

PATHOLOGY BOARD EXAMINATION

Instructions: Choose the best answer.

1. A 50-year old man has blood pressure of 150/90 mm Hg. If this person remains untreated for years, which of the following cellular alterations will be seen in the myocardium?

A. atrophy
B. metaplasia
C. hypertrophy
D. dysplasia

Answer: C

Reference: RPBD 7th p.7

2. On day 28 of her menstrual cycle, a 26-year old woman experiences menstrual bleeding which lasts for 5 days. She has had regular cycles for many years. Which of the following processes is most likely occurring in the endometrium just before onset of bleeding?

A. apoptosis
B. heterophagocytosis
C. liquefactive necrosis
D. hyperplasia

Answer: A

Reference: RPBD 7th p.26-27

3. At autopsy, a 60-year old man has an enlarged (2500 g) liver with yellow cut surface. Before death, his total serum cholesterol and triglyceride levels were normal, but he had decreased serum albumin concentration and prolonged prothrombin time. Which of the following activities most likely lead to these findings?

A. playing golf
B. cigarette smoking
C. drinking gin
D. aspirin ingestion

Answer: C

Reference: RPBD 7th p.35-36

4. A 70-year old woman suddenly lost consciousness and on awakening one hour later, she could not speak nor move her right arm and leg. Two months later, a head MRI showed a large cystic area in the left parietal lobe. Which of the following pathologic processes has most likely occurred in the brain?

A. karyolysis
B. fat necrosis
C. apoptosis
D. liquefactive necrosis

Answer: D

Reference: RPBD 7th p.22

6. A 21-year old woman complains of pain during menses (dysmenorrhea). To treat this symptom, she was advised to take indomethacin. This drug may help reduce her pain because it interferes with the production of which one of the following substances?

A. bradykinin
B. histamine
C. leukotrienes
D. estrogen

Answer: A

Reference: RPBD 7th p.65

7. What type of leukocyte actively participates in acute inflammatory processes and contains myeloperoxidase within its primary (azurophilic) granules and alkaline phosphates in its secondary (specific) granules?

A. lymphocytes
B. neutrophils
C. eosinophils
D. monocytes

Answer: B

Reference: RPBD 7th p.73

8. A 3-year old child touches a lit candle. Within several hours, there is marked erythema of the skin of the fingers on the child's left hand, and small blisters appear on the finger pads. Which of the following terms best describe the process?
A. fibrinous inflammation
B. ulceration
C. abscess formation
D. serous inflammation
Answer: D
Reference: RPBD 7th p.76
9. A woman who is allergic to cats visits a friend who keeps several pet cats. During the visit, she inhales cat dander and within minutes, she develops nasal congestion and abundant nasal secretions. Which of the following substances is most likely to produce these findings?
A. tumor necrosis factor
B. bradykinin
C. histamine
D. complement C5a
Answer: C
Reference: RPBD 7th p.63
10. After receiving incompatible blood, a patient develops a transfusion reaction in the form of back pain, fever, shortness of breath and hematuria. Which of the following statements best classifies this type of immunologic reaction?
A. systemic anaphylactic reaction
B. complement-mediated cytotoxicity reaction
C. systemic immune complex reaction
D. delayed type hypersensitivity reaction
Answer: B
Reference: RPBD 7th p.210
12. A patient presents with a large wound on the left leg as a result of a vehicular accident. Initially his wound is filled with granulation tissue, which is composed of proliferating fibroblasts and new blood vessels (angiogenesis). Which of the following is a growth factor that is capable of inducing all the steps necessary for angiogenesis?
A. vascular endothelial growth factor
B. platelet-derived growth factor
C. epidermal growth factor
D. transforming growth factor
Answer: A
Reference: RPBD 7th p.95
13. A 16-year old patient has lacerations on his hand which required sutures. The sutures were removed after 10 days. Wound healing continued but the site was disfigured by a prominent, raised nodular scar which developed over the next 2 months. Which of the following terms best describes the process that occurred within this 2-month period?
A. organization
B. resolution
C. keloid formation
D. dehiscence
Answer: C
Reference: RPBD 7th p.114
14. A 17-year old woman receiving corticosteroid therapy for an autoimmune disease has an abscess on her upper outer left arm. She undergoes a drainage procedure but the wound heals poorly over the next month. Which of the following aspects of wound healing is most likely to be deficient in this patient?
A. neutrophil infiltration
B. collagen deposition
C. re-epithelialization
D. fibroblast elaboration
Answer: B
Reference: RPBD 7th p.114
15. Which of the following changes best describes the pathophysiology involved in the production of pulmonary edema in patients with congestive heart failure?
A. widespread endothelial damage
B. decreased plasma oncotic pressure
C. acute lymphatic obstruction

D. increased hydrostatic pressure

Answer: D

Reference: RPBD 7th p.122

16. A 23-year old medical student develops a "red" face after being asked a question during a lecture. Which of the following statements best describes the vascular reaction?

A. active hyperemia
B. petechial hemorrhage
C. allergic reaction
D. passive congestion

Answer: A

Reference: RPBD 7th p.122

17. While preparing her lunch, a housewife nicks her finger with a knife. Seconds after the injury, the bleeding stops. Which of the following mechanisms is most likely to reduce blood loss from a small dermal arteriole?

A. protein C activation
B. vasoconstriction
C. neutrophil chemotaxis
D. platelet aggregation

Answer: B

Reference: RPBD 7th p.124

18. A 26-year old rock climber fractures his left femur after falling from a height of 20 meters. He was hospitalized and over the next several days develops progressive respiratory problems. He died three days later. At the time of autopsy, *oil red-O positive material* is seen in the small blood vessels of the lungs and brain. Which of the following is the most likely diagnosis?

A. air emboli
B. paradoxical emboli
C. fat emboli
D. saddle emboli

Answer: C

Reference: RPBD 7th p.136

19. A 23-year old who had a myocardial infarction 1 year ago now has chest pain when exercising. His underlying disease is due to an absence of LDL receptors on liver cells, inherited as an autosomal dominant condition. Which of the following laboratory findings is most likely to be present in this patient?

A. ketonuria
B. hypercholesterolemia
C. hypoglycemia
D. abetalipoproteinemia

Answer: B

Reference: RPBD 7th p.156

20. A 20-year old woman of average intelligence and short stature is being evaluated for primary amenorrhea. Physical examination reveals a shield-shaped chest and her elbows turn outward when her arms are at her sides. She has a "thick neck" and you notice the absence of secondary female sex characteristics. Serum estrogen levels are found to be decreased, while FSH and LH levels are increased. Which of the following is the most likely diagnosis?

A. Turner's syndrome
B. fragile X syndrome
C. Klinefelter's syndrome
D. XYY syndrome

Answer: A

Reference: RPBD 7th p.179

23. A 26-year old woman presents with increasing fatigue, arthritis, shortness of breath, and a bimalar, photosensitive erythematous rash. Biopsies from this rash reveal liquefactive degeneration of the basal layer of the epidermis with a perivascular lymphoid infiltrate. Physical examination shows bilateral pleural effusions, the fluid from which when examined histologically reveals multiple erythrocytes phagocytized by phagocytic leukocytes. Which of the following is the most likely diagnosis?

A. dermatomyositis
B. systemic lupus erythematosus
C. Sjogren's syndrome

D. rheumatoid arthritis

Answer: B

Reference: RPBD 7th p.227

25. A 36-year old man presents with a new onset of a "bulge" in his right inguinal area. This was diagnosed as an inguinal hernia. The resected hernial sac contained some adipose tissue. Adipose tissue was sent to the laboratory for examination. Which of the following features should be present to make a diagnosis of lipoma rather than normal adipose tissue?

A. anaplasia
B. fibrous capsule
C. prominent nucleoli
D. uniform population of cells

Answer: B

Reference: RPBD 7th p.270

26. A 23-year old woman has noted a palpable nodule on her neck for the past 3 months. On physical examination, there is a 2-cm firm nontender nodule on the left lobe of the thyroid gland. A fine needle biopsy of the nodule reveals cells consistent with thyroid carcinoma. No other family members are affected by this disorder. Which of the following is most relevant in the woman's past medical history?

A. exposure to polyvinyl compounds
B. chronic alcoholism
C. radiation exposure in childhood
D. history of trauma

Answer: C

Reference: RPBD 7th p.319

27. A 64-year old man has several episodes of hematuria in the past week. On physical examination, there are no abnormal findings. A urinalysis shows 4+ hematuria and cytologic examination of the urine shows that atypical cells are present. A urologist performs a cystoscopy and observes a 4 cm mass with a nodular, ulcerated surface in the dome of the bladder. Which of the following terms best describes this lesion?

A. sarcoma
B. carcinoma
C. fibroma
D. papilloma

Answer: B

Reference: RPBD 7th p.271

28. A 33-year old woman undergoes an annual physical examination and there are no abnormal findings. A Pap smear was done as part of the pelvic examination. Cytologically, the cells obtained from the cervical smear show severe epithelial dysplasia. Which of the following statements best explains the significance of these findings?

A. The lesion could progress to invasive cervical carcinoma
B. An ovarian teratoma is present
C. There has been a regression of cervical carcinoma
D. Antibiotic therapy will cure the lesion

Answer: A

Reference: RPBD 7th p.275

29. The use of broad-spectrum antibiotics can produce a bleeding diathesis characterized by hematomas, melena and bleeding gums by decreasing the normal gut flora and inducing a deficiency of which one of the following vitamins?

A. Vitamin A
B. Vitamin B
C. Vitamin C
D. Vitamin K

Answer: D

Reference: RPBD 7th p.456

33. An apathetic male infant from the slums is found to have peripheral edema, a "moon face," and an enlarged fatty liver. Which of the following is the basic defect causing this change in the liver?

A. Decreased fluid intake leads to hypernatremia
B. Decreased carbohydrate intake leads to hypoglycemia
C. Decreased caloric intake leads to hypoalbuminemia
D. Decreased protein intake leads to decreased lipoproteins

Answer: D

Reference: RPBD 7th p.447

38. A 5-year old girl developed a rash over her chest that began as 0.5 cm reddish macule. Within 2 days, the macules became vesicle. A few days later, the vesicles ruptured and crusted over. Over the next 2 weeks, crops of the lesion spread to the face and extremities. Which of the following clinical manifestations of this infection is most likely to appear decades later?

A. shingles
B. paralysis
C. congestive heart failure
D. infertility

Answer: A

Reference: RPBD 7th p.368

39. A 36-year old man with AIDS presents with deteriorating mental status. A spinal tap was done. The cerebrospinal fluid was stained with mucicarmine and India ink. The mucicarmine stain reveals numerous yeasts that stain bright red. The India ink demonstrates the capsule of the organism. Which of the following is the most likely diagnosis?

A. chromomycosis
B. blastomycosis
C. cryptococcosis
D. cryptosporidiosis

Answer: C

Reference: RPBD 7th p.399

40. A 38-year old man presents with cough, fever, night sweats and weight loss. A chest x-ray reveals irregular densities in the upper lobe of the right lung. Histologic sections reveal caseous necrosis surrounded by acid fast bacilli and few scattered giant cells. These giant cell are a result of fusion together of what type of cell?

A. activated macrophages
B. atypical lymphocytes
C. reactive fibroblasts
D. epithelial cells

Answer: A

Reference: RPBD 7th p.381

41. A 21-year old woman gives birth at term to an infant weighing 1859 g. On physical examination, the infant's head size is normal, but the crown-heel length and foot length are reduced. There are no external malformations. Throughout infancy, developmental milestones are delayed. Which of the following conditions occurring during gestation would most likely produce these findings?

A. maternal diabetes mellitus
B. pregnancy induced hypertension
C. congenital cytomegalovirus
D. erythroblastosis fetalis

Answer: B

Reference: RPBD 7th p.477

44. A 40-year old obese man presents signs and symptoms of hyperglycemia. After appropriate work-up, he is diagnosed as having type II diabetes mellitus, which is due in part to insulin resistance. Laboratory evaluation of his serum also discloses hypertriglyceridemia, which is due to his diabetes. The most common type of secondary hyperlipidemia associated with diabetes mellitus is characterized by elevated serum levels of which of the following substances?

A. low density lipoproteins
B. very low density lipoproteins
C. chylomicrons
D. intermediate density lipoproteins

Answer: B

Reference: RPBD 7th p.521

45. A 40-year old woman presents with recurrent severe headaches and increasing visual problems. Physical examination reveals her blood pressure to be 220/150. Her symptoms are most likely to be associated with which one of the following abnormalities?

A. medial calcific sclerosis
B. hyaline arteriosclerosis
C. giant cell arteritis
D. Takayasu's arteritis

Answer: C

Reference: RPBD 7th p.536

46. A 61-year old man presents with the sudden onset of excruciating pain. He describes the pain as beginning in the anterior chest, radiating to the back, then moving downward into the abdomen. His blood pressure is found to be 160/115. Myocardial infarction is suspected but was ruled out due to normal ECG. An x-ray of the patient's abdomen shows a "double-barrel" aorta. Which of the following is the cause of the abnormality?

A. loss of elastic tissue in the media
B. congenital defect in the aorta wall
C. abnormal collagen synthesis
D. a microbial infection

Answer: A

Reference: RPBD 7th p.531

50. A 62-year old woman presents with increasing fatigue and is found to have hypochromic normocytic red cells in her peripheral smear. Physical examination finds her heart rate and respiratory rate to be increased in frequency. Laboratory examination finds decreased serum ferritin, the levels of which are inversely proportional to the serum levels of which one of the following substances?

A. haptoglobin
B. bilirubin
C. hemosiderin
D. transferrin

Answer: D

Reference: RPBD 7th p.643

52. A 21-year old woman presents with fever, weight loss, night sweats, and painless enlargement of several supraclavicular lymph nodes. A biopsy from one of the enlarged lymph nodes shows binucleate giant cell with prominent acidophilic "owl-eye" nucleoli. Also present are atypical mononuclear cells that are surrounded by clear spaces (lacunar cells). Which of the following is the most likely diagnosis?

A. Hodgkin's disease
B. reactive hyperplasia
C. cat-scratch disease
D. non-Hodgkin's lymphoma

Answer: A

Reference: RPBD 7th p. 686

54. A 6-year old girl accidentally inhales a plastic bead, which lodges in one of her bronchi. A chest x-ray reveals the mediastinum to be shifted toward the side of the obstruction. Which of the following pulmonary abnormalities is most likely present in this girl?

A. resorption atelectasis
B. compression atelectasis
C. contraction atelectasis
D. patchy atelectasis

Answer: A

Reference: RPBD 7th p. 713

56. While recovering in bed 1 week after an abdominal hysterectomy, a 43-year old woman develops acute shortness of breath with hemoptysis. Physical examination finds the patient to be afebrile with moderate respiratory distress, calf tenderness, and a widely split S2. Which of the following is the most likely diagnosis?

A. atelectasis
B. viral pneumonia
C. congestive heart failure
D. pulmonary embolus

Answer: D

Reference: RPBD 7th p.742

64. A 35-year old man noticed an increased feeling of heaviness in his scrotum for the past 10 months. On physical examination, the left testis is three times the size of the right testis and is firm on palpation. Laboratory studies include an elevated alpha fetoprotein level. Which of the following cellular components is most likely to be present in this mass?

A. yolk sac cells
B. Leydig cells
C. seminoma cells
D. cytotrophoblasts

Answer: A

Reference: RPBD 7th p.1043

65. A 47-year old man presents with increasing "heartburn" especially after eating or when lying down. Biopsies taken approximately 4 cm proximal to the gastroesophageal junction reveal metaplastic columnar epithelium. Which of the following is the most likely diagnosis?
- A. hamartomatous polyp
 - B. Barrett's esophagus
 - C. Reflux esophagitis
 - D. Mallory Weiss syndrome

Answer: B

Reference: RPBD 7th p.804

66. A 20-year old woman with abdominal pain localized to the right lower quadrant, nausea and vomiting, mild fever and an elevation of peripheral leukocyte count. An appendectomy is performed. Which of the following is the expected microscopic appearance of this appendix?
- A. normal appearing appendix
 - B. dilated lumen filled with mucus
 - C. yellow tumor at the tip of the appendix
 - D. neutrophils within the muscular wall

Answer: D

Reference: RPBD 7th p.870

67. A 60-year old man presents with increasing fatigue. His past medical history is unremarkable. Physical examination is also unremarkable except for positive occult blood in stool and microcytic hypochromic anemia. Barium enema study shows a 4 cm mass in the left side of his colon having an "apple core" appearance. Which of the following is the most likely histologic diagnosis for this colonic mass?

- A. leiomyosarcoma
- B. adenocarcinoma
- C. carcinoid tumor
- D. squamous cell carcinoma

Answer: B

Reference: RPBD 7th p.862

68. A 48-year old woman with increasing fatigue and is found to have elevated liver enzymes (AST and ALT). Over the next year, her liver enzymes have remained elevated and all serological tests for viral markers remain negative. A liver biopsy reveals chronic inflammation in the portal triads that focally destroys the limiting plate and "spills over" into the adjacent hepatocytes. Anti smooth muscle and antinuclear antibodies are present. An LE test is also positive. Which of the following is the most likely diagnosis?

- A. autoimmune hepatitis
- B. primary biliary cirrhosis
- C. systemic lupus erythematosus
- D. chronic persistent hepatitis

Answer: A

Reference: RPBD p.903

69. A 57-year old male alcoholic with a history of chronic liver disease presents with increasing weight loss and ascites. Physical examination is unremarkable and fecal occult blood is negative. CT scan of the abdomen reveals a *single mass in the left lobe of the liver*. Work-up reveals elevated levels of alpha fetoprotein in this patient's blood. Which of the following is the most likely diagnosis?

- A. angiosarcoma
- B. hepatoblastoma
- C. cholangiocarcinoma
- D. hepatocellular carcinoma

Answer: D

Reference: RPBD 7th p.924

70. According to Courvoisier's law, a pancreatic cancer located in the head of the pancreas should be suspected in an individual with which one of the following clinical signs?

- A. migratory thrombophlebitis
- B. obstructive jaundice and a dilated gallbladder
- C. steatorrhea and a tender gallbladder
- D. obstructive jaundice and a nonpalpable gallbladder

Answer: B

Reference: RPBD 7th p.948

72. A 24-year old woman for a fertility work-up gives a history of severe pain during menses. A previous physician told her that she may have "chocolate in her cysts". Which of the following will most likely be present in this patient?
- A. acute pelvic inflammatory disease
 - B. metastatic ovarian carcinoma
 - C. endometriosis
 - D. subserosal leiomyoma
- Answer: C
Reference: RPBD 7th p.1083
73. A 22-year old woman presents with pelvic pain and is found to have an ovarian mass that measures 3 cm in diameter. Grossly, the mass consists of multiple cystic spaces. Histologically, these cysts are lined by tall columnar epithelium, with some of the cells being ciliated. Which of the following is the correct diagnosis for this ovarian tumor?
- A. serous tumor
 - B. mucinous tumor
 - C. endometrioid tumor
 - D. clear cell tumor
- Answer: A
Reference: RPBD 7th p.1095
74. A 30-year old woman in the third trimester of her first pregnancy develops persistent headaches and swelling of her legs and face. Early during her pregnancy her prenatal consultations were unremarkable, however, now her blood pressure is 170/105 mmHg and urinalysis reveals slight proteinuria. Which of the following is the most likely diagnosis?
- A. nephrotic syndrome
 - B. gestational trophoblastic disease
 - C. preeclampsia
 - D. ectopic pregnancy
- Answer: C
Reference: RPBD 7th p.1106
77. A 41-year old woman presents with the new onset of bloody discharge from her left nipple. Physical examination reveals a 1 cm freely moveable mass that is located directly beneath the nipple. Sections from the mass reveal multiple fibrovascular cores lined by several layers of epithelial cells. Atypia is minimal. The lesion is completely contained within the duct and no invasion into underlying tissue is seen. Which of the following is the most likely diagnosis?
- A. benign phyllodes tumor
 - B. Paget's disease
 - C. intraductal carcinoma
 - D. ductal papilloma
- Answer: D
Reference: RPBD 7th p.1126
79. A 43-year old man presents with increasing fatigue and occasional headaches. He states that recently he has had to change his shoe size from 8 to 9, and he also thinks that his hand and jaw are now slightly larger. Physical examination reveals a prominent forehead and lower jaw, enlarged tongue, and large hands and feet. Initial laboratory tests reveals increased serum glucose. Which of the following is the most likely explanation for this group of findings?
- A. acromegaly
 - B. diabetes
 - C. gigantism
 - D. apoplexy
- Answer: A
Reference: RPBD 7th p.1161
82. A 20-year old woman presents with the acute onset of perioral tingling and muscle cramps involving both of her hands. Physical examination finds an anxious woman with increased respiratory rate, while laboratory examination reveals decreased arterial pCO₂, decreased bicarbonate, and an increased blood pH. The respiratory alkalosis in this individual caused tetany by decreasing the ionized serum levels of what substance?
- A. calcium
 - B. sodium
 - C. magnesium
 - D. potassium
- Answer: A
Reference: RPBD 7th p.1188

83. A 56-year old woman presents with increasing muscle weakness and fatigue. Physical examination finds an obese adult woman with purple abdominal stria and increase facial hair. The excess adipose tissue is mainly distributed in her face, neck and trunk. Laboratory evaluation finds increased plasma levels of cortisol and glucose. Which of the following is the most likely diagnosis?
A. Addison's disease
B. Bartter's disease
C. Cushing's syndrome
D. Conn's syndrome
Answer: C
Reference: RPBD 7th p.1207
86. A 6-year old boy presents with clumsiness, a waddling gait, and difficulty climbing steps. Physical examination reveals that the boy uses his arms and shoulders to rise from the floor or a chair. Additionally, his calves appear to be somewhat larger than normal. Which of the following is the most likely diagnosis?
A. myotonic dystrophy
B. Duchenne's muscular dystrophy
C. polymyositis
D. inclusion body myositis
Answer: B
Reference: RPBD 7th p.1336
87. A 61-year old woman presents with difficulty swallowing, ptosis, and diplopia. Which of the following is the most likely cause of this woman's disease:
A. Rhabdomyolysis
B. Lack of lactate production during ischemic exercise
C. Antibodies to the acetylcholine receptor
D. Corticosteroid therapy
Answer: C
Reference: RPBD 7th p.1344
89. A 74-year old man with a slowly growing, ulcerated lesion located on the pinna of his left ear. The lesion is excised, and histologic sections reveal infiltrating groups of cells in the dermis. These cells have eosinophilic cytoplasm, intercellular bridges, and intracellular keratin formation. Which of the following is the most likely diagnosis?
A. dermatofibrosarcoma protuberans
B. Merkel cell carcinoma
C. basal cell carcinoma
D. squamous cell carcinoma
Answer: D
Reference: RPBD 7th p.1241
92. A 62-year old woman notices a lump on the left side of her face that has become larger over the past year. On physical examination, a 4 to 5 cm firm, mobile, painless mass is palpable in the region of the left parotid gland, The oral mucosa appears normal. The patient does not complain of difficulty in chewing food or talking. Which of the following conditions is most likely to account for these findings?
A. pleomorphic adenoma
B. Sjogren syndrome
C. sialolithiasis
D. mucoepidermoid carcinoma
Answer: A
Reference: RPBD 7th p.777
95. A 22-year old male gets hit on the head by a hard object in the temporal area. He does not lose consciousness but afterwards develops a slight headache. He is not taken to the hospital. By evening he develops severe headache with vomiting and confusion. He was then brought to the hospital and was assessed as having an epidural hematoma. Which of the following is most likely present in this individual?
A. Transection of a branch of the middle meningeal artery
B. Bleeding from torn bridging veins
C. Rupture of a preexisting berry aneurysm
D. Cortical bleeding opposite point of traumatic injury
Answer: A
Reference: RPBD 7th p.1359

96. A 47-year old man presents with weakness and cramping that involves both hands. Physical examination reveals atrophy of the muscles of both hands, hyperactive reflexes and muscle fasciculations involving the arms and legs and positive Babinski reflex. Sensation appears to be normal in both arms and legs. Which of the following is the most likely diagnosis?
- A. Guillain-Barre syndrome
 - B. Amyotrophic lateral sclerosis
 - C. Huntington's disease
 - D. Metachromatic leukodystrophy

Answer: B

Reference: RPBD 7th p.1396

97. After recovering from a viral respiratory infection, a 22-year old woman presents with weakness in her distal extremities that rapidly ascends to involve proximal muscles. Physical examination reveals absent deep tendon reflexes, and a lumbar puncture the CSF protein to be increased, but very few cells are present. A biopsy of a peripheral nerve reveals inflammation and demyelination. Which of the following is the most likely diagnosis?
- A. Brown-Sequard syndrome
 - B. syringomyelia
 - C. Gullain-Barre syndrome
 - D. diabetes melitus

Answer: C

Reference: RPBD 7th p.1331

98. A 22-year old man has a mild pharyngitis followed a few days later by sudden onset of a severe headache. Physical examination shows nuchal rigidity. His temperature is 38.8C. The gross appearance of his brain shows extensive purulent exudate covering the brain convexities. Which of the following is most likely to be the etiologic agent?

- A. Cryptococcus neoformans
- B. Neisseria meningitidis
- C. Poliovirus
- D. Toxoplasma gondii

Answer: B

Reference: RPBD 7th p.1369

99. A 51-year old man with acute psychosis has a long history of alcoholism. He keeps on talking nonsense and is unable to follow simple commands. There is also paralysis of the lateral rectus muscle. A deficiency of which of these nutrients is most likely the cause of these findings?

- A. thiamine
- B. niacin
- C. cobalamin
- D. riboflavin

Answer: A

Reference: RPBD 7th p.423

100. Carpal tunnel syndrome, produced by damage to or pressure on the median nerve deep to the flexor retinaculum, is best characterized by which one of the following clinical signs?

- A. Numbness in the fifth finger and medial portion of the ring finger
- B. Pain in thumb, index finger, middle finger and lateral half of ring finger
- C. Adduction, extension and internal rotation of upper limb
- D. Weakness of extensors of wrist and fingers

Answer: B

Reference: RPBD 7th p. 1335

Reference: **Robbins Pathologic Basis of Disease 7th Edition**

1. A 5-year old male child presented with strabismus, poor vision and whitish hue to the pupil of the left eye. Enucleation was done and biopsy revealed Flexner-Wintersteiner rosettes. What is the diagnosis?

(Robbin's 5th edition p 461)

- a. **retinoblastoma**
- b. paraganglioma
- c. melanoma
- d. immature teratoma

2. A 54-year old male was brought to the emergency room due to massive hemoptysis. CXR showed apical lesion in the right lung. The following are histologic features of this disease entity EXCEPT: (Robbin's 5th edition p 81)
- central caseous necrosis
 - Langhans type giant cells
 - concentric calcific concretion**
 - none of the above
3. A 70-year old male died of myocardial infarction. Autopsy was done and microscopic findings of the myocardium revealed coagulative necrosis with loss of nuclei and striations of the cells. How old is the lesion? (Robbins 5th ed p 536)
- 18-24 hrs
 - 4-12 hrs
 - 24-72 hrs**
 - 3-7 days
4. Histologic sections of the peripheral lung mass of a 60-year old female showed distinctive, tall, columnar to cuboidal epithelial cells that line up along alveolar septa and project into the alveolar spaces in numerous branching papillary projections. What is the diagnosis? (Robbins 5th ed p 726)
- small cell carcinoma
 - squamous cell carcinoma
 - bronchioalveolar carcinoma**
 - large cell carcinoma
5. A 35-year old male had been having on and off upper abdominal discomfort and vomiting for 1 year. EGD showed red gastric mucosa. Biopsy was done which revealed inflammatory cells within the lamina propria and beginning atrophy of the glandular structures. The following are major etiologic associations of this disease except: (Robbins 5th ed. p 771)
- alcohol consumption and cigarette smoking
 - immunologic
 - chronic infection
 - none of the above**
6. A 50-year old female presented with diarrhea and weight loss for 5 years. Punch biopsy of the small intestine showed *mucosa laden with distended macrophages in the lamina propria*. The macrophages contain PAS (+) granules and rod-shaped bacilli by electron microscopy. What is the diagnosis: (Robbins 5th ed p 799)
- tropical sprue
 - whipple's disease**
 - celiac sprue
 - disaccharidase deficiency
7. A 4-year old male with non-hodgkin's lymphoma presented with paraaortic lymphadenopathy and splenic mass. What is the stage of the disease? (Robbins 5th ed p 643)
- stage I
 - stage II
 - stage III**
 - stage IV
8. A 40-year old female presented with a 4 cm fixed right breast mass associated with movable axillary nodes. What is the stage of the disease? (Robbins 5th ed p 1107)
- stage I
 - stage II**
 - stage III
 - stage IV

9. A 45 y/o female has a history of regular oral contraceptive intake. She has a higher risk of developing this tumor compared to non-users. (Robbins 5th ed p.416)
- Hepatic adenoma**
 - Ovarian carcinoma
 - Endometrial carcinoma
 - Pancreatic adenoma
10. A 27 y/o male with fever and leukocytosis expired and was sent for autopsy. One of the gross finding included multiple pale, wedge-shaped infarcts all over the spleen. The most likely diagnosis is:(p. 572-576).
- Metastatic carcinoma
 - Disseminated histoplasmosis**
 - Infective endocarditis
 - Hodgkin's lymphoma

CELL INJURY AND ADAPTATION

1. Psammoma bodies are foci of dystrophic calcification seen in which condition?
- | | |
|-----------------------------|---------------------------------------|
| A. multiple myeloma of bone | B. papillary thyroid carcinoma |
| C. parathyroid adenoma | D. Paget disease |

Ref. Robbins 7th ed. Page 41

2. These are eosinophilic cytoplasmic inclusions seen in alcoholic liver disease.
- | | |
|------------------|--------------------------|
| A. Amyloid | B. Mallory bodies |
| C. Russel bodies | D. Kimura bodies |

Ref. Robbins 7th ed. Page 39

3. Which of the following is a feature of necrosis?
- | | |
|---------------------------|-----------------------------|
| A. reduced cell size | B. intact cellular contents |
| C. intact plasma membrane | D. karyolysis |

Ref. Robbins 7th ed. Page 13

4. A 40 year old male complains of chronic cough and weight loss. CXR shows an ill-defined mass along the apex of both lobes. Sputum AFB was positive. Biopsy of the lung most likely reveal which of the following:
- | | |
|------------------------------|-------------------------|
| A. liquifactive necrosis | B. coagulative necrosis |
| C. caseation necrosis | D. tumor necrosis |

Ref. Robbins 7th ed. Page 22

5. Which of the following is characteristic of apoptosis?
- | | |
|-----------------------------------|-------------------------------------|
| A. absence of inflammation | B. affects numerous cells at a time |
| C. cell swelling | D. leaking of enzymes |

Ref. Robbins 7th ed. Page 26

6. Which is characteristic of irreversible injury?
- | | |
|------------------|---------------------------------|
| A. cell swelling | B. fatty change |
| C. surface blebs | D. cell membrane defects |

Ref. Robbins 7th ed. Page 12

ACUTE AND CHRONIC INFLAMMATION

7. Which of the following substances may cause edema during inflammation?
- | | |
|---------------------|--------|
| A. histamine | B. C5a |
| C. interleukine-1 | D. TNF |

Ref. Robbins 7th ed. Page 50

8. This is known as the membrane attack complex.
A. C3b
C. C5b-9
B. C6-7
D. C1b-3

Ref. Robbins 7th ed. Page 64

9. Which of the following white blood cells predominate within 6 to 24 hrs after tissue injury?
A. macrophage
C. neutrophils
B. basophils
D. lymphocytes

Ref. Robbins 7th ed. Page 56

10. Type of inflammation induced by indigestible foreign bodies.
A. serous
C. suppurative
B. granulomatous
D. fibrinous

Ref. Robbins 7th ed. Page 83

11. Central actors in chronic inflammation.
A. neutrophils
C. macrophages
B. lymphocytes
D. eosinophils

Ref. Robbins 7th ed. Page 79

12. The hallmark of acute inflammation is:
transient vasoconstriction
C. **increased vascular permeability**
B. vasodilation
D. slowing of circulation

Ref. Robbins 7th ed. Page 50

WOUND HEALING AND TISSUE REPAIR

13. Which of the following is an example of wound healing by primary intention?
A. compound fracture fixation
C. endoscopic surgery
B. fistula repair
D. abscess drainage

Ref. Robbins 7th ed. Page 111-112

14. A wound will attain maximum strength at what time?
A. 2 weeks
C. 3 months
B. 1 month
D. 6 months

Ref. Robbins 7th ed. Page 114

15. Reduction in size of large wounds is attributed to which of the following?
A. fibrosis
C. contraction
B. tissue remodeling
D. re-epithelialization

Ref. Robbins 7th ed. Page 113

16. Inadequate formation of granulation tissue or scar can lead to which of the following?
A. ulcer
C. contracture
B. keloid
D. granuloma

Ref. Robbins 7th ed. Page 114

17. This is the most abundant glycoprotein in basement membrane.
A. elastin
C. proteoglycan
B. laminin
D. fibronectin

Ref. Robbins 7th ed. Page 105

18. This is a potent angiogenic growth factor.
A. Epidermal growth factor
C. fibroblast growth factor
B. platelet derived growth factor
D. transforming growth factor

Ref. Robbins 7th ed. Page 111

FLUID AND HEMODYNAMIC DISORDERS

19. A 40 year old chronic alcoholic complains of easy fatigability and orthopnea at night. CXR showed bilateral pleural effusion while abdominal ultrasound showed ascites with small liver. What is the mechanism of effusion?
- A. increased hydrostatic pressure **B. decreased plasma oncotic pressure**
C. lymphatic obstruction D. inflammation of membranes

Ref. Robbins 7th ed. Page 121

20. A 70 year old male after spending a month in the hospital confined to a wheel chair due to arthritis, suddenly experiences difficulty of breathing after walking on his own. What is the most likely diagnosis?
- A. pulmonary embolism** B. old age
C. sepsis D. bronchopneumonia

Ref. Robbins 7th ed. Page 136

21. An arterial thromboemboli is most likely to produce a hemorrhagic infarct in which organ?
- A. kidney B. liver
C. lungs D. bone

Ref. Robbins 7th ed. Page 138

22. The serum AST & ALT are observed to be increasing in a 61 y/o man over the past wk. He also has increasing lower leg swelling w/ grade 2+ pitting edema to the knees. He has prominent jugular venous distention in neck veins to the level of the mandible. W/c of the ff., underlying conditions is he most likely to have, if the gross appearance of the liver shows "nutmeg" pattern?
- A. portal vein thrombosis B. chronic hepatitis
C. congestive heart failure D. bile duct obstruction

Ref. Robbins 7th ed. Page 122

23. Virchow's triad (factors favoring thrombosis) includes w/c of the ff.?
- A. leukocytosis, thrombocytosis, & erythrocytosis
B. occult cancer, heart failure, & jaundice
C. hyperglycemia, hyperlipidemia, & hypertension
D. stasis, vascular injury, & hypercoagulability

Ref. Robbins 7th ed. Page 130

24. A 32 year old male experienced difficulty of breathing and edema of the lungs after being injected with a new antibiotic drug. He later lost consciousness and his BP rapidly declined, and later went into shock. This is due to which of the following?
- A. hemorrhage **B. anaphylactic**
C. idiopathic D. sepsis

Ref. Robbins 7th ed. Page 139

IMMUNE SYSTEM

25. This antibody mediates hypersensitivity reactions and is most commonly found on surface of mast cells.
- A. IgA B. IgG
C. IgM **D. IgE**

Ref. Robbins 7th ed. Page 206

26. Systemic Lupus Erythematosus can be confirmed by testing for which antibodies?
- A. SS-A **B. dsDNA**
C. centromere D. anti-GBM

Ref. Robbins 7th ed. Page 228

27. These cells can lyse tumor cells or virus infected cells without prior sensitization.
- A. B cells B. T cells
C. NK cells D. macrophages

Ref. Robbins 7th ed. Page 201

28. A patient with myasthenia gravis developed progressive muscle weakness. This is what type of hypersensitivity reaction?

- A. type I
- B. type II**
- C. type III
- D. type IV

Ref. Robbins 7th ed. Page 212

GENETIC DISORDERS

29. Deficiency in homogentisic oxidase results in this condition which manifests with black discoloration of the urine.

- A. albinism
- C. ochronosis**
- B. phenylketonuria
- D. galactosemia

Ref. Robbins 7th ed. Page 167

30. This is the most common genetic cause of mental retardation.

- A. trisomy 18
- B. trisomy 21**
- C. chromosome 5p-
- D. Turner syndrome

Ref. Robbins 7th ed. Page 175

31. A 10 year old female consulted due to multiple neurofibromas, cutaneous café au lait macules and pigmented iris hamartomas. This condition is called

- A. tuberous sclerosis
- B. Von Recklinghausen's disease**
- C. Marfan's syndrome
- D. Von Hippel-Lindau syndrome

Ref. Robbins 7th ed. Pages 168-169

NEOPLASIA

32. Chemical carcinogen implicated in the causation of mesothelioma.

- A. arsenic
- C. asbestos**
- B. vinyl chloride
- D. nickel

Ref. Robbins 7th ed. Page 285

33. Human papilloma virus type responsible for cervical carcinoma.

- A. 2 and 4
- B. 16 and 18**
- C. 20 and 40
- D. 6 and 11

Ref. Robbins 7th ed. Page 324

34. Most common paraneoplastic syndrome associated with squamous cell carcinoma of the lung.

- A. hypercalcemia**
- B. Cushing syndrome
- C. SIADH
- D. carcinoid syndrome

Ref. Robbins 7th ed. Page 334

35. Extremely radio-sensitive testicular tumor that tends to spread to lymph nodes along the iliac arteries and aorta.

- A. teratoma
- B. seminoma**
- C. embryonal carcinoma
- D. adenocarcinoma

Ref. Robbins 7th ed. Page 272

36. Which of the following is characteristic of a malignant tumor.

- A. well-differentiated
- B. slow growing
- C. cohesive and well-demarcated
- D. metastasis**

Ref. Robbins 7th ed. Page 279

37. Tumor marker for breast cancer.

- A. CA-125
- C. CA-15-3**
- B. CA-19-9
- D. CA-20-1

Ref. Robbins 7th ed. Page 339

ENVIRONMENTAL

38. This nutrient deficiency presents with microcytic and hypochromic anemia.

- A. zinc
- B. iron**
- C. iodine
- D. copper

Ref. Robbins 7th ed. Page 461

39. Vitamin deficiency results in night blindness and xerophthalmia.

- A. **Vitamin A**
- B. Vitamin C
- C. Vitamin D
- D. Vitamin B1

Ref. Robbins 7th ed. Page 450

40. Injury caused by a blunt force that damages small blood vessels, usually without disruption of the continuity of tissues.

- A. abrasion
- B. **contusion**
- C. laceration
- D. incision

Ref. Robbins 7th ed. Page 443

41. Chronic ingestion of this substance by mothers may cause growth retardation and microcephaly in infants.

- A. iron
- B. lactose
- C. **ethanol**
- D. caffeine

Ref. Robbins 7th ed. Page 424

DISEASE OF INFANCY AND CHILDHOOD

42. Most common cause of respiratory distress in the newborn.

- A. head injury
- B. **hyaline membrane disease**
- C. cord coiling
- D. amniotic fluid aspiration

Ref. Robbins 7th ed. Page 481

43. In-born error of metabolism associated with severe mental retardation and strong mousy odor to the affected infant.

- A. **phenylketonuria**
- B. galactosemia
- C. cystic fibrosis
- D. tyrosinemia

Ref. Robbins 7th ed. Pages 487-488

44. This is the most frequent childhood tumor causing death in children younger than 15 years old.

- A. astrocytoma
- B. **leukemia**
- C. neuroblastoma
- D. melanoma

Ref. Robbins 7th ed. Page 499

INFECTIOUS DISEASES

45. Special stain used in diagnosing mycobacteria and nocardiae infections.

- A. gram stain
- B. silver stain
- C. Giemsa
- D. **acid-fast stain**

Ref. Robbins 7th ed. Page 361

46. Which of the following organisms cause necrotizing inflammation.

- A. Mycobacterium tuberculosis
- B. measles virus
- C. **Clostridium perfringens**
- D. Staphylococcus aureus

Ref. Robbins 7th ed. Page 362

47. Pulmonary disease caused by mycobacteria characterized by small visible (2-mm) foci of yellow white consolidation scattered through the lung parenchyma.

- A. cavitating
- B. **miliary**
- C. primary focus
- D. Pott's disease

Ref. Robbins 7th ed. Page 385-386

48. These nodular lesions are related to delayed hypersensitivity to Treponema pallidum, and are most commonly seen in the bone, skin and mucous membranes of the mouth.

- A. chancre
- B. scrofula
- C. **gumma**
- D. warts

Ref. Robbins 7th ed. Page 389

49. This obligate intracellular gram negative bacterium is the most common bacterially sexually transmitted disease in the world.

- A. N. gonorrhoea
- B. **C. trachomatis**
- C. T. pallidum
- D. H. ducreyi

Ref. Robbins 7th ed. Page 394

CARDIOVASCULAR SYSTEM

50. Most common cause of death after myocardial infarction.
A. congestive heart failure B. hypotension
C. arrhythmia D. myocardial rupture

Ref. Robbins 7th ed. Page 584

51. A 20 year old male with rheumatic heart disease suddenly collapsed after a basketball game. Which of the following may have caused his symptoms?
A. mitral stenosis B. myocarditis
C. calcified aorta D. mitral valve prolapse

Ref. Robbins 7th ed. Page 594

52. This is the most common primary cardiac tumor in adults
A. lipoma **B. myxoma**
C. angiosarcoma D. papilloma

Ref. Robbins 7th ed. Page 613

HEMATOPOIETIC AND LYMPHOID DISEASES

53. Hemolysis and vaso-occlusive crisis are common in this form of anemia caused by mutation of glutamic acid to valine at amino acid 6 of beta chain.
A. thalassemia B. hemoglobin C
C. sickle cell anemia D. hereditary spherocytosis

Ref. Robbins 7th ed. Page 629

54. Noncaseating granulomatous inflammation in the lymph nodes and skin is typical in what condition?
A. sarcoidosis B. tuberculosis
C. histoplasmosis D. chronic lymphadenitis

Ref. Robbins 7th ed. Page 737

55. Most common type of Hodgkin's Lymphoma characterized by broad collagen bands separating lymphoid tissue into well-defined nodules.
A. Nodular sclerosis B. Mixed cellularity
C. Lymphocyte predominant D. Lymphocyte depleted

Ref. Robbins 7th ed. Pages 687-688

56. Which of the following is a common feature of all Hodgkin's Lymphomas.
A. helper T-cells **B. R-S cells**
C. B-cells D. Langhans giant cells

Ref. Robbins 7th ed. Page 686

RESPIRATORY SYSTEM

57. This type of pneumonia is characterized by patchy consolidation of the lung with foci of acute suppurative inflammation that are poorly defined grossly.
A. lobar pneumonia B. lipid pneumonia
C. bronchopneumonia D. tuberculous

Ref. Robbins 7th ed. Page 749

58. Which of the following is characteristic of emphysema?
A. increased number of goblet cells B. mucous plugs containing eosinophils
C. destruction of alveolar walls D. chronic necrotizing inflammation

Ref. Robbins 7th ed. Pages 717-718

59. Pulmonary emboli most often originate from which site?
A. right atrium **B. leg**
C. aorta D. left ventricle

Ref. Robbins 7th ed. Page 742

60. This is the most frequent primary lung tumor in men and associated with PTH secretion.

- A. adenocarcinoma
- B. carcinoid
- C. squamous cell carcinoma**
- D. small cell carcinoma

Ref. Robbins 7th ed. Page 760

61. Atherosclerotic changes in the pulmonary arteries are generally indicative of this condition.

- A. drug abuse
- B. hypertension**
- C. embolism
- D. amyloidosis

Ref. Robbins 7th ed. Page 744

KIDNEY AND URINARY SYSTEM

62. Most common WHO class of Lupus Nephritis.

- A. no lesions
- B. mesangial
- C. focal segmental
- D. diffuse proliferative**

Ref. Robbins 7th ed. Page 231

63. A 2 year old boy presented with a large well circumscribed abdominal mass involving both kidneys. Microscopic examination reveals epithelial tissues, blastema and mesenchymal tissues. These are diagnostic of which of the following?

- A. Oncocytoma
- B. Wilm's Tumor**
- C. mesoblastic nephroma
- D. Neuroblastoma

Ref. Robbins 7th ed. Pages 504-506

64. A 55 year old male presenting with hematuria, flank pain and abdominal mass. Gross findings show a golden yellow tumor with hemorrhage and necrosis. Microscopically, the tumor cells are large, with optically clear cytoplasm. What is the most likely diagnosis?

- A. Renal cell carcinoma**
- B. Wilm's tumor
- C. Pheochromocytoma
- D. Adenoma

Ref. Robbins 7th ed. Pages 1017-1018

65. Which of the following tests is most valuable in confirming Goodpasture's syndrome?

- A. diffuse linear staining of GBM with IgG**
- B. granular lumpy bumpy deposits of IgG
- C. urine culture for resistant E.coli
- D. diffuse thickening of GBM on electron microscopy

Ref. Robbins 7th ed. Page 975

GIT, LIVER, PANCREAS

66. These are linear lacerations occurring along the gastroesophageal junction due to fits of vomiting in alcoholics.

- A. esophageal varices
- B. Mallory-Weiss tears**
- C. Shatzki's rings
- D. Zenker's diverticula

Ref. Robbins 7th ed. Page 802

67. These are gastric ulcers associated with extensive burns.

- A. decubitus ulcers
- B. peptic ulcers
- C. Curling's ulcers**
- D. steroid ulcers

Ref. Robbins 7th ed. Pages 819-820

68. This is a solitary congenital malformation in the small bowel due to persistence of the omphalomesenteric duct.

- A. Meckel's diverticula**
- B. intussusception
- C. omphalocele
- D. duplication

Ref. Robbins 7th ed. Page 830

69. A 30 year old Scandinavian often experiences intermittent attacks of diarrhea, fever and abdominal pain during emotional stress. Examination of the GI tract reveal longitudinal mucosal ulcerations and fistulas with intervening unaffected

segments. Biopsy showed transmural inflammation and noncaseating granulomas. What is the most likely diagnosis?

- A. Typhoid ileitis
- B. Tropical sprue
- C. Crohn's disease**
- D. Ulcerative colitis

Ref. Robbins 7th ed. Pages 847-848

70. Most common cause of transfusion-related hepatitis.

- A. Hepatitis A
- B. Hepatitis B
- C. Hepatitis C**
- D. Hepatitis D

Ref. Robbins 7th ed. Page 894

71. Which of the following is one of the most frequent causes of acute pancreatitis?

- A. periampullary tumors
- B. thiazide use
- C. trauma
- D. alcoholism**

Ref. Robbins 7th ed. Page 942

MALE AND FEMALE REPRODUCTIVE SYSTEM

72. Most common type of germ cell tumor in men of 3rd decade.

- A. seminoma**
- B. embryonal carcinoma
- C. teratoma
- D. yolk sac tumor

Ref. Robbins 7th ed. Page 1041

73. Which of the following conditions are characterized by presence of endometrial glands and stroma outside the uterus?

- A. adenomyosis
- B. endometriosis**
- C. atrophic endometrium
- D. endometrial hyperplasia

Ref. Robbins 7th ed. Page 1083

74. This is a highly malignant neoplasm composed of a dual cell population of cytotrophoblasts and syncytiotrophoblasts.

- A. seminoma
- B. complete mole
- C. choriocarcinoma**
- D. invasive mole

Ref. Robbins 7th ed. Page 1113

BREAST

75. This is the most common benign tumor of the breast.

- A. fibrocystic disease
- B. fibroadenoma**
- C. blunt duct adenosis
- D. intraductal papilloma

Ref. Robbins 7th ed. Page 1149

76. These comprise majority of all invasive ductal carcinomas.

- A. classic**
- B. tubular
- C. cribriform
- D. mucinous

Ref. Robbins 7th ed. Pages 1142-1143

ENDOCRINE SYSTEM

77. A 20 year old female presented with muscle weakness, weight loss and pre-tibial myxedema. Examination of the thyroid show a 3 fold increase in size. Anti-TSH receptors were positive. What is the diagnosis?

- A. Acute thyroiditis
- B. Hashimoto's thyroiditis
- C. De Quervain's thyroiditis
- C. Grave's disease**

Ref. Robbins 7th ed. Pages 1172-1173

78. Fine needle aspirates of a 40 year old female showed atypical cells with nuclear grooves and inclusions, papillae and psammoma bodies. What is the most likely diagnosis?

- A. papillary carcinoma**
- B. follicular carcinoma
- C. medullary carcinoma
- D. diffuse hyperplasia

Ref. Robbins 7th ed. Page 1178

79. This is the most common thyroid malignancy.
A. medullary carcinoma
B. **papillary carcinoma**
C. Follicular adenoma
D. follicular carcinoma

Ref. Robbins 7th ed. Page 1178

80. These are adrenal masses which induces mark hypertension secondary to catecholamine production.
A. neuroblastoma
B. adenocarcinoma
C. **pheochromocytoma**
D. myelolipoma

Ref. Robbins 7th ed. Pages 1219-1221

81. This condition follows sudden infarction of the pituitary gland after obstetric hemorrhage or shock.
A. empty sella syndrome
B. craniopharyngioma
C. **Sheehan's syndrome**
D. lymphocytic hypophysitis

Ref. Robbins 7th ed. Page 1163

82. This is the most common secreting tumor of the pituitary gland.
A. **prolactinoma**
B. growth hormone
C. ACTH
D. TSH

Ref. Robbins 7th ed. Page 1160

MUSCULOSKELETAL SYSTEM

83. This is the most common soft tissue tumor of adulthood.
A. hibernoma
B. lipoblastoma
C. **lipoma**
D. histiocytoma

Ref. Robbins 7th ed. Page 1317

84. Myasthenia gravis is an autoimmune disease with increasing muscle fatigue with use and ocular muscle involvement. What is targeted by the antibody detected?
A. **acetylcholine receptors**
B. glomerular basement membranes
C. thyroid stimulating hormone
D. smooth muscle receptors

Ref. Robbins 7th ed. Page 1344

SKIN

85. This is a skin lesion presenting as pearly papules often containing prominent dilated subepidermal blood vessels. Microscopically, they are characterized by peripheral palisading of tumor cells, with separation artifacts and stromal mucin. What is the most probable diagnosis?
A. squamous cell carcinoma
B. Paget's disease
C. **basal cell carcinoma**
D. trichilemmoma

Ref. Robbins 7th ed. Pages 1242-1244

86. Most common form of malignant melanoma.
A. lentigo maligna
B. **superficial spreading**
C. nodular
D. acral-lentiginous

Ref. Robbins 7th ed. Pages 1234-1235

87. Severe form of erythema multiforme with mucosal involvement, conjunctivitis and high fever.
A. Urticaria
B. **Stevens-Johnson syndrome**
C. xeroderma pigmentosum
D. Lupus erythematosus

Ref. Robbins 7th ed. Pages 1255-1256

HEAD, NECK AND EYE

88. This is the most common salivary gland neoplasm.
A. Warthin tumor
B. Oncocytoma
C. Basal cell adenoma
D. **Pleomorphic adenoma**

Ref. Robbins 7th ed. Page 791

89. This is the most common primary malignant salivary gland tumor.
A. Adenoid cystic carcinoma
B. **Mucoepidermoid carcinoma**
C. Warthin tumor
D. Acinic cell tumor

Ref. Robbins 7th ed. Page 793

90. Which of the following is characteristic of a Warthin tumor?
A. chondromyxoid matrix
B. sheets of cells with clear cytoplasm
C. **epithelial and lymphoid elements**
D. hyaline material in between spaces

Ref. Robbins 7th ed. Pages 792-793

NERVOUS SYSTEM

91. This is the most common CNS tumor.
A. astrocytoma
B. **glioblastoma multiforme**
C. oligodendroglioma
D. ependymoma

Ref. Robbins 7th ed. Page 1401

100. Which of the following is the most common cause of cerebrovascular accidents?
A. **atherosclerosis**
B. embolic
C. intracerebral hemorrhage
D. subarachnoid hemorrhage

Ref. Robbins 7th ed. Page 1363

CELL INJURY AND ADAPTATION

2. An increase of tissue volume due to the addition of new cells is:
A. anaplasia
B. hyperplasia
C. hypertrophy
D. metaplasia

Answer: **B** (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 1 p 6)
Category: **Recall**

3. Tissue necrosis following occlusion of its blood supply is called:
A. passive congestion
B. inflammation
C. infarction
D. thrombosis

Answer: **C** (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 4, p 137)
Category: **Recall**

4. The type of necrosis seen in tissue injury associated with acute pancreatitis is:
A. traumatic necrosis
B. coagulation necrosis
C. caseation necrosis
D. enzymatic fat necrosis
E. cell-mediated necrosis

Answer: **D** (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 1, p 22)
Category: **Recall**

ACUTE AND CHRONIC INFLAMMATION

5. Macrophages are invariably found in abundance in inflammatory reactions. These are

derived from the:

- A. neutrophils
- B. monocytes
- C. lymphocytes
- D. endothelial cells
- E. none of the above

Answer: B (*Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 1 p 179.*)

Category: Recall

6. The hallmark of granulomatous inflammation is the:

- A. epithelioid cell
- B. plasma cell
- C. neutrophil
- D. fibroblast
- E. giant cell

Answer: A (*Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 1 p 82.*)

Category: Recall

7. The type of cell that is first to migrate into foci of acute inflammation is the:

- A. plasma cell
- B. monocyte
- C. lymphocyte
- D. polymorphonuclear leukocyte
- E. fibroblast

Answer: D (*Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 1 p 57*)

Category: Recall

8. Chronic inflammation most often contains:

- A. eosinophils
- B. neutrophils
- C. basophils
- D. lymphocytes
- E. endothelial cells

Answer: D (*Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 2, p.79*)

Category: Recall

TISSUE REPAIR

9. In the course of cellular repair, there often is collagen deposition. This largely is a function of:

- A. epithelial cells
- B. astrocytes
- C. fibroblasts
- D. malignant lymphocytes
- E. plasma cells

Answer: C (*Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 3, p110.*)

Category: Recall

10. One of the following is incapable of postnatal mitosis:

- A. myocardium
- B. bone
- C. skin epithelium
- D. fibroblast
- E. liver parenchyma

Answer: A (*Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 3, p90-91.*)

Category: Recall

11. The hallmark of tissue healing is:

- A. granulation tissue
- B. exudation
- C. granuloma
- D. lymphocyte infiltration

Answer: A (*Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 3, p.107*)

Category: Recall

HEMODYNAMIC DISORDERS

12. The main pathogenetic mechanism of edema in inflammatory diseases is:

- A. increase osmotic pressure
- B. decrease hydrostatic intravascular pressure
- C. low serum albumin
- D. increase vascular permeability
- E. decrease vascular permeability

Answer: D (*Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 4 P 120*)

Category: Recall

13. Sudden death in pulmonary embolism is due to:
- A. acute right heart failure
 - B. cardiac tamponade
 - C. pulmonary edema
 - D. superior vena cava syndrome
 - E. respiratory distress syndrome

Answer: A (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 4 p 136)
Category: Application

15. Localized edema is best exemplified by:
- A. low serum protein
 - B. nephritic syndrome
 - C. portal hypertension
 - D. lymphatic obstruction
 - E. congestive heart failure

Answer: D
Category: Recall

DISEASES OF IMMUNITY

16. Tumor most commonly associated with AIDS:
- A. adenocarcinoma
 - B. hepatoma
 - C. Kaposi's sarcoma
 - D. melanoma
 - E. lymphoma

Answer: C (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 6 p 256)
Category: Recall

17. Systemic Lupus Erythematosus is a variable multi-organ disease, but in 100% of cases lesions always occur in the:
- A. brain
 - B. liver
 - C. spleen
 - D. kidney

Answer: D (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 6 p 231)
Category: Application

18. Pneumonia caused by this organism is frequently the first diagnosed infection in HIV-infected persons:
- A. Pneumocystis carinii
 - B. Aspergillus sp.
 - C. Cryptococcus neoformans
 - D. Histoplasma capsulatum

Answer: A (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 15., p 765.)
Category: Recall

PRINCIPLES OF NEOPLASIA

21. The most frequent form of cancer in females:
- A. gastric
 - B. uterine
 - C. colonic
 - D. breast
 - E. lung

Answer: D (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 7 p 282.)
Category: Recall

22. The most common cause of death due to cancer in both men and women is:
- A. malignant lymphoma
 - B. colorectal carcinoma
 - C. lung carcinoma
 - D. hepatocellular carcinoma

Answer: C (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 7, p 282.)
Category: Recall

INFECTIOUS DISEASES

29. TB and Schistosoma can produce:
- A. ulceration
 - B. caseation
 - C. meningitis
 - D. cavitation
 - E. granuloma

Answer: E (Robbins and Cotran Pathologic Basis of Disease, 7th ed.; Chapter 8, p 384, 409)

MULTIPLE CHOICE:

1. The hallmark of acute inflammation is:
 - A. Increased blood flow
 - B. Rubor, calor, dolor increased permeability of microcirculation
 - C. Increased vascular permeability
 - D. Vascular stasis
2. The most efficient bactericidal compound present in neutrophils is the:
 - A. Arachidonic acid metabolites
 - B. H₂O₂-MPO-Halide system
 - C. Lysosomal enzymes
 - D. Hydrogen peroxide
3. Leukotrienes are derived from arachidonic acid through the help of this enzyme:
 - A. Phospholipase
 - B. Lipoxygenase
 - C. Cyclooxygenase
 - D. Lipoxins
4. The hallmark of chronic inflammation is:
 - A. Increased permeability of microcirculation
 - B. Migration of macrophages at site of injury
 - C. Tissue destruction
 - D. Mononuclear cell infiltration
5. An example of tumor suppressor gene:
 - A. p53
 - B. C-myc
 - C. ras
 - D. bcr
6. A lymph node biopsy was diagnosed as tuberculosis. This type of necrosis is characteristic of:
 - A. Coagulative
 - B. Liquefactive
 - C. Caseous
 - D. Gangrenous
7. Which of the following substances accumulates in atherosclerotic blood vessels?
 - A. Fatty acids
 - B. Cholesterol esters
 - C. Tryglicerides
 - D. Phospholipids
8. "Heart failure cells" found in the lungs in Chronic Passive Congestion are actually....
 - A. Lymphocytes
 - B. Eosinophils
 - C. Neutrophils
 - D. Macrophages
9. The outcome of thrombosis wherein the thrombi tends to GROW due to deposition of additional platelets, fibrin and red blood cells:
 - A. Resolution
 - B. Organization
 - C. Propagation
 - D. Recanalization
10. Most common cause of death in burn patients who got into shock is:
 - A. Sepsis
 - B. CHF
 - C. Dehydration
 - D. Hemorrhage
11. This type of hypersensitivity reaction is mediated by IgE:
 - A. Type I
 - B. Type II
 - C. Type III
 - D. Type IV
12. One of the three major components of acute inflammation include:
 - A. Alteration in vascular caliber that leads to a decrease in blood flow
 - B. Structure changes in the microvasculature permitting plasma proteins and leukocytes to leave the circulation
 - C. Tissue destruction
 - D. Healing by connective tissue

13. Heat and redness in acute inflammation is due to the following pathogenetic mechanism:
- A. Increased vascular permeability
 - B. **Increased blood flow**
 - C. Stasis
 - D. Leukocytic margination
14. The uterine endometrial lining thickens during the proliferative phase of the menstrual cycle. This is due to:
- A. Hypertrophy
 - B. Dysplasia
 - C. **Hyperplasia**
 - D. Metaplasia
15. Which of the following disorders is most likely to be associated with an exudates rather than a transudate?
- A. Congestive heart failure
 - B. Nephrotic syndrome
 - C. **Suppurative inflammation**
 - D. Peritonitis
17. The role of histamine in acute inflammatory response include:
- A. Platelet release and aggregation
 - B. **Increased vascular permeability of the venules**
 - C. Increased vascular permeability of the arterioles
 - D. Membrane lysis
18. The central figure in chronic inflammation is the Macrophage because of its role in:
- A. Breakdown of collagen and fibronectin
 - B. **Production of O₂ and Nitric oxide metabolites**
 - C. Emigration from the blood stream to site of injury
 - D. Inhibition by cytokines and oxidized lipids
19. A biopsy of the stomach reveal an area of malignant change characterized by varisized, compactly arranged neoplastic glands lined by moderately differentiated cells. Which of the following terms refer to malignant tumor of glandular epithelium?
- A. Sarcoma
 - B. Choristoma
 - C. Teratoma
 - D. **Adenocarcinoma**
20. Which of the following statements is NOT true of red infarcts?
- A. It occurs in organs with double blood supply
 - B. **Commonly found in the heart and kidneys**
 - C. Seen in venous occlusion with infarction
 - D. Seen in organs with well developed anastomosis
21. Which of the following conditions is a complication of both direct injuries to the lungs and systemic disorders?
- A. Atelectasis
 - B. Pulmonary edema
 - C. **Diffuse alveolar damage**
 - D. Pulmonary congestion
22. Which of the following conditions of the lung is characterized by abnormal permanent enlargement of the air space distal to the terminal bronchiole accompanied by destruction of their walls without obvious fibrosis?
- A. **Emphysema**
 - B. Bronchial asthma
 - C. Chronic bronchitis
 - D. Bronchiectasis
23. A spectrum of immunologically mediated predominantly interstitial lung disorders caused by intense often prolonged exposure to inhaled organic dusts and occupational antigens is:
- A. Pulmonary alveolar proteinosis
 - B. Bronchiolitis obliterans-organizing pneumonia
 - C. Desquamative interstitial pneumonitis
 - D. **Hypersensitivity pneumonitis**
24. An acute febrile respiratory disease characterized by patchy inflammatory changes in the lungs confined to the alveolar septa and pulmonary interstitium:
- A. **Primary atypical pneumonia**
 - B. Lobar pneumonia
 - C. Bronchopneumonia
 - D. Lobular bronchopneumonia

25. A systemic disease of unknown cause characterized by non-caseating granuloma in many tissues and organs particularly in the hilar lymph nodes, lungs, eye, and skin is:
- A. Silicosis
 B. **Sarcoidosis**
 C. Idiopathic pulmonary fibrosis
 D. Asbestosis
26. Most common benign tumor of the lung discovered incidentally as a coin lesion on routine X-Ray examination is:
- A. Bronchial carcinoids
 B. Thymoma
 C. **Hamartoma**
 D. Bronchogenic cyst
27. Most common cause of aspiration pneumonia in hospitalized patients:
- A. Streptococcus pneumoniae
 B. **Staphylococcus aureus**
 C. Haemophilus influenzae
 D. **Pseudomonas aeruginosa**
28. Most common type of asthma that begins in childhood and triggered by environmental antigens such as dust, pollens and food is:
- A. Non-atopic asthma
 B. Drug induced asthma
 C. **Atopic asthma**
 D. Occupational Asthma
29. Most common manifestation of asbestos exposure often containing calcium seen on the anterior and posterior aspect of the parietal pleura:
- A. Asbestos body
 B. **Plaques**
 C. Ferruginous bodies
 D. Amphibole
30. Which of the following syndrome is characterized by the appearance of proliferative glomerulonephritis and necrotizing hemorrhagic interstitial pneumonitis?
- A. **Goodpasture syndrome**
 B. Paraneoplastic syndrome
 C. Kartagener syndrome
 D. Lambert-Eaton myasthenic syndrome
31. Most common location of secondary tuberculosis in the lung:
- A. Hilar area
 B. **Base**
 C. Peripheral
 D. **Apex**
32. A fatal complication of ruptured aortic aneurysm and vascular trauma:
- A. Chylothorax
 B. **Hemothorax**
 C. Hydrothorax
 D. Empyema
33. Mang Juanito, 60-year-old man, has been smoking for many years, he experienced chronic cough and weight loss for the past 6 months, no fever no nausea and vomiting. He had one bout of hemoptysis and went to the ER for consultation. X-ray shows a 6 cm mass on the medial upper lobe. Bronchoscopy shows a mass on the segmental bronchus. Which of the following cytologic findings is likely to be found in this patient?
- A. Presence of acid fast organism on sputum exam
 B. **Presence of malignant squamous cells in sputum**
 C. Presence of numerous necrotic debris and inflammatory cells in sputum
 D. Presence of reactive mesothelial cells in pleural fluid exam
35. Mang Tony, 55-year-old man has no major medical problems in the past year, 4 months prior to consultation the patient experience malaise and weight loss of 10 kg. The patient is a non-smoker, no fever, no difficulty of breathing. Chest X-ray shows a multiple solid nodules scattered throughout the lung fields. What is the most likely diagnosis?
- A. Bronchogenic carcinoma
 B. **Metastatic carcinoma**
 C. Malignant mesothelioma
 D. Bronchioalveolar carcinoma
36. Mang Tomas, 45-year-old man had an episode of myocardial infarction he was brought to the emergency room and was intubated. Upon intubation he suffers aspiration of gastric contents. For the next 5 days he develops non-reproductive cough and fever. Chest X-ray shows a 3 cm mass in the right lung with elevated air fluid level. What is the most likely diagnosis?
- A. Bronchopulmonary sequestration
 B. **Bronchiectasis**
 C. Atelectasis
 D. **Lung abscess**

37. Hemodynamic pulmonary edema seen in congestive heart failure is due to:
 A. Increased oncotic pressure
 B. Decreased interstitial osmotic pressure
 C. Increased hydrostatic pressure
 D. Increased albumin
38. Sudden death in patients with pulmonary embolism is caused by:
 A. Blockage of blood flow through the lungs
 B. Atelectasis
 C. Development of chronic obstructive pulmonary disease
 D. Development of pulmonary hypertension
39. A lymphohematogenous dissemination of pulmonary tuberculosis would give rise to:
 A. Vacillary fibrocaceous tuberculosis
 B. Potts disease
 C. Tuberculous bronchopneumonia
 D. Miliary tuberculosis
40. The plausible mechanism in the development of emphysema is:
 A. Increase release of elastase in neutrophils and macrophages
 B. Increase alpha-1 anti-trypsin enzyme
 C. Presence of obstruction of a tumor or foreign body with concomitant infection
 D. Increase responsiveness of the bronchial tree
41. The major cause of celiac sprue is:
 A. Bacterial infection
 B. Deficiency of Vitamin B12
 C. Hypersensitivity to gliadin fraction of wheat gluten
 D. Lymphatic obstruction
43. The histologic criterion for the diagnosis of acute appendicitis is based on finding this type of cell infiltrating the muscularis propria:
 A. Histiocytes
 B. Monocytes
 C. Lymphocytes
 D. Neutrophils
45. Disaccharidase deficiency is classified under which of the following major causes of malabsorption syndrome:
 A. Defective Intraluminal digestion
 B. Lymphatic obstruction
 C. Primary mucosal cell abnormalities
 D. Reduced small intestinal surface area
46. In ulcerative colitis, inflammation is limited to the:
 A. Mucosa
 B. Submucosa
 C. Serosa
 D. Transmural layer
Answer: mucosa and submucosa only...
47. Large areas of hemorrhagic green ulceration of the mucosa and green-black necrosis through the wall, extending to the serosa of the appendix is most likely associated to which of the following stages of acute appendicitis?
 A. Acute gangrenous appendicitis
 B. Early acute appendicitis
 C. Acute suppurative appendicitis
 D. Ruptured acute appendicitis
48. Leon, 25-year-old male complained of intermittent diarrhea and lower abdominal pain. An upper G-I series showed segmental narrowing in the ileum. Microscopic findings of the lesion showed inflammation from the mucosa to the serosa with the presence of non-caseating granulomas. The most likely diagnosis is:
 A. Celiac sprue
 B. Tropical sprue
 C. Crohn's disease
 D. Whipple's disease
49. Henry, 45-year-old, male suffers from episodic abdominal bloating with flatulence and explosive diarrhea after attending a week-long community celebration of the dairy industry during the rest of the year, he does not consume milk shakes or ice cream and is not symptomatic. Which of the following conditions best accounts for these findings?
 A. Celiac sprue
 B. Ulcerative colitis
 C. Disaccharidase deficiency
 D. Whipple's disease
50. Josie, 40-year-old female, has a total serum bilirubin concentration of 8.9 mg/dl and

a direct bilirubin level of 6.8 mg/dl. The serum Alanine aminotransferase (ALT) level is 125 U/L, and the aspartate aminotransferase (AST) level is 108 U/L. A liver biopsy shows histologic findings characteristic for Sclerosing cholangitis. Which of the following gastrointestinal tract disease is most likely to coexist in this patient?

- A. Celiac sprue
- B. **Ulcerative colitis**
- C. Tropical sprue
- D. Whipple's disease

51. A middle-aged male complains of food sticking somewhere between mouth and stomach. Monometry reveals a peristalsis. The most possible diagnosis is:
- A. Stenosis due to severe gastroesophageal reflux
 - B. Paraesophageal hiatal hernia
 - C. **Achalasia**
 - D. Zenker's diverticulum
52. Joshua, 25-year-old, medical student developed sharp epigastric pain relieved by eating. An upper G. I. series demonstrated a 1 cm gastric ulcer. Which of the following features is not compatible with the clinical findings?
- A. The size of the ulcer does not differentiate a benign from malignant ulcer.
 - B. Heaping-up margin is rare in the benign ulcer but characteristic of malignant lesion
 - C. The base of the peptic ulcer is smooth and clean
 - D. **Ulcerative lesion in the greater curvature is more likely to be classic peptic ulcer**
53. Joan, 25-year-old, female, developed diarrhea, abdominal pain, and rectal bleeding. Sigmoidoscopy showed numerous ulcers. Idiopathic inflammatory bowel disease was considered. Which of the following findings is more compatible to Crohn's Disease than to ulcerative colitis?
- A. Crypt abscess formation deep in mucosa
 - B. Increase incidence of adenocarcinoma of colon
 - C. Pseudopolyp formation between ulcers
 - D. **Presence of granulomas in the colonic wall**
54. Cesar, 35-year-old male had a history of heart burn, regurgitation of sour brash, dyspnea, burning esophageal pain and slowly but progressive dysphagia. He was admitted to the emergency room because of lobar pneumonia. The most possible cause of his pneumonia is due to aspiration and can be attributed to which of the following conditions?
- A. Esophageal atresia
 - B. **Reflux esophagitis**
 - C. Sliding hiatal hernia
 - D. Esophageal diverticulum
55. Imelda, 6-year-old, girl, had a blocky, reddish brown rash and was treated with aspirin, she developed fatty change of the liver. The most likely diagnosis is:
- A. Subacute Sclerosing panencephalitis
 - B. Varicella-Zoster infection
 - C. **Reye's syndrome**
 - D. Poliomyelitis
56. Ronnie, 45-year-old, alcoholic went on a binge for 2 weeks. He was found comatose and in liver failure. His liver at autopsy showed several hepatocytes with hyaline Mallory bodies in the cytoplasm. This finding is most typical of:
- A. **Alcoholic hepatitis**
 - B. Alcoholic cirrhosis
 - C. Hepatic steatosis
 - D. Hepatocellular tumor
57. Fely, 18-year-old, female, presents with abdominal pain localized to the right lower quadrant, nausea and vomiting, mild fever, and an elevation of the peripheral leukocyte count to $17 \times 10^9/L$. Examination of the surgically resected appendix is most likely to reveal:
- A. An appendix with normal appearance
 - B. **Neutrophils within the muscular wall**
 - C. Lymphoid hyperplasia and multinucleated giant cells within the muscular wall
 - D. A dilated lumen filled with mucus
58. Nelia, 38-year-old, female, complains of fatigue and pruritus. She is found to have high serum alkaline phosphatase and slightly elevated serum bilirubin levels, and serum antimitochondrial antibodies are present. A liver biopsy reveals a marked

Lymphocytic infiltrate in the portal tracts. Occasional granulomas are also seen. The most likely diagnosis is:

- A. **Primary Sclerosing cholangitis**
- B. Primary biliary cirrhosis
- C. Viral hepatitis B infection
- D. Impacted gallstone

59. The findings of multiple, pale, yellow, hard round stones within the gallbladder is NOT associated with which of the following?

- A. Oral contraceptive
- B. **Biliary infection**
- C. Obesity
- D. Hyperlipidemia syndromes

60. Dilated sinusoids and irregular cystic spaces filled with blood within the liver which may rupture leading to massive intra-abdominal hemorrhage, are most commonly associated with:

- A. Salicylates
- B. **Anabolic steroids**
- C. Estrogen
- D. Acetaminophen

61. Transmural infarcts commonly involve these three arterial vessels of the heart. The LEAST affected one is the:

- A. Left anterior descending
- B. **Left circumflex**
- C. Right coronary
- D. Right circumflex

62. The heat failure cells are by nature:

- A. Alveolar lining cells
- B. **Macrophages**
- C. Polymorphonuclear cells
- D. Eosinophils

63. Angina that is unstable is clinically described as:

- A. Transient
- B. Relieved by rest
- C. Precipitated by physical stress
- D. **Progressive**

64. This organ is not prominent affected in right-sided failure:

- A. Liver
- B. **Lungs**
- C. Kidneys
- D. Brain

65. A cardiac mass form an infant on microscopic examination revealed "spider cells". What type of tumor is this?

- A. Leiomyoma
- B. Myxoma
- C. **Rhabdomyoma**
- D. Fibroma

66. Cases of patent ductus arteriosus that are not isolated are commonly associated with the following conditions, Except:

- A. VSD
- B. **ASD**
- C. Coarctation
- D. Pulmonary stenosis

67. Histopathology examination of the heart of a patient who died of AMI showed coagulative necrosis, edema, hemorrhage and neutrophilic infiltrates. How old is the infarct?

- A. 30 minutes
- B. 12 hours
- C. **1 day**
- D. 1 week

68. Noli, 15-year-old, student, had sore throat and a week later developed swollen joints and a murmur in the aortic valve area. What is the diagnosis?

- A. Infective endocarditis
- B. **Rheumatic heart disease**
- C. SLE
- D. Diphtheria

69. Daniel, 35-year-old man, who recently had an infarct developed a loud pericardial friction rub. This is due to:

- A. Another infarct
- B. Purulent pericarditis
- C. Serous pericarditis
- D. **Fibrinous pericarditis**

70. George, 40-year-old male, died of sepsis with DIC. Upon autopsy, small masses of fibrin thrombi were seen in the heart valves. How do you interpret this?

- A. Patient had infective endocarditis
- B. Patient had rheumatic heart disease
- C. **Patient had NBTE**
- D. It is normal finding

71. The bile salts aid in the emulsification of dietary fats in the intestines. They are composed of bile acids that have been conjugated with:

- A. Albumin
B. **Amino acid**
- C. Glucuronic acid
D. Glucose
72. The milky appearance of serum after fat ingestion is called post prandial lipemia. The lipemic appearance is caused by the presence of:
A. Cholesterol
B. **Chylomicrons**
C. Fatty acids
D. Phospholipids
73. Which of the following apolipoproteins, when present in an increased concentration, would be associated with a decreased risk of coronary artery disease?
A. **Apo A-I**
B. Apo B-48
C. Apo B-100
D. Apo C-II
74. Which type of inflammation is most characteristic of acute rheumatic fever?
A. Myocarditis
B. Pericarditis
C. **Pancarditis**
D. Endocarditis
75. This disease of the heart presents on early cyanosis:
A. Atrial septal defect
B. **Truncus arteriosus**
C. Patent ductus arteriosus
D. Atrioventricular septal defect
76. Which of the following statements about heart failure is true?
A. **Right sided failure may result in hepatomegaly**
B. Cor pulmonale usually is due to severe pulmonic stenosis
C. The clinical manifestation of heart failure most commonly reflect right-sided failure
D. Dyspnea is a result of blood stasis in the extremities
77. Which of the following diseases results from a familial absence of high-density lipoprotein?
A. Krabbe's
B. **Tangier**
C. Gaucher's
D. Tay-Sachs
78. The enzyme that exists chiefly in skeletal muscle, heart and brain is grossly active muscular dystrophy and rises early in myocardial infarction is:
A. Lipase
B. **Lactate dehydrogenase**
C. Transaminase
D. **Creatine kinase**
79. Juanito, 34-year-old was found to have total cholesterol of 225 mg/dl and an HDL cholesterol of 83 mg/dl. Based on these results, this individual:
A. Is a borderline high risk of coronary heart disease
B. Should be counseled to modify his diet to reduce his total cholesterol
C. Should be consulted to see his physician immediate to follow-up testing
D. **Is probably not borderline high risk for coronary heart disease.**
80. A blood specimen is drawn for lipoprotein phenotyping. The test results obtained are:
1. Triglycerides - 235 mg/dl (NV 40-164 mg/dl)
2. Total cholesterol - 190 mg/dl (NV less than 200 mg/dl)
3. Prebeta - lipoprotein fraction increased
4. Beta- lipoprotein fraction normal
5. Chylomicrons present
6. Serum appearance milky
- The best explanation for these results would be that the individual exhibited characteristic of:
A. A normal individual
B. **A non-fasting serum protein**
C. Type II hyperlipoproteinemia
D. Type IV hyperlipoproteinemia
81. Hemoglobin Bart's is composed of:
A. Four alpha chains
B. Four beta chains
C. **Four gamma chains**
D. Two alpha, two beta chains
82. Howell-Jolly bodies are composed of:
A. **DNA**
B. RNA
C. Iron
D. Mitochondria

83. The most mature cell that can undergo mitosis is the:
 A. Myeloblast
 B. Promyelocyte
 C. Metamyelocyte
 D. Myelocyte
84. Vasodilation and bronchoconstriction would be associated with which blood cell:
 A. Eosinophilic
 B. Neutrophils
 C. Basophils
 D. Monocytes
85. Lymphocytes that produce immunoglobulins in response to antigenic stimulation are designated:
 A. B Lymphocytes
 B. T lymphocytes
 C. Plasma cells
 D. Thymocytes
86. Toxic granulation is most commonly observed as a Cytoplasmic inclusion of:
 A. Lymphocytes
 B. Eosinophils
 C. Monocytes
 D. Neutrophils
87. Which of the following organs is NOT a site for hematopoiesis in the fetus?
 A. Liver
 B. Bone marrow
 C. Spleen
 D. Kidney
88. In early infancy the most numerous cells of the bone marrow are:
 A. Erythroblasts
 B. Lymphocytes
 C. Granulocytic precursors
 D. Histiocytes-monocytes
89. Which cell classification is described by the following: Second most numerous cell in the blood; usually small and round; intensely blue cytoplasm; and nucleus with clumped dark purple chromatin?
 A. Monocyte
 B. Null cell
 C. Lymphocyte
 D. Plasmacyte
90. Which of the following is most variable in normal marrow?
 A. Differential count of 500 cells
 B. Cellularity
 C. M:E ratio
 D. Iron stage
91. Which of the following is not a crucial area of RBC survival and function?
 A. Integrity of RBC cellular membrane
 B. Intravascular hemolysis
 C. Cell metabolism
 D. hemoglobin structure
92. Which of the following groups of abnormal hemoglobins are unable to transport or deliver oxygen?
 A. Carboxyhemoglobin and methemoglobin
 B. Methemoglobin and fetal hemoglobin
 C. Carboxyhemoglobin, sulfhemoglobin, and fetal hemoglobin
 D. Carboxyhemoglobin, methemoglobin and sulfhemoglobin
93. Production of primary granules ceases and production of secondary granules commences with what cell stage?
 A. Myelocyte
 B. Promyelocyte
 C. Myeloblast
 D. Metamyelocyte
94. A decreased in which of the following laboratory results is NOT a usual diagnostic criterion for anemia?
 A. Hemoglobin
 B. Platelet count
 C. hematocrit
 D. RBC count
95. What is diagnostic value of reticulocyte count in the evaluation of anemia?
 A. Determines response and potential of the bone marrow
 B. Determines compensation mechanisms for anemia
 C. Determines the corrected RBC count after the calculation
 D. Determines the potential sampling error for RBC count
96. A bone marrow has large cells that have eccentric pyknotic nuclei. The cytoplasm of these cell stains very pale and has a striated appearance:

- A. Mega karyoblasts
- B. Reed-Sternberg cells
- C. Gaucher's cells
- D. Large myeloblasts

97. Which of the following is NOT a factor to be evaluated in the interpretation of a bone marrow aspirate smear?

- A. Maturation of red and white blood cells series
- B. M:E ratio
- C. Type and amount of hemoglobin
- D. Estimate of bone marrow activity

98. Lito 27-year-old has a total WBC count of $4 \times 10^9/L$. The differential count is as follows:

- Neutrophils - 28 (NV . 56)
- Lymphocytes - 65 (NV .34)
- Band - .02 (NV .2-)
- Monocytes - .5 (NV - .4)

Which of the following statements is true?

- A. The percentage of lymphocytes is normal
- B. The absolute number of lymphocytes is low
- C. There is an absolute lymphocytosis
- D. There is a relative lymphocytosis

100. The principal defect in chronic granulomatous disease is in:

- A. Chemotaxis
- B. Lysosomal function
- C. Phagocytosis
- D. Production of oxygen and radical

Reference : Pathologic Basis of Disease 6th Edition

SIMPLE MULTIPLE CHOICE. CHOOSE THE BEST ANSWER.

ENDOCRINE PATHOLOGY

1. A patient with tremors and with exophthalmos has enlarged thyroid gland. If thyroidectomy is done the thyroid would exhibit this type of cellular adaptation.
 - A. Hyperplasia
 - B. Hypertrophy
 - C. Metaplasia
 - D. Dysplasia

Robbin's 7th Edition Chapter 24, Page 1166

2. This is characterized by hard, fixed thyroid gland associated with extensive fibrosis that is contiguous with adjacent neck structures
 - A. Hashimotos thyroiditis
 - B. Riedels thyroiditis
 - C. Granulomatous thyroiditis
 - D. Graves disease

Robbin's 7th Edition Chapter 24, Page 1171

3. A medical student who suddenly developed marked tetany and parasthesia and later on was found out that she was suffering from a parathyroid problem. Your diagnosis would be:
 - A. hypoparathyroidism
 - B. parathyroid adenoma
 - C. parathyroid carcinoma
 - D. parathyroid hypoplasia

Robbin's 7th Edition Chapter 24, Page 1167

4. Microscopic sections of a 3 cm solitary thyroid nodule show proliferating fetal type of thyroid follicles with a focus a transcapsular invasion. Your diagnosis would be:
 - A. Papillary carcinoma
 - B. Follicular carcinoma
 - C. Medullar thyroid
 - D. Anaplastic thyroid

Robbin's 7th Edition Chapter 24, Page 1177

5. Which of the following thyroid malignancy has the highest mortality?
 - A. Papillary carcinoma
 - B. Follicular carcinoma
 - C. Medullary carcinoma
 - D. Anaplastic thyroid carcinoma

Robbin's 7th Edition Chapter 24, Page 1178

6. Orphan- Annie nuclei is a characteristic nuclear feature of this thyroid malignancy
- A. Papillary carcinoma
 - B. Follicular carcinoma
 - C. Medullary carcinoma
 - D. Anaplastic carcinoma

Robbin's 7th Edition Chapter 24, Page 1178

GIT, LIVER, AND HBT

7. Barretts esophagus shows this adoptive cellular change
- A. Hyperplasia
 - B. Hypertrophy
 - C. Metaplasia
 - D. Dysplasia

Robbin's 7th Edition Chapter 1, Page 10

8. The hallmark of irreversible liver injury
- A. fatty change
 - B. cellular swelling
 - C. fibrosis
 - D. bridging necrosis

Robbin's 7th Edition Chapter 18, Page 881

9. The usual site of pancreatic malignancy is:
- A. Head
 - B. Body
 - C. tail
 - D. accessory pancreas

Robbin's 7th Edition Chapter 19, Page 950

10. Alpha feto protein is requested for the detection of this liver neoplasm
- A. Hepatoma
 - B. Cholangiocarcinoma
 - C. Metastatic carcinoma
 - D. Klatskin tumor

Robbin's 7th Edition Chapter 7, Page 339

11. An enlarged axillary lymph node excised from a 53 year old female presenting with an ill defined, fixed palpable firm mass at the right upper outer quadrant would probably show
- A. Metastatic tumor
 - B. Benign tumor
 - C. Primary malignant tumor
 - D. Hamartomatous tumor

Robbin's 7th Edition Chapter 7, Page 279

12. This lesion is grossly seen as linear laceration in the gastroesophageal area
- A. Barretts esophagus
 - B. Mallory weiss
 - C. Esophageal varices
 - D. Severe esophagitis

Robbin's 7th Edition Chapter 17, Page 802

13. This is an premalignant colonic polyp
- A. Hamartomatous polyp
 - B. Adenomatous polyp
 - C. Puetz Jegher polyp
 - D. Inflammatory polyp

Robbin's 7th Edition Chapter 17, Page 857

14. Which is true of chronic gastritis?
- A. H. pylori organisms aggregates along metaplastic epithelium
 - B. It is grossly seen as multiple ulceration
 - C. It is a common cause of gastric malignancy
 - D. It commonly presents as bleeding

Robbin's 7th Edition Chapter 24, Page 813

15. The type of ulcer produced by this organism is flask – shaped
- A. M. tuberculosis
 - B. E. histolytica
 - C. Samonella
 - D. Crohns disease

Robbin's 7th Edition Chapter 17, Page 839

16. Malignant transformation is a common complication of this lesion
- A. Achalasia
 - B. Mallory weiss
 - C. Peptic ulcer
 - D. Fraction diverticulum

Robbin's 7th Edition Chapter 17, Page 800

17. You would think of a malignant ulcer if this gross feature is seen
- A. converging mucosal fold
 - C. edematous border

B. uneven borders
edge of the ulcer
Robbin's 7th Edition Chapter 17, Page 850

18. Most common malignancy of the appendix is:

- A. Carcinoid
- B. Lymphoma

Robbin's 7th Edition Chapter 17, Page 871

19. A gastric carcinoma that metastasize in the periumbilical area is called:

- A. Virchows nodule
- B. Sister Mary Joseph nodule

Robbin's 7th Edition Chapter 17, Page 825

20. Stercoral ulcer are associated with this disease:

- A. Meckels diverticulum
- B. Chronic gastritis

Robbin's 7th Edition Chapter 17, Page 830

21. Most common location of gastric carcinoma

- A. Fundus
- B. Body

Robbin's 7th Edition Chapter 17, Page 822

22. Nutmeg liver is the gross appearance of the liver in:

- A. acute left ventricular failure
- B. portal vein thrombosis
- failure

Robbin's 7th Edition Chapter 4, Page 123

CELLULAR REACTION TO INJURY (CRI)

23. Atrophy of myocardial fibers would show this cellular accumulation

- A. Hemosiderophage
- B. Lipofuscin

Robbin's 7th Edition Chapter 1, Page 8

24. The deepest layer of an ulcer is made up of which of these?

- A. vessel proliferation
- B. necrotic tissues

Robbin's 7th Edition Chapter 2, Page 77

25. Mycobacterium tuberculosis infection would show this type of necrosis.

- A. Coagulation
- B. Caseation

Robbin's 7th Edition Chapter 8, Page 383

26. Which of the following is an irreversible form of cellular injury?

- A. Nuclear pyknosis
- B. Dilatation of ER

Robbin's 7th Edition Chapter 1, Page 12

NEOPLASIA

27. Cervical biopsy of a 32 year old female with cervical erosion shows squamous epithelium that exhibits some atypia and loss of polarity. This adoptive response is:

- A. Hyperpalsia
- B. Hypertrophy

Robbin's 7th Edition Chapter 7, Page 274

28. This is the most activated oncogene in adenomas and colon cancers:

- A. Bax gene
- B. APC

Robbin's 7th Edition Chapter 7, Page 317

D. mucosa overhungs the

- C. Squamous cell carcinoma
- D. Seminoma

- C. Krukenberg tumor
- D. Linitis plastica

- C. Gastric malignancy
- D. Congenital megacolon

- C. Cardia
- D. Antrum

- C. malnutrition
- D. chronic right ventricular

- C. Councilman bodies
- D. Bilirubin pigments

- C. fibrosis
- D. mixed inflammatory cells

- C. Liquefaction
- D. Gangrenous

- C. Mitochondrial swelling
- D. Plasma membrane blebs

- C. Metaplasia
- D. Dysplasia

- C. K-ras
- D. p-53

29. Absolute lymphocytosis, lymphoblasts, many small mature lymphocytes in the peripheral smears is a characteristic of this type of leukemia:

- A. ALL
- B. AML
- C. CLL
- D. CML

Robbin's 7th Edition Chapter 14, Page 670

30. This is not a common complication of leukemia:

- A. gout
- B. infection
- C. diabetes
- D. anemia

Robbin's 7th Edition Chapter 14, Page 667

31. Identification of Reed-Sternberg cells will lead you to think of this tumor:

- A. Non-hodgkins lymphoma
- B. Hodgkins lymphoma
- C. Burkitts lymphoma
- D. hairy cell leukemia

Robbin's 7th Edition Chapter 14, Page 686

32. A malignant epithelial tumor is referred to as:

- A. carcinoma
- B. adenoma
- C. sarcoma
- D. lymphoma

Robbin's 7th Edition Chapter 7, Page 271

33. Loss of organizational, structural and functional differentiation of cell is known as:

- A. Neoplasia
- B. Anaplasia
- C. hyperchromaticity
- D. dysplasia

Robbin's 7th Edition Chapter 7, Page 272

34. A well differentiated tumor means:

- A. The tumor is severely anaplastic
- B. The tumor still looks like the tissue where it originates
- C. The tumor would be very pleomorphic
- D. The tumor is benign

Robbin's 7th Edition Chapter 7, Page 281

35. Which of the following is a benign tumor ?

- A. Hepatoma
- B. Retinoblast
- C. Hemangioma
- D. Sarcoma

Robbin's 7th Edition Chapter 7, Page 273

36. Which of the following is the pre-cancerous lesion

- A. CIN
- B. Adenomatous polyp
- C. Fibroepithelial polyp
- D. Ulcerative colitis

Robbin's 7th Edition Chapter 25, Page 1238

37. Aniline dye and rubber can cause malignancy to this organ

- A. Cervix
- B. Liver
- C. Skin
- D. Urinary bladder

Robbin's 7th Edition Chapter 21, Page 1032

INFLAMMATION

38. A hypertrophied scar would show this feature.

- A. Angiogenesis
- B. Lymphoid follicle formation
- C. Presence of haphazardly arranged bundles of collagen
- D. Aggregates of epitheloid histiocytes

Robbin's 7th Edition Chapter 3, Page 115

39. The main difference between healing by primary intention and secondary intention is:

- A. Leukocyte migration
- B. Amount of Granulation tissue
- C. Fibrosis
- D. Contraction

Robbin's 7th Edition Chapter 3, Page 113

40. This process is always seen in chronic inflammation:

- A. Proliferation of blood vessels
- B. Increase in edema fluid
- C. Emigration of neutrophils
- D. Increase permeability of blood vessels

Robbin's 7th Edition Chapter 2, Page 79

RESPIRATORY SYSTEM

41. Pulmonary embolism could lead to this type of shock

- A. Neurogenic shock
- B. Cardiogenic shock
- C. Hypovolemic shock
- D. Septic shock

Robbin's 7th Edition Chapter 4, Page 139

42. The mechanism of adult respiratory distress syndrome is:

- A. deficiency in pulmonary surfactant
- B. increased hydrostatic pressure
- C. diffuse damage to the alveolar capillary wall
- D. inflammatory reaction to microorganisms

Robbin's 7th Edition Chapter 15, Page 715

43. Posterior mediastinal rest of the lungs tissue with no connection to the air way system is known as:

- A. Bronchiectasis
- B. pulmonary sequestration
- C. teratoma
- D. hamartoma

Robbin's 7th Edition Chapter 17, Page 799

44. This syndrome is characterized by bronchiectasis, sinusitis and sinus inversus caused by defect in ciliary motility

- A. Kartagener
- B. Cystic fibrosis
- C. Pulmonary sequestration
- D. Mesothelioma

Robbin's 7th Edition Chapter 15, Page 727

45. Viral pneumonias typically presents in the lungs as:

- A. lymphoplasmacytic infiltrates within the alveolar sacs
- B. mononuclear cells within the septa
- C. accumulation of neutrophils in one lobar segment
- D. neutrophils in the peribronchiolar area

Robbin's 7th Edition Chapter 15, Page 751

46. Most common cause of community acquired pneumonia is:

- A. Klebsiella
- B. Haemophilus influenza
- C. Strep pneumonia
- D. Staph aureus

Robbin's 7th Edition Chapter 15, Page 748

47. This is the second stage in the evolution of the lobar pneumonia:

- A. Congestion
- B. Gray hepatization
- C. Resolution
- D. Red hepatization

Robbin's 7th Edition Chapter 15, Page 750

48. This type of malignancy is commonly seen in the periphery of the lungs

- A. Oat cell carcinoma
- B. Squamous cell carcinoma
- C. Adenocarcinoma
- D. Small cell carcinoma

Robbin's 7th Edition Chapter 15, Page 760

49. Collapse of lung secondary to air in the pleural cavity is an example of:

- A. Compression atelectasis
- B. Resorption atelectasis
- C. Patchy atelectasis
- D. Contraction atelectasis

Robbin's 7th Edition Chapter 15, Page 714

50. This lung disease exhibits smooth muscle hyperplasia of the bronchial walls

- A. Emphysema
- C. Asthma

B. Bronchitis
Robbin's 7th Edition Chapter 15, Page 723

D. Bronchiectasis

51. This finding in the pulmonary vessel would indicate advance pulmonary hypertension

- A. Medial hypertrophy
- B. Internal hyperplasia

- C. Plexogenic arteriopathy
- D. Pulmonary embolus

Robbin's 7th Edition Chapter 15, Page 744

52. The usual source of pulmonary embolism is:

- A. Bronchus
- B. Deep leg veins

- C. mitral valve
- D. left atrium

Robbin's 7th Edition Chapter 4, Page 136

53. Squamous cell carcinoma would normally spread via

- A. Lymphatic route
- B. Hematogenous route

- C. Direct extension
- D. It does not metastasize

Robbin's 7th Edition Chapter 7, Page 279

THE HEART

For question number 58 – 59

A 25 year old female presents with a history of recurrent fever and arthralgia accompanied by ECG changes and increased ASO titer in the past 2 years. The physical examination reveals a cardiac murmur.

54. What is the clinical impression?

- A. Acute Rheumatic Fever
- B. Chronic Rheumatic Heart Disease

- C. Infective Endocarditis
- D. Aortic Calcific Stenosis

Robbin's 7th Edition Chapter 12, Page 592

55. The murmur is caused by;

- A. Anemia
- B. Valve deformity
blood

- C. Contraction deformity
- D. Change in consistency of

Robbin's 7th Edition Chapter 12, Page 592

56. Hemorrhagic infarct is the expected lesion in thromboembolism to:

- A. Renal artery
- B. Coronary artery

- C. Mesenteric artery
- D. Splenic artery

Robbin's 7th Edition Chapter 4, Page 138

57. The earliest microscopic sign of myocardial infarction is:

- A. neutrophilic infiltration
- B. congestion

- C. coagulation necrosis
- D. fiber waviness

Robbin's 7th Edition Chapter 12, Page 579

58. This congenital heart disease has cyanosis at birth:

- A. VSD
- B. ASD

- C. PDA
- D. TOF

Robbin's 7th Edition Chapter 12, Page 568

59. Chronic mitral stenosis will show this lung finding:

- A. rupture of alveolar septa
- B. neutrophilic infiltrates in septa coating the septa

- C. thickening of the septa
- D. hyaline membrane

Robbin's 7th Edition Chapter 12, Page 589

60. Maximal neutrophilic infiltration in a postinfarct heart is:

- A. 8 hours
- B. 1-3 days

- C. 5-7 days
- D. 2 weeks

Robbin's 7th Edition Chapter 12, Page 584

MALE REPRODUCTIVE SYSTEMS

61. Most common testicular tumor in infants

- A. Yolk sac tumor
- B. Teratoma
- C. Embryonal carcinoma
- D. Choriocarcinoma

Robbin's 7th Edition Chapter 21, Page 1040

FEMALE REPRODUCTIVE SYSTEMS AND BREAST

62. This breast malignancy has the best prognosis

- A. Papillary carcinoma
- B. Invasive ductal carcinoma
- C. Colloid carcinoma
- D. Intraductal carcinoma

Robbin's 7th Edition Chapter 23, Page 1139

63. Usefulness of the Paps smear is seen in the following except:

- A. Hormonal cytology
- B. Identifying etiology of infection
- C. Diagnosis of endocervical polyp
- D. Screening of cervical malignancies and its early precursors

Robbin's 7th Edition Chapter 7, Page 336

64. The surgery of choice in a patient with palpable axillary lymph nodes in the presence of proven primary breast carcinoma

- A. Simple mastectomy
- B. Excision biopsy
- C. Modified Radical mastectomy
- D. MRM with frozen section

Robbin's 7th Edition Chapter 23, Page 1129

65. If you are suspecting an ovarian cancer, you would request for what tumor marker?

- A. CEA
- B. CA – 125
- C. Alpha fetoprotein
- D. HCG

Robbin's 7th Edition Chapter 7, Page 339

IMMUNE DYSFUNCTION

66. The following are antigen presenting cells, EXCEPT:

- A. dendritic cells
- B. macrophages
- C. langerhans cells
- D. natural killer cells

Robbin's 7th Edition Chapter 6, Page 210

67. Which of the following cells contain CD3, CD4, and CD 8 molecule

- A. T lymphocytes
- B. B lymphocytes
- C. Interferon
- D. Natural Killer cells

Robbin's 7th Edition Chapter 6, Page 196

68. A localized area of tissue necrosis resulting from an acute immune complex is an example of this type of hypersensitivity reaction

- A. Type I
- B. Type II
- C. Type III
- D. Type IV

Robbin's 7th Edition Chapter 6, Page 210

NERVOUS SYSTEM

69. Subarachnoid hemorrhage is associated with this lesion

- A. Charcot Bouchard microaneurysm
- B. AV malformation
- C. Degenerative
- D. Berry aneurysm

Robbin's 7th Edition Chapter 28, Page 1366

70. This is the most common cause of acute bacterial meningitis in children:

- A. E. Coli
- B. H. Influenza
- C. Tuberculosis
- D. Klebsiella

Robbin's 7th Edition Chapter 28, Page 1369

71. Histologic lesion that is not present in glioblastoma multiforme

- A. Necrosis
- B. Proliferating blood vessels
- C. rosette formation
- D. anaplastic cells

Robbin's 7th Edition Chapter 28, Page 1410

72. The most common cause of intracerebral hemorrhage is:

- A. berry aneurysm
- B. microaneurysm
- C. A-V malformation
- D. infection

Robbin's 7th Edition Chapter 28, Page 1366

SKIN

73. Which type of mole is noted for its greatest malignant potential?

- A. Melanoma
- B. Intradermal nevus
- C. Compound nevus
- D. Junctional nevus

Robbin's 7th Edition Chapter 25, Page 1234

74. Which among these is not a common malignancy of the skin?

- A. Adenocarcinoma
- B. Melanoma
- C. Squamous cell carcinoma
- D. Basal cell carcinoma

Robbin's 7th Edition Chapter 25, Page 1240

75. Which among these is considered a premalignant tumor?

- A. Keratoacanthoma
- B. Seborrheic keratosis
- C. Actinic keratosis
- D. Acanthosis nigricans

Robbin's 7th Edition Chapter 25, Page 1240

ENVIRONMENTAL PATHOLOGY

76. This substance has been implicated in mesothelioma

- A. asbestos
- B. mercury
- C. X – ray
- D. formaldehyde

Robbin's 7th Edition Chapter 15, Page 735

77. This is the major source of oil spill

- A. Big spills
- B. Down the drain
- C. Off shore drilling
- D. Up in smoke

Robbin's 7th Edition Chapter 9, Page 431

78. Caisson disease is associated with this physical injury

- A. Blast injury
- B. Electrical injury
- C. Decompression disease
- D. High altitude sickness

Robbin's 7th Edition Chapter 9, Page 446

KIDNEY AND URINARY TRACT

79. Crescent formation is produced by the proliferation of which component of the glomerulus?

- A. endothelial cells
- B. mesangial epithelia
- C. parietal epithelia
- D. podocytes

Robbin's 7th Edition Chapter 20, Page 976

For question number 80 to 83

A 10 year old female presents with generalized edema. Blood pressure is 90/60.

80. What is the most likely clinical diagnosis?

- A. Acute renal failure
- B. Chronic renal failure
- C. Nephritic syndrome
- D. Nephrotic syndrome

Robbin's 7th Edition Chapter 20, Page 978

Urinalysis showed the following findings: specific gravity = 1.10 (1.015 – 1.022)

Protein = 3+

Oval fat bodies = 3+

81. Considering the clinical data, what is the most likely light microscopic pattern?

- A. Acute glomerulonephritis (GN)
- B. Membranous GN
- C. Membranoproliferative GN
- D. Normal glomerulus

Robbin's 7th Edition Chapter 20, Page 956

82. What is the expected immunofluorescence pattern in this case?

- A. Linear immunofluorescence
- B. Granular
- C. Negative
- D. Variably linear granular

Robbin's 7th Edition Chapter 20, Page 969

83. What is the expected electron microscopic (EM) findings?

- A. Subepithelial deposits
- B. Subendothelial deposits
- C. Loss of podocyte foot process
- D. No pathologic EM findings

Robbin's 7th Edition Chapter 20, Page 970

For question number 84 to 85

A 65 years old man sought consult due to decreased vigor urinary stream and increased urinary frequency. Digital rectal examination revealed an enlarged prostate gland.

84. An elevated serum prostatic specific antigen (PSA) together with an elevated alkaline phosphatase level is consistent with which of the following mechanisms?

- A. Benign prostatic hyperplasia
- B. Cystitis
- C. Prostatic malignancy
- D. Prostatitis

Robbin's 7th Edition Chapter 21, Page 1053

85. The clinical symptoms of this patient are referable to which of the following mechanisms?

- A. Increased urine output
- B. Prostatic irritation and inflammation
- C. Urethral fibrosis & stricture
- D. Urinary bladder outlet obstruction

Robbin's 7th Edition Chapter 21, Page 1033

NUTRITIONAL DISORDERS

For question number 86 to 93

A 35 year old female came in for consultation due to increased amount and frequent menstruation for the past 6 months. CBC was done revealing low hemoglobin, hematocrit and red blood cell (RBC) count.

86. The mechanism for the abnormal RBC parameter is due to.

- A. Anemia due to hemolysis
- B. Anemia due to hemoglobinopathy
- C. Anemia due to chronic blood loss
- D. Anemia due to decreased RBC production

Robbin's 7th Edition Chapter 13, Page 624

87. The red cell morphology of the peripheral smear is expected to be

- A. Normocytic normochromic
- B. Normocytic hypochromic
- C. Macrocytic hyperchromic
- D. Microcytic hypochromic

Robbin's 7th Edition Chapter 13, Page 624

88. The most likely RBC disorder present in this patient would be:

- A. Megaloblastic anemia
- B. Thalassemia
- C. Iron deficiency anemia
- D. Sickle Cell Disease

Robbin's 7th Edition Chapter 13, Page 643

89. Macrocytic, hypochromic type of anemia is seen in which of the following conditions?

- A. Folic Acid Deficiency antibodies
- B. Lack of dietary iron
- C. RBC destruction due to
- D. RBC membrane defect

Robbin's 7th Edition Chapter 13, Page 642

MUSCULOSKELETAL SYSTEM

90. Most common primary malignant tumor of the bone

- A. Osteosarcoma
B. Metastatic tumor
C. Chondrosarcoma
D. Giant cell tumor

Robbin's 7th Edition Chapter 26, Page 1294

91. On x-ray of the skull, lytic punched – out lesion are seen. This tumor is probably made up of

- A. giant cells
B. proliferating chondrocytes
C. bone forming tumor cells
D. plasma cells

Robbin's 7th Edition Chapter 14, Page 679

92. This lesion has the oldest age group of predilection

- A. Osteosarcoma
B. Ewings sarcoma
C. Chondrosarcoma
D. Giant cell tumor

Robbin's 7th Edition Chapter 26, Page 1298

93. This soft tissue tumor has biphasic feature of tumor cells

- A. Fibrosarcoma
B. Synovial sarcoma
C. Osteosarcoma
D. Malignant fibrous histiocytoma

Robbin's 7th Edition Chapter 26, Page 1323

CHOOSE THE BEST ANSWER.

Cellular Injury and Adaptation

1. Viruses induce cell injury through:

- A. direct cytopathic effect
B. immune – mediated reactions
C. **both A & B are correct**
D. neither A nor B is correct

Robbins 7th edition p. 356 – 357

2. Process (es) involved in cell necrosis is (are):

- A. denaturation of proteins
B. enzymic digestion of cells
C. **both A & B are correct**
D. neither A nor B is correct

Robbins 7th edition pp. 21 – 22

3. The following statements are TRUE of caseous necrosis:

- A. it is a combination of coagulation and liquefaction necrosis
B. it is a characteristic feature of tuberculosis
C. **both A & B are correct**
D. neither A nor B is correct

Robbins 7th edition pp 21 -22

4. Jaundice is due to the accumulation of this pigment:

- A. **bilirubin**
B. hemosiderin
C. lipofuscin
D. melanin

Robbins 7th edition p. 41

Inflammation and Repair

5. The sequence of cellular events in inflammation is:

- A. **margination → diapedesis → chemotaxis → phagocytosis**
B. diapedesis → margination → chemotaxis → phagocytosis
C. chemotaxis → margination → diapedesis → phagocytosis
D. chemotaxis → diapedesis → margination → phagocytosis

Robbins 7th edition p. 53

6. The most effective means of microbial killing is via the:

- A. oxygen – independent mechanism
B. myeloperoxidase independent mechanism
C. **hydrogen peroxide, myeloperoxidase and halide system**
D. only A & C are correct

Robbins 7th edition 59 - 61

7. The most important cause of delay in wound healing is:
A. **infection** C. inadequate blood supply
B. presence of foreign bodies D. mechanical factors

Robbins 7th edition p. 114

8. Keloid is due to excessive:
A. granulation tissue C. amyloid deposition
B. granuloma formation D. **collagen accumulation**

Robbins 7th edition 115

Fluid and Hemodynamics

9. Edema can result from any of the following mechanisms:
A. increased hydrostatic pressure of the blood
B. increased osmotic pressure of interstitial fluid (sodium retention)
C. decreased oncotic pressure of plasma protein
D. **all of the above are correct**

Robbins 7th edition p. 120

10. Periorbital edema is usually encountered in:
A. filariasis C. liver cirrhosis
B. **nephritic syndrome** D. inflammatory states

Robbins 7th edition p. 122

11. Fluid that collects during acute inflammation and that has a protein content in excess of 3.0 g/L and SG over 1.015 is termed:
A. **exudate** C. hydropericardium
B. transudate D. wheal

Robbins 7th edition p.120

Genetics Disorders

12. A segment of one chromosome transferred to another segment is known as:
A. mutation C. inversion
B. **translocation** D. deletion

Robbins 7th edition pp. 174 - 175

13. The most common cause of the occurrence of Klinefelter's syndrome:
A. **non-disjunction in meiotic division in oogenesis**
B. non-disjunction in meiotic division in spermatogenesis
C. non-disjunction in meiotic division in embryogenesis
D. translocation

Robbins 7th edition p. 179

14. The number of Barr bodies in a patient with 48 XXXY karyotype:
A. none C. **two**
B. one D. three

Robbins 7th edition p.178

15. The following are suppressor genes **EXCEPT**:
A. p53 C. APC
B. **bcl-2** D. NF – I

Robbins 7th edition p. 298 - 300

Infectious Disease

16. A 6-year-old boy develops abdominal pain and vomiting preceded by a 3-day period without bowel movements. A diagnosis of intestinal obstruction is made. Of the following, the most likely reason for the obstruction is a bolus of:
A. *Taenia saginata* C. *Strongyloides tercoralis*
B. ***Ascaris lumbricoides*** D. *Onchocerca volvulus*

Robbins 7th edition p. 351 - 352

17. A chronic carrier state of typhoid fever is most likely due to the persistence of the organism in:
- A. the appendix
 - B. the cortex of the kidney
 - C. **the gall bladder**
 - D. the ileum

Robbins 7th edition p. 835

Nutritional Disease

18. Function of thiamine:
- A. **co-enzyme in oxidative decarboxylation of alpha-ketoacids**
 - B. synthesis of DNA and RNA
 - C. respiratory enzyme in the cytochrome enzyme
 - D. all of the above are correct

Robbins 7th edition p. 456

19. The metabolism of calcium is closely regulated by:
- A. vitamin D
 - B. parathyroid gland
 - C. thyroid gland
 - D. **all of the above are correct**

Robbins 7th edition pp. 452 - 453

20. The mechanism of clotting is affected by:
- A. Vitamin A
 - B. **Vitamin K**
 - C. Thiamine
 - D. Vitamin E

Robbins 7th edition p. 456

Environmental Pathology

21. This/these pollutants is/are dangerous because once released into the environment they are "forever" i.e. resistant to natural process of decay.
- A. **polychlorinated biphenyls**
 - B. chloroform
 - C. carbon monoxide
 - D. all of the above are correct

Robbins 7th edition p. 432

22. Ethyl alcohol toxicity will cause:
- A. venous thrombosis
 - B. cheery-red discoloration of skin
 - C. **fatty liver**
 - D. gingivitis

Robbins 7th edition p. 421

23. Which of the following is the most common adverse effect of smoking?
- A. **myocardial infarction**
 - B. cancer of the bladder
 - C. cancer of the pancreas
 - D. peptic ulcer disease

Robbins 7th edition p. 419

24. Exposure to carbon particle in the ambient air will result to:
- A. Anthracosis
 - B. coal worker's pneumoconiosis
 - C. progressive massive fibrosis
 - D. **any of the above**

Robbins 7th edition pp. 732 - 734

Diseases of Infancy & Childhood

25. The leading cause of death in children between 5-14 years of age is:
- A. malignant neoplasm
 - B. congenital anomalies
 - C. **injuries resulting from accidents**
 - D. cardiac diseases

Robbins 7th edition p. 470

26. The highest at risk period for intrauterine cytomegalovirus infection:
- A. 1st trimester of pregnancy
 - B. **2nd trimester of pregnancy**
 - C. 3rd trimester of pregnancy
 - D. all of the above

Robbins 7th edition p.473

27. Organogenesis is completed by:
- A. 2nd trimester of pregnancy
 - B. the end of 2nd trimester
 - C. **the end of 1st trimester**
 - D. the middle of 1st trimester

Robbins 7th edition pp. 470 - 471

The Heart

28. Complicated or advanced atherosclerosis would most likely affect this portion of the blood vessel:
- A. intima only
 - B. **intima and media**
 - C. intima and adventitia
 - D. adventitia

Robbins 7th edition p 517 - 520.

29. A biopsy of the femoral artery revealed calcification in the media would be compatible with:
- A. accelerated hypertension
 - B. young individuals, usually male
 - C. usual complication of ischemia and gangrene
 - D. **none of the above**

Robbins 7th edition p. 515

30. A vascular tumor associated with AIDS is:
- A. Lymphangiosarcoma
 - B. **Kaposi's sarcoma**
 - C. Angiosarcoma
 - D. Hemangiopericytoma

Robbins 7th edition pp. 256 - 257

WBC, Lymph nodes and Spleen

31. "Starry sky" pattern of lymph node is characteristic of:
- A. **Burkitt's lymphoma**
 - B. Hodgkins lymphoma
 - C. Histiocytic lymphoma
 - D. Sezary's syndrome

Robbins 7th edition p. 677 - 678

32. Lacunar cells are characteristics of this type of Hodgkin's disease:
- A. lymphocytic predominance
 - B. **lymphocyte depletion**
 - C. mixed cellularity
 - D. nodular sclerosis

Robbins 7th edition p. 686 & 688

33. The most common type of Histiocytosis X in infants is:
- A. eosinophilic granuloma
 - B. hand-schuller-christian disease
 - C. **letterer-siwe syndrome**
 - D. unifocal langerhans cell histiocytosis

Robbins 7th edition p. 701 - 702

34. Sinus histiocytosis are normally seen in nodes draining:
- A. infection
 - B. **cancers**
 - C. drug abuse
 - D. immunologic disorders

Robbins 7th edition p. 666

35. A patient presents with hemoptysis and acute renal failure. A diagnosis worth considering in this clinical picture is:
- A. Asbestosis
 - B. primary atypical pneumonia
 - C. **Good pasture's syndrome**
 - D. tuberculosis

Robbins 7th edition pp. 745 - 746

Respiratory System

36. Alpha-1 antitrypsin deficiency is associated with:
- A. **panlobular emphysema**
 - B. anthracosis
 - C. Wegener's granulomatosis
 - D. bronchogenic carcinoma

Robbins 7th edition pp. 718 - 719

37. Enlargement of pulmonary alveolar spaces with destruction of septal walls is seen in:
- A. chronic bronchitis
 - B. **emphysema**
 - C. pulmonary infarction
 - D. alveolar proteinosis

Robbins 7th edition p. 717

38. A chest x-ray that shows a shaggy cavity with a thick irregular border and satellite densities in the right lower lobe is most compatible with:
- | | |
|---------------------------|-------------------|
| A. bronchogenic carcinoma | C. abscess |
| B. tuberculosis | D. histoplasmosis |

Robbins 7th edition p. 753

GIT

39. Which statement about esophageal cancer is false?
- | |
|--|
| A. it is usually of squamous cell type |
| B. most common in the distal portion |
| C. primarily a disease of elderly males |
| D. characterized by dysphagia and painless weight loss |

Robbins 7th edition p. 806 - 809

40. Macrophages with positive periodic acid-schiff-staining material in intestinal lamina propria and lymph nodes are characteristically found in:
- | | |
|----------------------------------|-----------------------------|
| A. Wilson's disease | C. Whipple's disease |
| B. Elevated serum gastrin levels | D. Gardener's syndrome |

Robbins 7th edition p. 844

41. The Mallory-Weiss syndrome is due to laceration in the mucosa of the:
- | | |
|---------------------|--------------------|
| A. Esophagus | C. Pylorus |
| B. Stomach | D. Small intestine |

Robbins 7th edition p. 802

42. Carcinoma of the GIT would be expected to occur with greatest frequency in patients with:
- | | |
|---|--------------------|
| A. familial polyposis of the colon | C. Crohn's disease |
| B. villous adenoma of the colon | D. gastric ulcer |

Robbins 7th edition p. 284 - 285

Liver, Biliary & Pancreas

43. Chronic obstruction of the cystic duct results to development of:
- | | |
|---------------------------|---------------------------------------|
| A. Choledochal cyst | C. Hydrops of the gall bladder |
| B. Porcelain gall bladder | D. Carcinoma of the gall bladder |

Robbins 7th edition p. 933

44. Which of the following condition(s) increase(s) the risk of bile duct carcinoma?
- | | |
|---------------------------|--------------------------------|
| A. Choledochal cyst | C. Hydrops of the gall bladder |
| B. Porcelain gall bladder | D. Choledocholithiasis |

Robbins 7th edition p. 933

45. Carcinoma of the pancreas:
- | |
|---|
| A. occurs most often in the body of the pancreas |
| B. is associated with hypocalcemia |
| C. arises from the pancreatic ductal cells |
| D. is usually cured by total pancreatectomy |

Robbins 7th edition p. 950 - 951

46. The least common type of gall bladder calculi are:
- | | |
|----------------------------------|---------------------|
| A. pure calcium bilirubinate | C. pure cholesterol |
| B. pure calcium carbonate | D. mixed stone |

Robbins 7th edition p. 1033 - 1034

47. Cholelithiasis is mainly due to:
- | | |
|--|-----------------|
| A. Infection | C. bile stasis |
| B. supersaturation of bile with cholesterol | D. inflammation |

Robbins 7th edition p. 929 - 930

Kidney

48. In addition to nephritic injury, the other main cause of acute tubular necrosis is:
A. Sepsis
B. **Ischemia**
C. severe hypocomplementemia
D. immune complex deposition

Robbins 7th edition p. 933

49. Of the complications of acute pyelonephritis enumerated below, one does not belong:
A. retroperitoneal abscess formation
B. renal papillary necrosis
C. **acute episodes of paroxysmal HPN**
D. pyonephrosis

Robbins 7th edition p. 998 - 1000

50. Of the risk factors for pyelonephritis enumerated below, one does not belong:
A. **diabetes mellitus**
B. male sex
C. congenital abnormalities of the urinary tract
D. pregnancy

Robbins 7th edition pp. 998 - 1000

51. Chronic renal disease, pheochromocytoma, Conn's syndrome, coarctation of the aorta and acromegaly are all conditions that may lead to:
A. venous thrombosis
B. hypersensitivity vasculitis
C. Wegener's granulomatosis
D. **hypertension**

Robbins 7th edition p. 526

Lower Urinary Tract & Male Genital System

52. Nests of urothelium may be found in the lamina propria of the urinary bladder representing normal variation in the morphology of the bladder. These nests of urothelium are called:
A. Brunner's nests
B. Burney's nests
C. **Brunn's nests**
D. Burner's nests

Robbins 7th edition p. 1024

53. A newborn baby was noted to pass out urine through a small opening in the area of the umbilicus. This is most probably due to:
A. Urachal cyst
B. **Patent urachus**
C. Exstrophy of the bladder
D. Any of the above

Robbins 7th edition p. 1026

54. The following is caused by human papilloma virus type 6 (HPV-6):
A. Giant condyloma
B. **Condyloma acuminatum**
C. condyloma lata
D. all of the above

Robbins 7th edition p. 1265

Female Genital Tract

55. The majority of ovarian neoplasms arise from:
A. germ cells
B. **surface epithelial cell**
C. sex-cord stroma
D. metastatic from GIT

Robbins 7th edition p. 1093

56. **The most common site of endometriosis:**
A. fallopian tube
B. **ovary**
C. recto-vaginal septum
D. vagina

Robbins 7th edition p. 1083 - 1084

57. Choriocarcinoma is most often preceded by:
A. abortion
B. ectopic pregnancy
C. normal pregnancy
D. **H. mole**

Robbins 7th edition p. 1110

58. The most common primary malignant tumor of the ovary:
A. endometrioid carcinoma **C. serous cystadenocarcinoma**
B. mucinous cystadenocarcinoma D. yolk sac tumor

Robbins 7th edition p. 1083 - 1084

Breast

59. Cord like ducts filled with necrotic and cheesy tumorous tissue that can be readily extruded upon pressure is seen in:
A. mucinous carcinoma C. medullary carcinoma
B. **comedocarcinoma** D. paget's disease of the breast

Robbins 7th edition p. 1139

60. Sites of metastases of cystosarcoma phyllodes are usually:
A. axillary lymph nodes C. liver
B. **lungs and bone** D. brain

Robbins 7th edition p. 1150

61. The most frequent site of breast cancer is:
A. lower inner quadrant **C. upper outer quadrant**
B. upper inner quadrant D. subareolar

Robbins 7th edition p. 1123

Endocrine

For numbers 87 to 89

62. A female patient presented with "moon facies," truncal obesity and hirsutism. Plasma cortisol was elevated. These features characterize:
A. Conn's syndrome C. Waterhouse-Friderichsen syndrome
B. **Cushing's syndrome** D. Only B & C are correct

Robbins 7th edition p. 1209

63. If you suspect the presence of Cushing's syndrome, you should perform a:
A. **low dose dexamethasone test**
B. high dose dexamethasone suppression test
C. both A & B are correct
D. neither A nor B is correct

Robbins 7th edition p. 1162

64. If this were Cushing's syndrome, one would expect:
A. suppression of cortisol secretion **C. no suppression of cortisol secretion**
B. suppression of ACTH secretion D. only A & B are correct

Robbins 7th edition p. 1162, p.1207 - 1209

65. Suppression of cortisol secretion with high dose dexamethasone suppression test indicates the presence of:
A. an adrenal neoplasm **C. pituitary ACTH excess**
B. ectopic ACTH syndrome D. all of the above are correct

Robbins 7th edition p. 1207 - 1209

Skin & Musculoskeletal

66. Which of the following is a secondary lesion?
A. wheal **C. erosion**
B. pustule D. bulla

Robbins 7th edition p. 1229

67. Psoriatic patients typically develop silvery:
A. excoriations C. papules
B. **scales** D. pustules

Robbins 7th edition p. 1256

68. A patient presents with vesicles on the left side of his trunk. A simple lab procedure to do to support a diagnosis of herpes zoster is:
- A. gram stain
 - B. KOH stain
 - C. **Tzanck smear**
 - D. Patch test

Robbins 7th edition p. 368

69. One of the etiologic factors in acne is the:
- A. Pityrosporum
 - B. Staphylococcus
 - C. **Propionibacterium**
 - D. Enterococci

Robbins 7th edition p. 1264

70. The paucibacillary therapy for Hansen's disease is:
- A. Rifampicin 600 mg; Ofloxacin 400 mg; Minocycline 100mg daily for 6 months
 - B. **Rifampicin 600mg once a month for 6 months; Dapsone 100mg daily for 6 months**
 - C. Rifampicin 600mg once a month for 2 years; Dapsone 100mg daily for 2 years; Clofazimine 50mg daily for 2 years
 - D. Rifampicin 600mg once a month for 6 months; Dapsone 100mg daily for 6 months; Clofazimine 50mg daily for 6 months

Robbins 7th edition p. 387 - 388

71. A child presents with an array of macules, papules, vesicles, and bullae, reddish, with pale eroded center involving the extremities, lips and oral mucosa in a symmetric pattern. There was intake of penicillin and sulfonamides for urinary tract infection. The patient most likely has:
- A. **erythema multiforme**
 - B. psoriasis
 - C. lichen planus
 - D. porphyria

Robbins 7th edition p. 1255 - 1256

Nervous System

72. Most common primary malignant brain tumor:
- A. **Medulloblastoma**
 - B. glioblastoma multiforme
 - C. Ganglioneuroma
 - D. ependymoma

Robbins 7th edition p. 1407

73. Histologic criteria for glioblastoma multiforme:
- A. vascular endothelial proliferation
 - B. anaplasia
 - C. **both A & B are correct**
 - D. neither A nor B is correct

Robbins 7th edition p. 1401 - 1402

74. Medulloblastoma most frequently occurs in:
- A. age 60 and above
 - B. middle adulthood
 - C. **children & young adults**
 - D. no age predilection is observed

Robbins 7th edition p. 1407

75. Tuberculoma in children frequently occurs in:
- A. Supratentorial
 - B. Infratentorial
 - C. **Posterior fossa**
 - D. Transtentorial

Robbins 7th edition p. 1372

CHOOSE THE BEST ANSWER:

_____ 1. Which cell adaptation is achieved by decreasing cellular activity and reducing number and size of cellular organelles?

- A. **Atrophy**
- B. Hyperplasia
- C. Hypertrophy
- D. Metaplasia

_____ 2. In hypertrophy, at what point of the cell cycle is blocked?

A. **S to G₀** B. S C. G₀ to G₁ D. M to G₀

_____ 3. Which mechanism explains the initial reduction in size of an organ undergoing atrophy?

A. Apoptosis B. Autolysis C. **Autophagy of organelles** D. Extrusion of organelles

_____ 4. In hyperplasia of the skin, which stratum enters the cell cycle?

A. **Basale** B. Granulosum C. Lucidum D. Spinosum

_____ 5. Which of the following substances disrupt the steady state and causes cell swelling?

A. Calcium B. Chloride C. Potassium D. **Sodium**

_____ 6. Accumulation of lactic acid due to anoxia stops the synthesis of proteins by disrupting which cellular structure?

A. Cell membrane C. Mitochondrial DNA
B. Endoplasmic reticulum D. **Nuclear DNA**

_____ 7. Abscess of the liver is a form of which type of necrosis?

A. Caseous B. Coagulative C. Gangrenous D. **Liquefactive**

_____ 8. Which facilitates the degradation of denatured protein that is beyond repair to prevent further injury to the cell?

A. Caspases B. Chaperones C. Laminin D. **Ubiquitin**

_____ 9. Transplantation of organs between two identical twins is called:

A. Allograft B. Autograft C. **Isograft** D. Xenograft

_____ 10. Which of the following is an essential component of neoplasia?

A. **Autonomic growth** C. Large mass
B. Excessive proliferation of cells D. Rapid growth

_____ 11. The deposition of calcium salts and other mineral salts in vital tissue that reflects derangement in calcium metabolism and hypercalcemia is called:

A. Apoptotic calcification C. Gangrenous calcification
B. Dystrophic calcification D. **Metastatic calcification**

_____ 12. Morphologically, a malignant tumor is poorly differentiated when there is:

A. Markedly hyperchromatic nuclei C. Total lost of normal function of cells
B. **Poor resemblance to cell of origin** D. Very high nucleo-cytoplasmic ratio

_____ 13. Which of the following is a definite sign of malignancy?

A. Compression of adjacent structures C. **Metastasis**
B. Infiltrative growth D. Vascular invasion

_____ 14. Ras oncogene qualitatively changes function of proto-oncogene through which form of mutation?

A. Deletion B. Gene amplification C. **Point mutation** D. Translocation

_____ 15. In the TNM staging system, M stands for which of the following?

A. **Metastasis to distant sites** C. Probable mortality
B. Probable morbidity D. Regional lymph node metastasis

_____ 16. Which of the following increases the cell's ability to adapt and survive prolonged environmental changes?

A. Anaerobic respiration C. **Subdivision and multiplication**
B. Entering the cell cycle D. Synthesis of growth factor receptors

- _____ 17. Which is the unique characteristic of innate immune response?
- A. Macrophages play a dominant role
 - B. Main cellular components are the T-lymphocytes
 - C. Main humoral components are the interferons
 - D. **Memory cells are produced**
- _____ 18. The repair component of healing involves principally which of the following?
- A. **Formation of supporting connective tissue**
 - B. Regeneration of parenchymal cells
 - C. Removal of cellular debris
 - D. Synthesis of basement membrane
- _____ 19. In acute inflammation, scar formation is primarily due to the presence of:
- A. Antigen that is not readily digested
 - B. Infection
 - C. **Large areas of necrosis and exudate formation**
 - D. Oxygen deprivation
- _____ 20. The formation of giant cells in a granulomatous inflammation is for the purpose of:
- A. Acquiring faster amoeboid movement to run after the offending agent
 - B. Acquiring greater capability for phagocytosis
 - C. **Forming a barrier around the offending agent**
 - D. Presenting more efficiently the antigen-MHC complex
- _____ 21. Which statement best expresses the concept of chronic inflammation?
- A. Acquired immune response
 - B. Inflammatory response following acute inflammation
 - C. **Persistence of stimulus with prolonged inflammation and repair**
 - D. Result of a failed acute inflammatory response
- _____ 22. In innate immune response, the antiviral activity of interferon reduces the synthesis of:
- A. Host and viral DNA
 - B. **Host and viral mRNA**
 - C. Host proteins in the ribosomes
 - D. Viral cell membrane proteins
- _____ 23. The ultimate goal of homeostasis in a persistently changing interstitial milieu is to:
- A. Induce cell division
 - B. Limit entry and exit of substances into the cytosol
 - C. **Maintain constancy in the cytosol to ensure physiologic function**
 - D. Remove cells that cannot adapt
- _____ 24. Aging causes cell damage and death through which mechanism?
- A. Accumulation of intracellular calcium
 - B. Increasing ligands for Fas or death receptor
 - C. Mutation of nuclear DNA
 - D. **Production of oxygen-derived free radicals**
- _____ 25. The pathogenesis of coagulation necrosis is:
- A. Action of powerful proteolytic enzymes from lysosomes and inflammatory cells
 - B. Activation of the Fas or death receptor
 - C. **Inactivation of autolytic or intracellular enzymes and dehydration without cell decomposition**
 - D. Rapid entry of water and calcium with saponification of cellular contents
- _____ 26. Which of the following best describes dysplasia in the context of biological growth?
- A. Cells that lost ability to enter the G₀ phase of cell cycle and are perpetually in the cycle
 - B. **Loss of differentiation and/or maturation of increasing number of cells**
 - C. Loss of function of increasing number of fully differentiated cells
 - D. Malignant cells that already possess invasive capabilities but are still in the resting phase of the cell cycle

_____ 27. Grave's disease is caused by which of the following immunologic reactions?

- A. **Activation of natural killer cells due to complement fixation on the follicular cells**
- B. Destruction of follicles by autoantibodies against thyroglobulin
- C. Destruction of follicles by Tc lymphocytes and subsequent excessive release of thyroid hormones
- D. Excessive production of IgG thyroid-stimulating antibodies due to defect in the T_s lymphocytes

_____ 28. Which is the initial step in transudate formation?

- A. **Decreased plasma oncotic pressure**
- B. **Increased hydrostatic pressure**
- C. **Increased interstitial osmotic pressure**
- D. **Increased vascular permeability**

_____ 29. The key mechanism of apoptosis is:

- A. Cessation of mRNA synthesis
- B. Coiling of DNA chromatin
- C. **DNA fragmentation by endonuclease activation**
- D. Non-specific degradation & random DNA cleavage

_____ 30. Which of the following makes homeostasis possible in the body systems?

- A. Internal environment always constant
- B. **Physiologic feedback mechanism**
- C. Tendency of body system to be in equilibrium
- D. Tendency of body system to be in steady state

_____ 31. Which is the mechanism by which an infectious agent may trigger an autoimmune disease?

- A. **Infectious agent has a similar antigenic structure as self-antigen and the resulting immune response cross-reacts with self-antigen.**
- B. Infectious agent triggers premature release of T-lymphocytes from the thymus still possessing receptors to self-antigens
- C. Infectious agent triggers macrophages to randomly present antigens to the T-lymphocytes and by chance present an antigen that is similar to self-antigen.
- D. Infectious agent suppresses the suppressor T-lymphocytes thus giving the T-helper lymphocyte the "freedom" to react to any antigen including self-antigen.

_____ 32. A Type I hypersensitivity reaction due to the intake of an antibiotic can immediately kill a person because of:

- A. Cellular swelling of the lining epithelium with paralysis of the cilia
- B. Constriction due to edema of the interstitial tissue
- C. Necrosis and desquamation of the lining epithelium
- D. **Spasm of the smooth muscles and increased mucus gland secretion**

_____ 33. The point of irreversibility of cell damage is evident ultrastructurally by the presence of which of the following?

- A. Marked swelling of mitochondria and clumping of mitochondrial DNA
- B. **Numerous fractures and breakups of membranes of cell and saccular organelles**
- C. Polyribosome complexes dispersed into single ribosome
- D. Tight coiling of nuclear DNA threads

_____ 34. In an injured liver, growth factors ultimately cause liver cells to:

- A. Deactivate the cyclin-dependent kinase complexes thus shortening the cell cycle so that more cells are produced within a shorter time
- B. Deactivate the p53 suppressor gene so that no delay in DNA synthesis occurs
- C. **Enter and complete the cell cycle**
- D. Grow in size by increasing the cytoplasmic organelles

_____ 35. Soluble factor (e.g. TNF α) released by inflammatory and tumor cells are believed to cause cancer cachexia through which of the following mechanisms?

- A. Divert TP of normal cells to meet increased energy needs of tumor cells
- B. Increase tumor needs for essential nutrients at the expense of normal cells
- C. **Interfere with normal cell metabolism and metabolism of essential nutrients**
- D. Suppress desire for food by acting on the pituitary

_____ 36. In the vascular phase of acute inflammation, the interstitial osmotic pressure progressively increases due to the increasing amount of:
A. Lymphatic flow resulting in reduced interstitial fluid
B. Neutrophils
C. **Plasma proteins**
D. Proteinaceous debris from dead bacteria

_____ 37. In an acquired immune response to a specific antigen, the reaction to a second exposure usually takes a much shorter time compared to the first exposure because of which of the following?
A. After initial exposure, all T-lymphocytes develop receptors to the antigen and are ready to react to a second exposure
B. **Memory T lymphocytes committed to that antigen are already present**
C. Memory T-lymphocytes continue to recruit uncommitted T-lymphocytes even in the absence of the antigen
D. Recruitment of uncommitted T-lymphocytes is faster in the second exposure

_____ 38. The difficulty in producing an effective vaccine against HIV is due to which of the following?
A. **The frequent enzymatic errors in transcription, which make copies of the virus' RNA, results in different strains**
B. The exact structure of the HIV has not been determined yet
E. For some unknown reasons, Th lymphocytes do not have the receptors for this virus, and so, cannot be activated to initiate an immune response
F. It is difficult to isolate the antigen of an RNA virus

_____ 39. Patients on anti-cancer chemotherapy are highly susceptible to infections because of:
A. **Marked diminution in the number of cells of the innate and acquired immune response**
B. Susceptibility of liver to drug injury resulting in diminished complement production
C. Toxicity of the drugs causes the neutrophils to lose its phagocytic activity
D. Toxicity of the drugs impairs the production of MHC by macrophages

_____ 40. Coagulation necrosis can be seen in some types of bacterial and fungal infection when there is:
A. **Growth and multiplication of the organism in the blood resulting in obstruction to blood flow**
B. Marked edema formation resulting in the compression of arterioles
C. Production of large amount of toxins and enzymes by the microorganism resulting in denaturation of intracellular proteins
D. Suppuration resulting in the destruction of blood vessels

_____ 41. The basal cell changes seen in reflux esophagitis is an example of this adaptive change:
A. Atrophy B. Hyperplasia C. Hypertrophy D. **Metaplasia**

_____ 42. The formation of esophageal varices secondary to cirrhosis is primarily due to:
A. Active congestion B. **Passive congestion** C. Thrombosis D. Embolism

_____ 43. In megacolon, the aganglionic segment is in which portion:
A. Transverse colon
B. Distended portion
C. **Non-distended distal segment**
D. Non-distended segment proximal to the distension

_____ 44. The lesion of cholera is at most which of the following:
A. **Congestion and edema** B. Erosions C. Hemorrhage D. Suppurative inflammation

_____ 45. The reason the typhoid lesion is usually seen in the ileum is that:
A. Absorption is greatest in this segment

B. Intestinal contents is less liquid and alkaline, thus favoring bacterial growth

C. It is the longest segment

D. Larger amount of lymphoid tissue organized into nodules

_____ 46. The inflammatory reaction seen in typhoid ileitis is composed mostly of:

- A. Eosinophils B. **Mononuclear cells** C. Neutrophils D. Plasma cells

_____ 47. The ulcers of amebiasis are initially flask-shaped because:

- A. Fibrosis causes the upper portion of the mucosa adjacent to the ulcer to slowly approximate each other over the ulcer
B. Ischemia causes the lower third of the mucosa to die first
C. **Trophozoites penetrate the mucosa but do not penetrate the muscularis propria**
D. Upper third of the mucosa adjacent to the ulcer regenerates above the ulcer

_____ 48. The essence of adenomas of the gastrointestinal tract is:

- A. Disorganized benign glands C. Hamartomatous growth
B. **Dysplastic glandular epithelium** D. **Polypoid mucosal outgrowth**

_____ 49. Colonic carcinoma is most common at this portion:

- A. Cecum B. Ascending C. Descending D. **Recto-sigmoid**

_____ 50. The prognosis of colonic carcinoma is more dependent on:

- A. Age of patient B. Grade of tumor C. Location D. **Stage**

_____ 51. The inflammatory lesion seen in acute appendicitis is usually initiated by:

- A. Bacterial infection C. Ischemia
B. Fecal material within the lumen D. **Luminal obstruction**

_____ 52. The thrombosis seen in the veins of hemorrhoids is primarily due to this mechanism:

- A. Accumulation of clotting factors C. **Endothelial injury**
B. Deficiency of plasmin D. Localized deficiency of Protein C and S

_____ 53. In infective endocarditis, organisms of low virulence that cause infection in a previously abnormal, deformed valves is classified as:

- A. Acute B. Chronic C. Necrotizing D. **Subacute**

_____ 54. A right-to-left shunt best exemplified by which of the following?

- A. ASD B. PDA C. **TOF** D. VSD

_____ 55. Basal cell carcinoma is characterized by which of the following?

- A. Aggressive tumor
B. Early metastasis hematogenous spread
C. **Locally invasive and rarely metastasizing tumor**
D. Presence of intercellular bridges and keratohyalin

_____ 56. The most common primary cancer of the bone is:

- A. Chondrosarcoma C. Metastatic adneocarcinoma
B. Ewing's sarcoma D. **Osteosarcoma**

_____ 57. A 10 month old infant presented with a vaginal mass. What is the most likely diagnosis?

- A. Fibrosarcoma C. **Rhabdomyosarcoma**
B. Liposarcoma D. Synovial carcinoma

_____ 58. All soft tissue tumors are positive for:

- A. Cytokeratin B. Desmin C. S-100 D. **Vimentin**

_____ 59. Which is a characteristic finding in alcoholic liver disease?

- A. Alpha fetoprotein C. HbsAg

B. Ground glass hepatocytes

D. Mallory bodies

____ 60. A 24 yr old male, hours after excessive food and alcohol intake, was brought to the ER. He was moaning, writhing in pain, and holding his abdomen. Serum amylase is elevated. If autopsy is done, which organ will most likely show necrosis?
A. Liver B. **Pancreas** C. Spleen D. Stomach

____ 61. Redistribution of body fat, "moon face", dorsal "buffalo hump" and thin extremities suggests:
A. Addison's disease C. **Cushing's syndrome**
B. Conn's syndrome D. Sipple's syndrome

____ 62. Crescents formation seen in renal biopsy strongly suggests:
A. Membranous glomerulonephritis C. Poststreptococcal glomerulonephritis
B. Minimal change disease D. **Rapidly progressive glomerulonephritis**

____ 63. A 28 y/o woman presented with fever, dysuria, urinary frequency and flank tenderness. Urinalysis showed abundant WBC and bacteria. The most likely etiology is:
A. **E. coli** B. *H. influenzae* C. *N. gonorrhoea* D. *Proteus vulgaris*

____ 64. Coarse asymmetric renal corticomedullary scarring, deformity of the renal pelvis and calyces, atrophic tubules with eosinophilic casts all suggest:
A. Acute pyelonephritis C. Nephritic syndrome
B. **Chronic pyelonephritis** D. Nephrotic syndrome

____ 65. A 19 yr. old female student developed acute pharyngitis. Throat culture revealed *S. pyogenes*. Which of the following is likely to be elevated?
A. Basophils B. Eosinophils C. Lymphocytes D. **Neutrophils**

____ 66. Intestinal intussusception in older children and in adults is most likely associated with:
A. **Adenomatous polyp** B. Cholera C. Crohn's disease D. Typhoid ileitis

____ 67. Which of the following has highest risk of developing colorectal carcinoma?
A. **Familial adenomatous polyposis** C. Peutz-Jeghers syndrome
B. Hirschprung's disease D. Ulcerative colitis

____ 68. The erosions associated with acute gastritis is seen in this layer/s of the stomach:
A. **Mucosa** C. Mucosa, submucosa, and inner smooth muscle layer
B. Mucosa and submucosa D. All layers including the outer smooth muscle layer

____ 69. The most common type of carcinoma associated with Barrett's esophagus is:
A. **Adenocarcinoma** C. Leiomyosarcoma
B. Gastrointestinal stromal tumor D. Squamous carcinoma

____ 70. Which of the following is an autosomal deletion disorder?
A. **Cri du chat syndrome** C. Edward's syndrome
B. Down's syndrome D. Patau's syndrome

____ 71. The likelihood that a clinical condition will occur when a particular genotype is present:
A. Heterozygosity B. Mosaicism C. **Penetrance** D. Polymorphism

____ 72. In liquefactive necrosis, destruction of the tissue morphology is mainly due to:
A. Bacterial toxins C. **Inflammatory cells**
B. Digestive proteases D. Pancreatic lipases

____ 73. Which of the following morphologic changes is irreversible?

- A. Dysplasia
Neoplasia
- B. Hyperplasia
- C. Metaplasia
- D.

- ___ 74. In which condition will caseation necrosis most likely occur?
 A. Arterial blood supply interrupted by thrombus
 B. **Infected with Mycobacterium tuberculosis**
 C. Infected with Pseudomonas aeruginosa
 D. Lost innervation
- ___ 75. Degradation of DNA to nucleosome-sized fragments is characteristic of:
 A. **Apoptosis** B. Dysplasia C. Liquefactive necrosis D. Metaplasia
- ___ 76. Invasive ductal carcinoma in the upper outer quadrant of the right breast will likely metastasize to:
 A. Brain B. Contralateral breast C. **Ipsilateral axillary lymph node** D. Lungs
- ___ 77. In females, most cancer deaths are caused by malignancy in the :
 A. **Breast** B. Colorectal segment C. Lung D. Uterus
- ___ 78. Most likely condition that a histologically benign neoplasms may be fatal:
 A. **Cause extensive bleeding** C. Fail to invoke immune response
 B. Multifocal lesions D. Transform into cancer
- ___ 79. In the Philippines, the most common form of immunodeficiency is:
 A. Ataxia-Telangiectasia C. Severe combined immunodeficiency
 B. **Chronic granulomatous disease** D. X-linked agammaglobulinemia
- ___ 80. Anesthetic accident resulting in loss of vascular tone and peripheral pooling of blood leads to which type of shock:
 A. Cardiogenic B. Hypovolemic C. **Neurogenic** D. Septic
- ___ 81. Which is the initial mechanism of transudate formation?
 A. Decreased plasma oncotic pressure C. Increased interstitial osmotic pressure
 B. Increased hydrostatic pressure D. **Increased vascular permeability**
- ___ 82. In acute congestive heart failure, edema of the lower extremities is due to:
 A. Decreased oncotic pressure C. Na⁺ accumulation
 B. **Increased hydrostatic pressure** D. Pump failure
- ___ 83. Which of the following is a reflection of left heart failure?
 A. Hepatomegaly C. **Pulmonary edema**
 B. Pitting edema D. Splenomegaly
- ___ 84. Ischemic injury to the myocardium lasting for 15 minutes leads to:
 A. **Coagulative necrosis** B. Fat necrosis C. Gangrene D. Liquefactive necrosis
- ___ 85. The erosion of progressive pulmonary tuberculous cavitary lesions into nearby pulmonary blood vessels would present clinically as:
 A. dyspnea B. **hematemesis** C. hemoptysis D. high grade fever
- ___ 86. The mechanism of adult respiratory distress syndrome is:

- A. Deficiency in pulmonary surfactant
 B. **Diffuse damage to alveolar capillary wall**
 C. Inflammatory reaction to
 D. Increased hydrostatic pressure

___ 87. In the Philippines, the most common source of infection with pulmonary tuberculosis:

- A. Children with undiagnosed primary infection
 B. Patients with miliary tuberculosis
 C. **Patients with undiagnosed cavitory pulmonary tuberculosis (PTB)**
 D. Patients with diagnosed cavitory PTB

___ 88. Which type of radiation would be most harmful?

- A. Alpha particles B. Beta particles C. **Gamma rays** D. X rays

___ 89. Exposure to ultraviolet light is most important in development of:

- A. **Basal cell carcinoma of the skin** C. Papillary carcinoma of the thyroid
 B. Squamous cell carcinoma of the lung D. Acute myelogenous leukemia

___ 90. Type of lung carcinoma that strongly correlates with smoking:

- A. Adenocarcinoma C. Mucinous tumor
 B. Bronchoalveolar carcinoma D. **Squamous cell carcinoma**

___ 91. Which of the following best describes invasive ductal carcinoma of the breast?

- A. **Aggressive, highly metastasizing**
 B. Gelatinous consistency
 C. Most common cancer among males and females
 D. Predominantly hematogenous spread

___ 92. Which contributes to the pathogenesis of malignant melanoma, basal cell carcinoma and squamous cell carcinoma of the skin?

- A. Previous irradiation C. Prolonged cosmetic use
 B. Previous trauma D. **Sun exposure**

___ 93. In nephrotic syndrome, the edema is likely due to:

- A. Inappropriate sodium and water absorption
 A. Increased solute resulting in water retention
 B. Renal insufficiency with fluid accumulation
 C. **Urinary protein loss due to glomerular injury**

___ 94. Which of the following relationships is a MISMATCHED PAIR?

- A. Colonic adenocarcinoma: Carcinoembryonic antigen
 B. **Prostatic adenocarcinoma: Human chorionic gonadotropin**
 C. Pure testicular seminoma: Placental alkaline phosphatase
 D. Small cell cancer of lung: Neuron – specific enolase (NSE)

___ 95. In severe hepatic disease, edema results primarily from:

- A. Hypocalcemia C. **Hypoproteinemia**
 B. Hyponatremia D. Hypergammaglobulinemia

___ 96. The most common pathology in the gallbladder is:

- A. Adenoma B. **Chronic inflammation** C. Fat accumulation D. Stone formation

___ 97. Most common cause of subarachnoid bleed?

- A. A-V malformation B. **Berry aneurysm** C. Hemangioma D. Microaneurysm

___ 98. Sarcomas usually metastasize via:

- A. **Bloodstream** B. Local extension C. Lymphatics D. Perineural invasion

___ 99. In rabies infection, where in the brain is Negri body located?

- A. Blood vessel B. Dura C. Glial cells D. **Neuron**

- ____ 100. Physiologic atrophy of the brain in an 82 year old male is mainly due to:
 A. Denervation atrophy C. Loss of endocrine stimulation
 B. Disuse atrophy D. **Senile atrophy**

answer	#	Question	page
B	1	The central factor in the pathogenesis of irreversible cell injury would be A. mitochondrial dysfunction B. membrane damage C. cytoskeletal abnormalities D. free radical formation	9
C	2	Which would be the consequence(s) of the occurrence of mitochondrial permeability transition ? A. promotes ATP production B. increase in the number of mitochondria C. cell death D. A,B,C	12
B	3	The presence of chalky, white areas in the adipose tissue in the abdominal cavity would be interpreted to be associated with: A. activation of pancreatic amylases into the peritoneal cavity B. combination of fatty acids released with calcium C. histologic reaction of numerous lipophages D. A, B, C	18
A	4	The ultimate mechanism of sudden cardiac death is: A. lethal arrhythmia B. ischemic cardiomyopathy C. dilated cardiomyopathy D. aortic valve stenosis	564
D	5	Myxomatous degeneration of the mitral valve is associated with: A. prolapse of the mitral valve into the left ventricle B. ischemic areas in the left atrial septum C. fusion of the mitral commissures D. complication of mitral insufficiency	564
A	8	In peripartum cardiomyopathy, the systolic dysfunction of the patient is associated or explained by: A. large and flabby heart B. massive ventricular hypertrophy without dilatation C. impaired ventricular filling during diastole D. asymmetric septal hypertrophy	580
C	9	The most characteristic histologic lesion of acute pancreatitis A. Neutrophilic infiltration B. Hemorrhage C. Fat necrosis D. Necrosis of parenchyma	905
A	10	Most important environmental factor for pancreatic cancer A. Smoking B. Hyperlipoproteinemia C. Alcoholism D. Viral infection	910
C	11	Ritter disease is also known as A. gas gangrene B. Hidradenitis suppurativa C. Staphylococcal scalded skin syndrome D. Quinsy sore throat	367
B	12	Elephantiasis is associated with	398

- A. Onchocerca volvulus
 B. Wuchereria bancrofti
 C. Ancylostoma duodenale
 D. Any of the above
- D 13 Fungi within small cysts in the Virchow-Robin perivascular space is characteristic of 380
 A. Mucor
 B. Aspergillus
 C. Pneumocystis carinii
 D. Cryptococcus neoformans
- D 14 Differential diagnosis of a child who presents with fever 389
 A. malaria 383
 B. dengue 373
 C. poliovirus infection
 D. Any of the above
- A 15 Consequence of lead exposure 422
 A. memory loss
 B. lung fibrosis
 C. asthma
 D. cancer of nasal cavity
- A 16 Indoor air pollutant 418
 A. carbon monoxide
 B. sulfur dioxide
 C. ozone
 D. acid aerosol
- D 17 A patient with hypochromic, microcytic anemia is deficient in 452
 A. zinc
 B. copper
 C. selenium
 D. iron
- C 18 A child came in at the out-patient department because of generalized edema accompanied by easily pluckable hair, listlessness, and loss of appetite. Most likely she is suffering from 438
 A. anorexia
 B. marasmus
 C. kwashiorkor
 D. bulimia
- C 19 Traveler's diarrhea is associated with what organism 808
 A. Salmonella typhi
 B. Campylobacter jejuni
 C. Escherichia coli
 D. Shigella
- A 20 Astler-Coller classification when the malignant glands in the colon are limited to the mucosa 835
 A. A1
 B. A2
 C. B
 D. None of the above
- B 21 Grossly appears as a blind pouch on the antimesenteric side of the small bowel 805
 A. Hirschprung disease
 B. Meckel diverticulum
 C. Celiac sprue
 D. None of the above
- C 22 Information to elicit in the clinical history of a patient with 799

- gastric carcinoma
 A. fondness for barbecued foods
 B. alcoholism
 C. presence of relatives with gastric carcinoma
 D. Any of the above
- D 23 Alcoholic patients may manifest
 A. longitudinal tears in the esophagogastric junction 779
 B. as squamous cell carcinoma of the esophagus 783
 C. as acute gastritis 789
 D. Any of the above
- C 24 Schiller-Duval body is associated 1076
 A. thecoma-fibroma
 B. dysgerminoma
 C. yolk sac tumor
 D. granulosa-theca tumor
- D 25 Which is an ovarian cyst?
 A. serous cyst 1069
 B. follicular cyst 1066
 C. luteal cyst 1066
 D. Any of the above
- B 26 Differential diagnosis of a patient with sessile masses projecting into the endometrial cavity 1058
 A. papillary hidradenoma
 B. polyp
 C. lichen sclerosus
 D. Any of the above
- B 27 A 30 year old female complained of loss of consciousness. History revealed that the episodes were precipitated by fasting. Laboratory exam at the time of attack showed glucose level at less than 50mg/dl. This is usually associated with 926
 A. Gastrinoma
 B. Insulinoma
 C. Glucagonoma
 D. Somatostatinoma
- D 29 A newborn infant was born with a hemolytic disease due to RH incompatibility. What is the most serious threat in this disorder. 474
 A. Anasarca
 B. Liver Cirrhosis
 C. Pancreatic insufficiency
 D. Kernicterus
- B 30 The most characteristic renal finding in diabetes mellitus 923
 A. Hyaline arteriosclerosis
 B. Nodular glomerulosclerosis
 C. Acute pyelonephritis
 D. Diffuse glomerulosclerosis
- A 31 Most frequent type of hyperfunctioning pituitary adenoma 1125
 A. Lactotroph adenoma
 B. Corticotroph adenoma
 C. Somatotroph adenoma
 D. Gonadotroph adenoma
- C 32 A 23 year old female complained of sore throat, fever and malaise. PE revealed tender, enlarged thyroid gland. Lab exam showed increased T4 and T3, decreased TSH. The most likely diagnosis is 1135
 A. Graves disease
 B. Hashimoto thyroiditis

- C. De Quervain thyroiditis
- D. Reidel thyroiditis

- B 33 The most characteristic microscopic finding of Retinoblastoma is: 1373
 A. Homer Wright rosettes
 B. Flexner Wintersteiner rosette
 C. Blastema cells
 D. Rosenthal fibers
- A 34 Microscopic features of this lesion in the urinary bladder revealed infiltration with large foamy macrophages with multinucleated giant cells interspersed with lymphocytes. Michaelis Gutmann bodies are present 1002
 A. Malakoplakia
 B. Tuberculosis
 C. Cystitis glandularis
 D. Acute suppurative cystitis
- B 35 Which of the following is TRUE of Pleomorphic adenoma 770
 A. These are also called Adenolymphomas
 B. There are the most common tumors of the salivary gland
 C. These are highly malignant tumors
 D. Occurs much more often in males
- C 36 This is a highly vascular tumor of the nasopharyngeal area that occur almost exclusively in adolescent males. It has a benign nature but has tendency to bleed profusely during surgery. 877
 A. Neuroblastoma
 B. Squamous cell carcinoma
 C. Angiofibroma
 D. Inverted papilloma
- A 37 Step/s in phagocytosis enhanced by opsonins: 62
 A. Recognition & attachment
 B. Engulfment
 C. Killing or degradation
 D. A & B only
- D 38 Abnormal acquired leukocyte chemotaxis is/are seen in: 65
 A. Anemia
 B. Sepsis
 C. Diabetes mellitus
 D. B & C only
- C 39 Distinctive pattern of inflammation seen in tuberculosis 83
 A. Serous
 B. Suppurative
 C. Fibrinous
 D. Chronic granulomatous
- B 40 The biologic behaviour of malignant melanoma is determined by: 1179
 A. Radial growth phase
 B. Nature & extent of vertical growth phase
 C. Degree of pigmentation
 D. All
- A 41 The most commonly accepted cause of squamous cell carcinoma of the skin is: 1185
 A. Exposure to ultraviolet light
 B. Exposure to arsenic
 C. Cutaneous scars
 D. PUVA
- B 42 The detection of this antibody is specific for systemic sclerosis : 227
 A. Anti-centromere antibody
 B. Anti-Scl 70

- C. Anti-DsDNA
D. Anti-Sm
- C 43 The receptor used by the HIV strain that is effective in transmitting the infection : 240
A. CCR4
B. CXCR4
C. CCR5
D. CXCR5
- B 44 Blood transfusion reaction is an example of which mechanism of hypersensitivity reaction ? 199-200
A. Type IV - delayed hypersensitivity
B. Type II - complement dependent
C. Type II - Ab-mediated cellular dysfunction
D. Type III - immune complex mediated
- C 45 True of clonal anergy : 213-214
A. Fas-FasL engagement leading to apoptosis of activated T-cells
B. clonal deletion of self-reactive T-cells during maturation
C. Ag is presented by cells not bearing the proper ligand resulting to a negative signal
D. suppressor T-cells down regulating the other T-cells
- C 46 A 53 y/o G10P10(10-0-0-10) female underwent transplantation of the right kidney. The donor kidney was taken from her husband. Fifteen minutes after transplantation, the transplanted kidney become cyanotic, mottled and flaccid. What is the mechanism of rejection? 207-208
A. direct cell mediated reaction
B. indirect cell mediated reaction
C. Ab-mediated reaction
D. there is no graft rejection
- D 47 The true neoplastic element in Hodgkin disease : 670
A. eosinophil
B. smudge cells
C. plasma cells
D. Reed-sternberg cells
- C 48 Left enlarged axillary lymph node from a 45 y/o female with left breast carcinoma would likely show : 649-650
A. paracortical hyperplasia
B. follicular hyperplasia
C. sinus histiocytosis
D. histologically normal
- A 49 Incision biopsy of a submandibular mass of a 6 y/o African boy revealed diffuse infiltrates of intermediate-sized lymphoid cells with "starry sky" pattern. Tumor cells express CD19, CD10 and surface IgM. Give the probable diagnosis : 662
A. Burkitt's lymphoma
B. small lymphocytic lymphoma
C. acute lymphoblastic lymphoma
D. follicular lymphoma
- B 50 Hypochromic Microcytic RBC is seen in : H-619
A. Vitamin B12 deficiency
B. Iron deficiency anemia
C. Sickle cell disease
D. Hereditary spherocytosis
- D 51 Sucrose hemolysis test result in a patient with paroxysmal nocturnal hemoglobinuria : H-635
A. no hemolysis

- B. <5% hemolysis
C. 5-10% hemolysis
D. >10% hemolysis
- A 52 A stillborn infant with severe edema, marked anemia and hepatosplenomegaly shows large quantities of Hb Bart's. True of this condition : H-647
A. complete absence of alpha chains
B. complete absence of beta chains
C. large quantities of Hb A
D. small quantities of Hb F
- B 53 Angioblasts are involved in: 103
A. angiogenesis
B. vasculogenesis
C. granulation tissue formation
D. tissue remodeling
- C 54 Vitamin C deficiency retards wound healing because: 110
A. infection persists
B. wound contraction is inhibited
C. collagen synthesis is inhibited
D. exuberant granulation occurs
- A 55 Increased apoptotic activity will: 90
A. decrease the cell population
B. increase cell differentiation
C. decrease cell proliferation
D. decrease cell death
- D 56 Grossly, a breast tumor is soft with an appearance of pale gray-blue gelatin. Microscopically, large lobes of lightly staining mucin with floating neoplastic cells are seen. What is your diagnosis? 1112
A. Scirous carcinoma
B. Tubular carcinoma
C. Medullary carcinoma
D. Colloid carcinoma
- B 57 Which is a common benign lesion in male breast? 1117
A. fibroadenoma
B. gynecomastia
C. fibrocystic change
D. tubular adenoma
- B 58 Which is TRUE in a patient diagnosed with invasive lobular carcinoma? 1111
A. the tumor is always unilateral
B. tumor frequently metastasize to the CSF
C. tumor cells are confined to the lobule
D. prominent lymphoplasmacytic infiltration
- C 59 What is the most common complaints of lung cancer patients? 745
A. weight loss
B. chest pain
C. cough
D. dyspnea
- B 60 A female patient with no previous smoking history is diagnosed to have bronchogenic carcinoma, what is the most probable histologic type? 745
A. oat cell carcinoma
B. adenocarcinoma
C. squamous cell carcinoma
D. large cell carcinoma
- C 61 A patient presented with enophthalmos, ptosis, & miosis. He was previously diagnosed with lung cancer. Where is the most probable site of the tumor? 747
A. lower lobe

- B. middle lobe
- C. apex
- D. whole lung

C	62	A malignant lung tumor is 3 cm in size without pleural involvement & has ipsilateral hilar node involvement, what is the stage of the tumor? A. Ia B. Ib C. IIa D. IIb	745
D	63	Patchy consolidation of the lungs & the presence of suppurative exudate filling up the bronchi, bronchioles, & adjacent alveolar spaces are characteristics seen in: A. tuberculosis B. lobar pneumonia C. primary atypical pneumonia D. bronchopneumonia	721
B	64	The associated molecular change in the evolution of colorectal tumor from late adenoma to carcinoma is loss of A. APC gene chromosome 5q B. p53 chromosome 17p C. tumor suppressor gene chromosome 18q D. ras gene chromosome 12p	296
B	65	Migration of tumor cells in invasion of extracellular matrix is facilitated by A. metalloproteinases B. thymosin B15 C. cadherin D. beta catenin	302
A	66	High risk HPV involve in cervical carcinoma A. HPV 16 B. HPV 6 C. HPV 11 D. HPV 4	311
D	67	Tumor suppressor gene involved in breast carcinoma A. p53 B. WT1 C. APC D. BRCA1	286
C	68	Tumor composed of more than one neoplastic cells type from more than one germ layer A. pleomorphic adenoma B. fibroadenoma C. Mature cystic teratoma D. leiomyoma	261
A	69	Enzyme deficiency in Tay Sacch's disease A. Hexosaminidase A B. Sphingomyelinase C. Glucocerebrosidase D. alpha 1-iduronidase	155
D	70	Characteristic clinical manifestation of Von Gierke's disease A. painful cramps B. massive cardiomegaly C. café au lait spots D. hypoglycemia	160
C	71	Most threatening feature of Marfan's syndrome	149

- A. skeletal abnormality
B. ocular findings
C. cardiovascular lesion
D. hyperextensible skin
- C 72 Class III mutation in Familial hypercholesterolemia is a defect in 152
A. transport
B. recycling
C. binding
D. synthesis
- B 75 What is the most characteristic cell found in Rhabdomyoma? 591
A. Epithelioid Histiocyte
B. Spider Cell
C. Mallory Cell
D. Langhan's Giant Cell
- D 76 Associated with little or no production of the 427kD protein called Dystrophin: 1281-1283
A. Duchenne Muscular Dystrophy
B. Myotonic Dystrophy
C. Becker Muscular Dystrophy
D. A and C only
- A 77 A white infarct, in contrast to red infarct, is usually seen in organs which are: 132
A. solid
B. with double blood supply
C. infected
D. previously congested.
- B 78 Patients with left-sided heart failure may develop pulmonary edema because 114-116
of
which of the following mechanisms?
A. increase oncotic pressure
B. increase osmotic pressure
C. vascular permeability
D. sodium retention.
- C 79 A 24 years old male drug abuser developed Subacute bacterial endocarditis 130
involving the mitral valve. The patient later developed a septic pulmonary
infarct.
through a process known as:
A. systemic thromboembolisation
B. pulmonary thromboembolisation
C. paradoxical thromboembolisation
D. bacterial dissemination.
- D 83 A 57 year old seaman was admitted because of dysphagia, sternal pain, 526
dyspnea, and chronic cough of 6 months duration. He was treated for a penile
chancre followed by fever, rashes, and lymphadenopathy 30 years ago.
Most patients with this lesion die of:
A. cardiogenic shock
B. hypovolemic shock
C. sepsis
D. congestive heart failure
- C 84 The most characteristic histologic lesion in the glomeruli of patients with 951-952
Rapidly progressive glomerulonephritis is:
A. focal hyalinosis
B. basement membrane thickening
C. crescent formation
D. hypercellularity.
- C 86 A 28 year old primigravida had hypotensive shock because of postpartum 969-971
hemorrhage. Her urine output ranged from 80 - 200 ml/24 hours. The

basic kidney lesion to explain this decreased urine output among these patients is:

- A. Hemolytic-uremic syndrome
- B. Obstructive uropathy
- C. Acute tubular necrosis
- D. Acute tubulointerstitial nephritis.

- A 88 Histologic findings of markedly enlarged hyperchromatic nuclei, arranged in disorderly fashion with increased mitosis, and confined within the basement membrane of the penile skin is consistent with: 1013
- A. Bowen's disease
 - B. Erythroplasia of Queyrat
 - C. Bowenoid papulosis
 - D. Squamous cell carcinoma.
- B 89 An 8 year old male child was brought to the hospital for testicular enlargement. Pertinent physical examination findings revealed gynecomastia, with pubic and axillary hair and husky voice. The most probable testicular lesion is: 1024
- A. Seminoma
 - B. Leydig cell tumor
 - C. Sertoli cell tumor
 - D. Embryonal cell carcinoma
- D 90 Found in the hippocampus and Purkinje cells of the cerebellum of patients with Alzheimer's Disease 1331
- A. Cowdry bodies
 - B. Negri bodies
 - C. Lewy bodies
 - D. Hirano bodies
- C 91 Characteristic of CNS neoplasia 1343
- A. metastasize early
 - B. majority arise from neurons
 - C. site is more important than grade
 - D. metastatic cancers are uncommon
- D 92 Hydrocephalus may result from 1298-9
- A. tuberculous meningitis
 - B. decreased brain parenchyma
 - C. space occupying lesion in the brain
 - D. all of these
- C 96 Liver cancer seen in young adults without predisposing factors 890-1
- A. cholangiocarcinoma
 - B. angiosarcoma
 - C. fibrolamellar HCC
 - D. hepatic adenoma
- C 98 Mechanism of triglyceride accumulation in malnutrition 39
- A. excessive production
 - B. exogenous accumulation
 - C. defective transport
 - D. decreased enzyme
- C 99 Protein accumulation in cell 41
- A. brown atrophy
 - B. Psammoma bodies
 - C. Russell bodies
 - D. steatosis
- C 100 Most common initial outcome of acute inflammation in Peptic ulcer: 79
- A. Abscess formation
 - B. Healing through fibrosis

- C. Progression to chronic inflammation
- D. Resolution

REFERENCE

Robbins Pathologic Basis of Diseases by Cotran, Kumar, Collins 6th edition
H= Clinical Diagnosis and Management by Laboratory Methods by Henry nineteenth edition

1. Which of the following accumulates in the cytoplasm of liver cells in steatosis:
 - a. Sphingolipids ans. d p. 25
 - b. phospholipids
 - c. cholesterol/cholesterol esters
 - d. triglycerides
2. Chalky-white appearance of necrotic tissues is seen in which of the following:
 - a. caseation necrosis ans. c p. 1092
 - b. coagulation necrosis
 - c. enzymatic fat necrosis
 - d. liquefaction necrosis
3. Obstruction of the blood supply to the brain would lead to which type of necrosis:
 - a. Caseation ans. C p. 138
 - b. coagulation
 - c. liquefaction
 - d. enzymatic fat necrosis
4. What is the cell of origin of the epithelioid cell and the Langhan's giant cell seen in tuberculous lesion:
 - a. Neutrophils ans. B p. 216
 - b. monocyte
 - c. lymphocyte
 - d. plasma cell
5. Adenocarcinoma of the prostate tends to involve initially which of the following lobes of the prostate gland:
 - a. Anterior ans. B p. 1054
 - b. posterior
 - c. lateral
 - d. median
6. A 60 year-old woman presented with postmenopausal bleeding. D and C showed endometrial hyperplasia. Pelvic ultrasound showed a solid mass in the left ovary. Total abdominal hysterectomy and bilateral salpingo-oophorectomy was done. The histopathologic examination of the left ovary would most likely show which of the following:
 - a. Granulose cell tumor ans. A p. 1102
 - b. Mature teratoma
 - c. Mucinous cystadenoma
 - d. Fibroma
7. Marked thrombocytopenia and a DIC-like phenomenon are responsible for the unusually severe bleeding tendency in which of the following:
 - a. Acute lymphocytic leukemia ans. C p. 693
 - b. Acute monocytic leukemia
 - c. Acute myelocytic leukemia
 - d. Acute promyelocytic leukemia
8. Lacunar cells are seen in which of the following:
 - a. Hodgkin's lymphoma ans. a p. 646
 - b. Non-Hodgkin's lymphoma
 - c. Plasma cell dyscrasia
 - d. Langerhans cell histiocytosis

- b. currant jelly clots
 c. both
 d. neither
20. Emboli of major veins of the legs will eventually plug small vessels of which of the following:
 a. pulmonary circulation ans. A p. 136
 b. coronary circulation
 c. cerebral circulation
 d. systemic circulation
21. Which of the following is the most important factor in the development of thrombosis:
 a. Stasis ans. C p. 130
 b. turbulence
 c. endothelial injury
 d. hypercoagulability of blood
22. Which of the following is the substance that is responsible for massive peripheral vasodilatation in sepsis:
 a. Cytokines ans. D p. 72
 b. oxygen-derived free radicals
 c. fibrin degradation products
 d. nitric oxide
23. Movement of leukocytes towards the site of injury is:
 a. Opsonization ans. B p. 56
 b. Chemotaxis
 c. Diapedesis
 d. Transmigration
24. Secondary union is characterized by:
 a. Wound contraction ans. A p. 113
 b. Minimal tissue loss
 c. Death of limited cells
 d. Small defect
25. Cells which act as vehicles in the transport of HIV to the other parts of the body:
 a. Monocytes ans. A p. 248
 b. Neutrophils
 c. Lymphocytes
 d. Plasma cells
26. Diffuse effacement of foot processes is characteristic of:
 a. Idiopathic rapidly progressive glomerulonephritis ans. B p. 981
 b. Lipoid nephrosis
 c. IgA nephropathy
 d. Lupus nephritis
27. Accumulation of cells, in the form of crescents, in the bowman's space is characteristic of which of the following:
 a. Focal segmental glomerulosclerosis ans. C p. 976
 b. Membranous glomerulonephritis
 c. Rapidly progressive glomerulonephritis
 d. Nephritic syndrome
28. Hematuria, oliguria and hypertension indicate involvement of the:
 a. Glomeruli ans. A p. 974
 b. Tubules
 c. Interstitium
 d. Blood vessels
29. Primarily unconjugated hyperbilirubinemia is seen in which of the following:
 a. Viral hepatitis ans. D p. 888
 b. Dubin-Hohnson syndrome
 c. Biliary tract obstruction
 d. Gilbert's syndrome

30. The classic diagnostic features of costovertebral pain, palpable mass and hematuria suggest the presence of which of the following:
a. Renal cell carcinoma ans. A p. 1018
b. Wilm's tumor
c. Urethelial CA of the renalpelvis
d. Urinary bladder CA
31. The most important histopathologic indication of CNS injury is:
a. Rosenthal fibers ans. B p. 1351
b. Gliosis
c. Neuronophagia
d. Corpora amylacea
32. Which of the following markers confer protection and forms the basis for current vaccination strategies:
a. Anti- HBe ans. D p. 894
b. IgM anti HBe
c. IgG anti-HBe
d. Anti HBsAg
33. Persistent infection and chronic hepatitis are hallmarks of which of the following:
a. HBV ans. A p. 891-892
b. HCV
c. Coinfection with HDV and HBV
d. HEV
34. H. pylori is associated with which of the following conditions:
a. Barrett esophagus ans. B p. 817
b. Peptic ulcer
c. Reflux esophagitis
d. Curling's ulcer
35. Variceal dilatation of the anal and perianal plexuses is called:
a. Angiodysplasia ans. B p. 854
b. Hemorrhoids
c. Hemangioma
d. Arteriovenous malformation
36. Which of the following is associated with early cyanosis:
a. Patent duotus arteriosus ans. b p. 575
b. Tetralogy of Fallot
c. Ventricular septal defect
d. Atrial septal defect
37. Most deaths that occur during acute rheumatic fever are caused by which of the following:
a. Streptococcal sepsis ans. c p. 549
b. Pericarditis
c. Myocarditis
d. Endocarditis
38. The following are effects of aging in the heart, EXCEPT:
a. Brown atrophy ans. b p. 519
b. "boot"-shaped heart
c. "sigmoid" septum
d. Lambl's excrescences
39. Which of the following primarily affects the cerebral cortex:
a. Parkinsonism ans. b p. 1329
b. Alzheimer's disease
c. Huntington's disease
d. Friedrich ataxia
40. Most cases of esophageal carcinomas are located in the:
a. Upper third ans. b p. 765

