1. A 70-year-old female with osteoporosis fractures her leg at a location of preexisting abnormality. She reports that the fracture occurred following a minor fall. Which of the following best describes the fracture?
   A. Idiopathic fracture
   B. Iatrogenic fracture
   C. Pathologic fracture
   D. Greenstick fracture

2. A 36-year-old male complains of pain and weakness in the elbow. He reports that he is a warehouse worker and lifts boxes daily. MRI reveals inflammation of the tendon where it attaches to bone. This condition is called:
   A. periosteitis.
   B. pericondylitis.
   C. bursitis.
   D. epicondylitis.

3. After the Boston Marathon, seven runners were admitted to local hospitals with suspected myoglobinuria (rhabdomyolysis). What is the most likely cause of myoglobinuria in these athletes?
   A. Tendon injury
   B. Undiagnosed hypertension
   C. Excessive muscular activity
   D. Undetected cardiac abnormalities

4. A 70-year-old female presents with a hip fracture. She is diagnosed with osteoporosis. This condition is caused by an increase in bone:
   A. density.
   B. formation.
   C. resorption.
   D. mineralization.

5. An 80-year-old male presents with skeletal pain and tenderness, especially in the hips. He is diagnosed with osteomalacia caused by:
   A. collagen breakdown in the bone matrix.
   B. excessive bone resorption.
   C. crowding of bone marrow by excessive bone growth.
   D. inadequate bone mineralization.

6. A 35-year-old female presents with impaired motor function, gradual deafness, and visual disturbances. Physical examination reveals asymmetric shape of skull and displaced teeth. X-ray reveals thickened and disorganized bones caused by abnormal and excessive bone remodeling. This condition is referred to as:
   A. rickets.
   B. Paget disease.
7. A 70-year-old male presents with back pain, fever, and weight loss. He reports that he had a recent respiratory infection from which he thought he recovered. Tests revealed increased white blood cell count, and a diagnosis of endogenous osteomyelitis was made. The organisms causing this condition entered the bone through:
A. blood capillaries.
B. open fractures.
C. animal bites.
D. infected bedsores.

8. A 54-year-old male was recently diagnosed with osteoarthritis. Which of the following symptoms is he most likely experiencing?
A. Joint swelling
B. Hypermobility of joints
C. Contractures
D. Joint pain

9. Researchers have now determined that rheumatoid arthritis:
A. is curable with antiviral agents.
B. is an autoimmune disease.
C. arises from rheumatic fever.
D. has the same causes as osteoarthritis.

10. A 21-year-old female presents with low back pain and stiffness that is alleviated by physical activity. She was diagnosed with ankylosing spondylitis. Which of the following joints would be most affected?
A. Vertebra and sacroiliac
B. Carpal and pharyngeal
C. Shoulder and hip
D. All hinge joints

11. Fibromyalgia is a chronic musculoskeletal disorder characterized by:
A. pain resulting from joint and muscle inflammation.
B. muscle pain in the back and gastrointestinal symptoms.
C. neurologic pain in the skeletal muscles.
D. diffuse pain, fatigue, and point tenderness.

12. Myotonia is characterized by:
A. prolonged depolarization of muscle cell membranes.
B. absence of ATP for muscle contraction.
C. delayed muscle contraction.
D. hyperactive reflexes.

13. **TRUE or FALSE** In myasthenia gravis autoantibodies bind to and inhibit the acetylcholine receptor
14. A 34-year-old male was diagnosed with a bacterial gastrointestinal infection. Which of the following types of diarrhea would most likely occur with his condition?
   A. Osmotic
   B. Secretory
   C. Hypotonic
   D. Motility

15. A 20-year-old male was recently diagnosed with lactose intolerance. He eats an ice cream cone and develops diarrhea. His diarrhea can be classified as:
   A. osmotic diarrhea.
   B. secretory diarrhea.
   C. hypotonic diarrhea.
   D. motility diarrhea.

16. The most common disorder associated with upper gastrointestinal bleeding is:
   A. diverticulosis.
   B. hemorrhoids.
   C. esophageal varices.
   D. cancer.

17. A 52-year-old presents with bleeding from the rectum. This condition is referred to as:
   A. melena.
   B. occult bleeding.
   C. hematochezia.
   D. hematemeses.

18. A 50-year-old male is experiencing reflux of chyme from the stomach. He is diagnosed with gastroesophageal reflux. This condition is caused by:
   A. fibrosis of the lower third of the esophagus.
   B. sympathetic nerve stimulation.
   C. loss of muscle tone at the lower esophageal sphincter.
   D. reverse peristalsis of the stomach.

19. A 45-year-old male complains of heartburn after eating and difficulty swallowing. He probably has:
   A. pyloric stenosis.
   B. gastric cancer.
   C. achalasia.
   D. hiatal hernia.

20. A 38-year-old female complains of epigastric fullness following a meal, nausea, and epigastric pain. Tests reveal narrowing of the opening between the stomach and the duodenum. This condition is referred to as:
A. ileocecal obstruction.
B. hiatal hernia.
C. pyloric obstruction.
D. hiatal obstruction.

21. A 29-year-old male presents complaining of colicky pain followed by vomiting, sweating, nausea, and hypotension. Testing reveals a condition in which one part of the intestine telescopes into another. From which type of intestinal obstruction is he suffering?
A. Hernia
B. Ileus
C. Torsion
D. Intussusception

22. A 60-year-old male presents with gastrointestinal bleeding and abdominal pain. He reports that he takes nonsteroidal anti-inflammatory agents (NSAIDs) daily to prevent heart attack. Tests reveal that he has a peptic ulcer. The most likely cause of this disease is:
A. decreasing subepithelial bicarbonate production.
B. accelerating the H⁺ (proton) pump in parietal cells.
C. inhibiting mucosal prostaglandin synthesis.
D. stimulating a shunt of mucosal blood flow.

23. A 22-year-old male underwent brain surgery to remove a tumor. Following surgery, he experienced a peptic ulcer. His ulcer is referred to as a(n) _____ ulcer.
A. Addison
B. Cushing
C. ischemic
D. Curling

24. Clinical manifestations of bile salt deficiencies are related to poor absorption of:
A. fats and fat-soluble vitamins.
B. water-soluble vitamins.
C. proteins.
D. all macronutrients.

25. A 50-year-old male complains of abdominal pain, diarrhea, and bloody stools. A possible diagnosis would be:
A. ulcerative colitis.
B. hiatal hernia.
C. pyloric obstruction.
D. achalasia.

26. A 16-year-old female is diagnosed with anorexia nervosa. Excessive weight loss can cause:
A. improved eating habits.
B. chronic hypertension.
C. bulimia nervosa.
D. cardiac failure.
27. A 54-year-old male complains that he has been vomiting blood. Tests reveal portal hypertension. Which of the following is the most likely cause of his condition?
A. Thrombosis in the spleen
B. Cirrhosis of the liver
C. Left ventricular failure
D. Renal stenosis

28. A 60-year-old female with a history of alcoholism complains of recent weight gain and right flank pain. Physical examination reveals severe ascites. This condition is caused by:
A. decreased albumin and capillary oncotic pressure.
B. decreased capillary filtration pressure.
C. decreased capillary permeability.
D. aldosterone and antidiuretic hormone suppression.

29. Problems associated with hepatic encephalopathy from chronic liver disease are the result of:
A. hyperbilirubinemia and jaundice.
B. fluid and electrolyte imbalances.
C. impaired ammonia metabolism.
D. decreased cerebral blood flow.

30. An increase in the rate of red blood cell breakdown causes which form of jaundice?
A. Obstructive
B. Hemolytic
C. Hepatocellular
D. Metabolic

31. Intrahepatic obstructive jaundice is characterized by elevated levels of serum:
A. unconjugated bilirubin only.
B. conjugated bilirubin only.
C. unconjugated and conjugated bilirubin.
D. urobilinemic.

32. In alcoholic cirrhosis, hepatocellular damage is caused by:
A. acetaldehyde accumulation.
B. bile toxicity.
C. acidosis.
D. fatty infiltrations.
33. A 39-year-old female presents with abdominal pain and jaundice. She is diagnosed with gallstones and undergoes cholecystectomy. An analysis of her gallstones would most likely reveal a high concentration of:
A. phosphate.
B. bilirubin.
C. urate.
D. cholesterol.

34. Tissue damage in pancreatitis is caused by:
A. insulin toxicity.
B. autoimmune destruction of the pancreas.
C. premature activation of pancreatic proenzymes.
D. hydrochloric acid reflux into the pancreatic duct.

35. A 31-year-old female presents with midabdominal pain. She is expected to have acute pancreatitis. Which of the following lab results is (are) most specific to this diagnosis?
A. Low hematocrit and hemoglobin
B. Elevated white blood cell count
C. Elevated serum amylase
D. Hyperglycemia

36. A 60-year-old male is diagnosed with cancer of the esophagus. Which of the following factors most likely contributed to his disease?
A. Reflux esophagitis
B. Intestinal parasites and polyps
C. Nitrates and salty foods
D. Aflatoxin from moldy peanuts

37. Which of the gastrointestinal cancers has the highest rate of incidence and is responsible for the highest number of deaths?
A. Esophageal
B. Stomach
C. Pancreatic
D. Colorectal

38. Which one is true
A. in colitis the lesion goes through all layers of the intestines
B. Crohn's disease is confined mostly to the sigmoid colon
C. diverticulosis is one of the 2 inflammatory bowel diseases
D. celiac disease destroys the brush border enzymes and causes malabsorption/maldigestion

39. True or False cancer in the descending colon presents with skinny stools covered with bright red blood

40. True or False anorexia and bulimia may cause Mallory-Weiss tears due to retching
41. The icteric phase of hepatitis is characterized by which of the following clinical manifestations?
A. Fatigue, malaise, vomiting  
B. Jaundice, dark urine, enlarged liver  
C. Resolution of jaundice, liver function returns to normal  
D. Fulminant liver failure, hepatorenal syndrome  

42. **True or False**  McArdle disease and myoadenylate deaminase deficiency make exercise harder to tolerate  

43. **True or False**  polymyositis is caused by cytotoxic T cells  

44. **True or False**  fatty liver is reversible  

45. A 70-year-old male nursing home resident developed a dermal pressure ulcer. This condition is most often caused by:
A. arteriosclerosis.  
B. malnutrition.  
C. mental depression.  
D. unrelieved pressure.  

46. Individuals of ____ descent are more prone to developing keloids.  
A. African-American  
B. Northern European  
C. Asian  
D. Native American  

47. A 12-year-old female visits her physician to obtain acne medication for recurrent acne vulgaris. This condition is an inflammatory disorder of the:  
A. apocrine glands.  
B. pilosebaceous follicle.  
C. hair follicle.  
D. eccrine gland.  

48. A 42-year-old female presents with raised red lesions with a brownish scale. She was diagnosed with discoid lupus erythematosus. This disorder is caused by:  
A. infection.  
B. trauma.  
C. autoimmunity.  
D. cancer.
49. A 45-year-old male presents with a chronic blister-forming disease of the skin and oral mucous membranes. This condition is referred to as:
A. lupus erythematosus.
B. pemphigus.
C. psoriasis.
D. eczema.

50. A 9-year-old male presents with severe erythematous bullous lesions. Which of the following is the most likely diagnosis?
A. Pemphigus
B. Acne vulgaris
C. Lupus erythematosus
D. Stevens-Johnson syndrome

EXTRA CREDIT

51. A 50-year-old male recently underwent a liver transplant and is taking immunosuppressive drugs. He now has pain and vesicular eruptions on the face and trunk. He reports that he had chickenpox as a child. Which of the following is the most likely diagnosis?
A. Erysipelas
B. Poliomyelitis
C. Warts
D. Herpes zoster

52. Tinea corporis (ringworm) is a _____ infection of the skin.
A. nematode
B. fungal
C. viral
D. bacterial

53. 52-year-old female is diagnosed with scleroderma. Which complication results in skin ulcers to the fingers and nail shedding?
A. Cutaneous vasculitis
B. Raynaud phenomenon
C. Cellulitis
D. Candidiasis

54. Hypovolemia in the early stages of burn shock is directly related to:
A. decreased cardiac contractility and shunting of blood away from visceral organs.
B. increased capillary permeability and evaporative water loss.
C. hypometabolism and renal water loss.
D. bacterial infection of the wound and resulting bacteremia.