

**NBCE  
MOCK BOARD QUESTIONS  
PATHOLOGY –A**

1. Which of the following types of cell injury is reversible?
  - A. Necrosis
  - B. Caseation
  - C. Degeneration
  - D. Gangrene
  
2. Fatty change in the liver due to alcoholism is produced by which of the following mechanisms?
  - A. Anemia and hypoxia
  - B. Depressed protein synthesis
  - C. Increased mobilization of adipose tissue
  - D. Enhanced enzyme production
  
3. Which of the following does not cause insufficient cell energy production?
  - A. Hyperplasia
  - B. Uncoupling of oxidative phosphorylation
  - C. Hypoxia
  - D. Hypoglycemia
  
4. Cells that are capable of phagocytosis of particulate matter include which of the following?
  - A. Neutrophils and macrophages
  - B. Lymphocytes and mast cells
  - C. T cells and Null cells
  - D. Basophils and eosinophils
  
5. In cell injury, which of the following changes is irreversible?
  - A. Pyknosis
  - B. Dispersion of ribosomes
  - C. Bleb formation
  - D. Mitochondrial swelling
  
6. Atrophy is characterized by which of the following?
  - A. A decrease in the size of cells
  - B. A change in the differentiation of the cells
  - C. An increase in the size of the cells
  - D. A change in the maturation of the cells
  
7. Which of the following is the word that means the unidirectional migration of leukocytes toward a target?
  - A. Diapedesis
  - B. Chemotaxis
  - C. Opsonization
  - D. Endocytosis

8. In which of the following processes does phagocytosis by neutrophils and macrophages take place?
  - A. Autolysis
  - B. Autophagy
  - C. Heterophagy
  - D. Hyperplasia
  
9. In hypertrophy, the increase in the size of the organ is produced by which of the following?
  - A. Increase in the size of the cells within the organ
  - B. Increase in the number of the cells within the organ
  - C. Increased presence of water within the cells of the organ
  - D. Increase in the amount of adipose tissue within the organ
  
10. Dysplasia is an abnormality that is characterized by which of the following?
  - A. Changes in maturation and differentiation
  - B. Invasion of surrounding tissue
  - C. Degeneration of the cells
  - D. Accumulation of lipofuscin
  
11. Wet gangrene is a form of necrosis associated with which of the following?
  - A. Hyperplasia
  - B. Viral infections
  - C. Ischemic necrosis
  - D. Bacterial infection
  
12. Which of the following factors is most important in the cellular pathogenesis of acute ischemia?
  - A. Mitochondrial hyperplasia
  - B. Reduced ATP production
  - C. Lipid deposition
  - D. Glycogenolysis
  
13. Liquefactive necrosis is seen typically in which of the following organs?
  - A. Heart
  - B. Liver
  - C. Lungs
  - D. Brain
  
14. Corticosteroids affect the activation of cellular phospholipase which leads to which of the following?
  - A. Enhanced vasodilation
  - B. Increased chemotaxis
  - C. Smooth muscle contraction
  - D. Decreased production of arachidonic acid
  
15. Acute hemorrhage is associated with which of the following?
  - A. Induction of an anemia via hemodilution
  - B. Production of a microcytic, hypochromic anemia
  - C. Decreased production of RBCs in the bone marrow
  - D. Production of hemolysis

16. Which of the following statements is correct about hemolytic anemias?
- A. Is associated with iron deficiency
  - B. The morphology of the RBCs is microcytic and hypochromic
  - C. The RBC lifespan is less than 120 days
  - D. Is associated with decreased cell production in the bone marrow
17. The more common form of hemolytic anemia is associated with which of the following?
- A. Reactive hyperplasia of the spleen
  - B. Increased plasma hemoglobin concentration
  - C. May be caused by trauma to the red cells
  - D. All of the above
18. Sickle cell anemia is associated with which of the following?
- A. A single amino acid substitution with glycine substituting for valine
  - B. Is termed a leukoglobinopathy
  - C. Worldwide, sickle cell is the most common form of familial hemolytic anemia
  - D. Heterozygotes for the sickle cell gene have approximately 80% of their hemoglobin replaced with sickle cell hemoglobin
19. Sickling of RBC's is associated with which of the following?
- A. Deoxygenation reversible corrects the sickling of the RBCs
  - B. During the sickling process calcium and potassium increase in the RBCs
  - C. Repeated sickling episodes cause dehydration of the RBC
  - D. Sickling of the RBCs cause hyperemia of blood flow through bone marrow and spleen
20. An individual who is homozygous for sickle cell usually starts to produce symptoms at which of the following ages?
- A. At birth
  - B. At approximately 1 year of age
  - C. After approximately 1 week of life
  - D. After approximately 6 months of life
21. An individual who is homozygous for the sickle cell gene can experience which of the following?
- A. Stroke
  - B. Splenic infarcts
  - C. Bone infections
  - D. All of the above
22. Which of the blood vessels are usually spared from developing atherosclerosis?
- A. Aorta
  - B. Renal arteries
  - C. Brachial arteries
  - D. Coronary arteries

23. Which of the following statements about atherosclerosis is correct?
- A. Chronic or repetitive endothelial injury is an important primary factor for the development of atherosclerosis
  - B. Atherosclerosis is considered an acute inflammatory condition
  - C. The specific causes of endothelial dysfunction in early atherosclerosis are well established
  - D. One of the causes of atherosclerosis is thrombosis
24. Which of the following is correct regarding hypertensive vascular disease?
- A. About 5% of all types of hypertension are classified as “essential” hypertension
  - B. Hypertension is defined as a sustained systolic blood pressure of greater than 120mmHg
  - C. 90-95% of all types of hypertension are classified as essential hypertension
  - D. Most of non-essential hypertension is primarily due to cardiac disease
25. Which of the following can result in sustained increases in arterial blood pressure?
- A. Renal vascular stenosis
  - B. Acute hemorrhage
  - C. Diabetes insipidus
  - D. Congestive cardiac failure
26. What are some of the signs and symptoms for syphilitic aneurysms?
- A. Difficulty in swallowing
  - B. Persistent cough
  - C. Difficulty breathing
  - D. All of the above
27. Which of the following are consistent with a vasculitis?
- A. It is associated with medial cystic necrosis
  - B. Can be caused by immune mediated damage
  - C. Vessels most often involved are the aorta and large sized vessels
  - D. It is usually associated with atherosclerosis
28. Treatment of which of the following forms of arteritis by administration of IgG produces a marked reduction in coronary artery disease?
- A. Kawasaki disease
  - B. Takayasu arteritis
  - C. Polyarteritis nodosa
  - D. Wegener granulomatosis
29. In Raynaud’s disease the fingers change color in which order when they are exposed to cold?
- A. Red, white, blue
  - B. Blue, red, white
  - C. White, blue, red
  - D. Red, blue, white

30. Which of the following is a malignant tumor of blood vessels?
- A. Hemangioma
  - B. Telangiectasia
  - C. Angiosarcoma
  - D. Nevus flammeus
31. Which of the following genital infections is classified as “endogenous”?
- A. Lactobacillus
  - B. Candida
  - C. Gardnerella
  - D. Mycoplasma
32. Which of the following is NOT correct regarding pelvic inflammatory disease?
- A. Is an ascending infection
  - B. Endogenous form is usually from polymicrobial flora of the lower genital tract
  - C. In the adult the vagina is prone to gonococcal infection
  - D. Fertility is not affected
33. Which of the following is a type of dysfunctional uterine bleeding?
- A. Hemorrhagia
  - B. Hemangioma
  - C. Metrorrhagia
  - D. Hyperplasia
34. Which of the following is associated with transplacental infections?
- A. Rubella
  - B. Chicken pox
  - C. Gonococcus
  - D. Candida
35. Ectopic pregnancies are usually found in which of the following anatomic sites?
- A. Peritoneal cavity
  - B. Cervix
  - C. Bladder
  - D. Fallopian tubes
36. Which of the following statements is correct?
- A. Both female BRCA-2 and male BRCA-1 show higher incidence of cancer
  - B. Both male BRCA-1 and female BRCA-1 show higher incidence of cancer
  - C. Both male BRCA-2 and female BRCA-2 show higher incidence of cancer
  - D. Both female BRCA-1 and male BRCA-2 show higher incidence of cancer
37. Which of the following is the correct definition of “AZOTEMIA”?
- A. Is usually associated with glomerular disease such as glomerulonephritis
  - B. Has presence of proteins in the urine (proteinuria)
  - C. Increased BUN and creatinine in blood
  - D. Increased glucose in the blood stream

38. Endogenous pyrogen increases the synthesis of prostaglandin E2 in the anterior hypothalamus which in turn stimulates the vasomotor center and eventually results in fever production. Which of the following represents the events in the vasomotor center that leads to the febrile state?
- A. The vasomotor system activates the sympathetics, which release epinephrine at the neuromuscular junction leading to increased skeletal muscle activity and heat production
  - B. The vasomotor system activates the sympathetics which leads to vasoconstriction of the vessels of the skin, a decrease in heat dissipation, and fever
  - C. The vasomotor system activates the sympathetics which leads to increased sweating, which increases heat loss by evaporation
  - D. The vasomotor system activates the parasympathetics, which leads to vasodilation of the vessels in the skeletal muscle and increased heat dissipation
39. Which of the following statements regarding glomerulonephritis is correct?
- A. When approximately 50% of all the glomeruli are destroyed (reduced in number), end-stage renal failure will occur
  - B. Proteinuria, caused by epithelial cell injury, may be caused by alterations in the nephron
  - C. Renal ablation glomerulopathy results in increase number of podocytes
  - D. None of the above
40. Which of the following is correct regarding acute pyelonephritis?
- A. Can be caused by a Urinary Tract Infection
  - B. More commonly affects males
  - C. Diabetes mellitus decreases the incidence
  - D. None of the above
41. Which of the following is the most common cause of acute renal failure
- A. Drug induced interstitial nephritis
  - B. Acute tubular necrosis
  - C. Acute pyelonephritis
  - D. Rapid progressive glomerular nephrosis (crescentic)
42. Henoch-Schonlein's Purpura is associated with which of the following?
- A. Often follows a respiratory tract infection
  - B. Is caused by the presence of the organism
  - C. Occurs mostly in adults
  - D. Is mainly due to thrombocytopenia
43. A thrombosis of the left anterior descending coronary artery in the heart of a 49-year-old man who died in the emergency room was probably manifested by an increase which of the following proteins in the serum?
- A. Amylase
  - B. Bilirubin
  - C. Lactate dehydrogenase
  - D. Creatine kinase

44. Prinzmetal angina pectoris can be pharmacologically treated with what kinds of medications?
- A. Arterial vasoconstrictors which would decrease cardiac output and thereby decrease work by the heart
  - B. Venoconstrictors which would decrease blood return (venous return) and thereby decrease volume work of the heart
  - C. Vasodilators which dilate the coronary arteries and so increase the coronary blood flow
  - D. Drugs that increase the heart rate and so would increase coronary blood flow
45. As the heart becomes hypertrophied during congestive failure, and the heart is unable to eject the blood entering the ventricle during diastole (dilated ventricle), which of the following would occur?
- A. Blood flow to the hypertrophied ventricular parenchyma would increase (hyperemic response)
  - B. Develop eccentric hypertrophy
  - C. Develop concentric hypertrophy
  - D. Develop isokinetic hypertrophy
46. What are some common ECG changes associated with a myocardial infarction
- A. T wave elevation
  - B. ST segment elevation
  - C. Decreased R-R interval
  - D. Q wave elevation
47. The most sensitive marker for MI is which of the following?
- A. CK-BB
  - B. LDH
  - C. CK-MB
  - D. cTn I
48. Asthma is associated with which of the following
- A. Irreversible bronchospasm
  - B. IgG mediation
  - C. Thought to be from persistent bronchial inflammation
  - D. Decreased vital capacity
49. COPD Type A is associated with which of the following?
- A. Emphysema
  - B. Chronic bronchitis
  - C. Cyanosis
  - D. Cough, productive of sputum
50. Increased mortality from ARDS is likely due to which of the following?
- A. Bronchospasm
  - B. Leukemia
  - C. Multiple system organ failure
  - D. None of the above

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QUESTIONS  
PATHOLOGY - A  
Answer Key**

- 1. C
- 2. D
- 3. A
- 4. A
- 5. A
- 6. A
- 7. B
- 8. C
- 9. A
- 10. A
- 11. D
- 12. B

- 13. D
- 14. D
- 15. A
- 16. C
- 17. A
- 18. C
- 19. C
- 20. D
- 21. D
- 22. C
- 23. A
- 24. C
- 25. A
- 26. D
- 27. B
- 28. A
- 29. C
- 30. C
- 31. B

- 32. C
- 33. C
- 34. A
- 35. D
- 36. D
- 37. B
- 38. C
- 39. B
- 40. A
- 41. B
- 42. A
- 43. D
- 44. C
- 45. B
- 46. B
- 47. D
- 48. C
- 49. A
- 50. C