation is characterized by blocks reepithelialization*
- e. Contractures are commonly seen after serious burns*

Answer: b

Q56: at the end of a normal menstrual cycle, the endometrium sloughs (menstrual bleeding), examination of the endometrium microscopically shows cellular fragmentation (apoptotic body) which of the following is most likely to trigger apoptosis in these endometrial cells?

- a. acute inflammation*
- b. decreased estrogen*
- c. p53 protein accumulation*
- d. hypoxia*
- e. DNA damage*

Answer: b

Q57: All the following is true regarding fibrosis except?

- a. Fibrosis is a pathologic process induced by persistent injurious stimuli*
- b. Stellate cells are the major collagen producers in liver Cirrhosis*
- c. Myofibroblasts are the main source of collagen producers in the lung*
- d. It may be responsible for substantial organ dysfunction and even organ failure*
- e. It typically associated with preserved tissue of the original state*

Answer: c

Q58: which of the following changes and consequences that follow the cellular injury usually take longer time to be identified?

- a. cell death**
- b. loss of function**
- c. ultrastructural changes**
- d. gross morphological changes**
- e. light microscopic changes**

Answer: d

Q59: A 67-years-old female known case of hypertension, in one of her follow-up visit, she has a blood pressure of 150/95 mmHg, she said that she keeps forgetting her medication, if this patient kept forgetting her medication which of the following cellular alteration would most likely be seen in her myocardium?

- a. apoptosis**
- b. hypertrophy**
- c. hyperplasia**
- d. hemosiderosis**
- e. fatty changes**

Answer:

Q60: All of the following is correct about the study of pathology EXCEPT?

- a. etiology: the mechanism through which diseases develop and progress**
- b. pathogenesis: cellular and molecular changes give rises to abnormalities characterize the disease**
- c. pathogenesis: is the basis of developing rational treatments and effective preventive measure**

d. morphology: the basic structural and functional changes associated with disease

e. morphological changes: could be either observed with the naked eye or microscopy

Answer: a

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