**1. Which of the following are NOT parts of the Virchow thrombosis triad:**

1. abnormal blood flow
2. hypercoagulability
3. reduction of clotting factors
4. endothelial injury
5. hypocoagulability

**2. Which of the following is the most likely to cause a fat embolism:**

1. reposition of shoulder luxation
2. healing of a chemical burn
3. healing of a heat burn
4. a broken femur
5. congestive heart failure

**3. What is the most common site of origin of pulmonary thromboemboli:**

1. cavity of the left ventricle
2. deep veins of lower extremities
3. cavity of the right ventricle
4. mesenteric veins
5. superficial veins of lower extremities

**4. “Nutmeg Liver “occurs in:**

1. liver cirrhosis
2. liver necrosis
3. chronic passive congestion
4. thrombosis of the portal vein
5. hepatitis

**5. Hyperemia is characterized by the following:**

1. increased blood flow
2. impaired blood flow
3. develops during exercises
4. it is a passive process
5. it is an active process

**6. Congestion is characterized by the following:**

1. characterizes inflammation
2. develops due to impaired blood outflow
3. it is a passive process
4. it is an active process
5. develops during exercises

**7. Coughing with blood is named:**

1. hematochezia
2. melena
3. hematuria
4. hemoptysis
5. hematemesis

**8. Thrombus is characterized by the following:**

1. it is attached to the vascular wall
2. it is friable
3. it is formed during life
4. it is elastic
5. it is made after death

**9. Consequences of thrombosis are:**

1. resorption
2. organization
3. congestion
4. thromboembolism
5. cyanosis

**10. Ischemia may lead to:**

1. myocardial infarction
2. liver congestion
3. gangrene of lower extremities
4. stroke
5. acrocyanosis

**11. Tick the ischemia causes:**

1. arterial thrombosis
2. venous thrombosis
3. embolism
4. stroke
5. infarction

**12. Systemic venous congestion is consequence of:**

1. left heart failure
2. right heart failure
3. pulmonary congestion
4. atherosclerosis
5. arteriolosclerosis

**13. A thrombus is composed of:**

1. fibrin
2. platelets
3. red blood cells
4. leukocytes
5. Willebrand factor

**14. Which of the following is chronic congestion of spleen:**

1. brown induration
2. cyanotic induration
3. nutmeg spleen
4. fatty spleen
5. sago spleen

**15. Which of the following are the microscopic changes of nutmeg liver:**

1. selective congestion in the periphery of lobule
2. selective centrilobular congestion
3. centrilobular hemorrhage
4. centrilobular necrosis of hepatocytes
5. centrilobular hypertrophy of hepatocytes

**16. Blood in stool is called:**

1. epistaxis
2. hematemesis
3. hemoptysis
4. metrorrhagia
5. melena

**17. Tick the main causes of hemorrhages:**

1. exicosis
2. vascular wall erosion
3. vascular wall rupture
4. blood stasis in the vessels
5. thrombosis

**18. Identify types of generalized edema:**

1. cardiac
2. cerebral
3. renal
4. hepatic
5. pulmonary

**19. Chronic lymphatic stasis is followed by:**

1. elephantiasis
2. tissue hypoxia
3. hemomelanosis
4. sclerosis
5. amyloidosis

**20. Identify morphological variants of interstitial hemorrhages:**

1. hematoma
2. hemorrhagic infiltration
3. echimosis
4. apoplexy
5. petechia

**21. Consequences of hemorrhages are:**

1. suppuration
2. encapsulation
3. chylothorax
4. cysts formation
5. melena

**22. Hepatic vein obstruction leads to:**

1. hyperemia
2. liver congestion
3. nutmeg liver
4. hemochromatosis
5. amyloidosis

**23. The types of external hemorrhage are:**

1. hemoptysis
2. petechia
3. hemoperitoneum
4. melena
5. hemothorax

**24. Femoral artery obstructive thrombosis leads to:**

1. ischemia
2. congestion
3. anemia
4. gangrene
5. lymphorrhea

**25. Interstitial accumulation of edematous liquid is called:**

1. ascites
2. anasarca
3. hydrocele
4. hydropericardium
5. hydrocephalus

**26. Air embolism develops in the following cases:**

1. carotid artery injury
2. neck vein injury
3. pneumothorax
4. jugular vein injury
5. carotid artery aterosclerosis

**27.Thrombus can be:**

1. paradoxical
2. parietal
3. occlusive
4. lipidic
5. tissular

**28. Paradoxical embolism may develop in the following cases:**

1. atrial septal defect
2. ventricular septal defect
3. arteriovenous shunts
4. well-developed collateral circulation
5. aortic wall defect

**29. Lower extremity veins thrombus usually is delivered to:**

1. vena cava inferior
2. jugular vein
3. portal vein
4. right atrium
5. pulmonary artery

**30. A thrombus can be:**

**a.** white with red border

**b.** white

**c.** mixed

**d.** postmortem

**e.** red

**31. Conical shaped infarcts are usually formed in the:**

1. brain
2. intestine
3. kidneys
4. lungs
5. spleen

**32. The favorable outcomes of thrombosis include:**

1. septic autolysis
2. thromboembolism
3. recanalization
4. vascularization
5. organization

**33. Most common location of hematogenous metastasis of intestinal carcinoma is into the:**

1. lungs
2. heart
3. liver
4. spleen
5. kidneys

**34. Fatty lung embolism develops in the following cases:**

1. fatty liver degeneration
2. fracture of the tubular bone
3. subcutaneous tissue crash
4. atherosclerotic plaque ulceration
5. alimentary obesity

**35. Gas embolism develops in:**

1. vein injury
2. ammoniac intoxication
3. rapid decompression
4. carbon monoxide poisoning
5. pneumothorax

**36. What is the cause of oncotic edema:**

**a.** congestive heart failure

**b.** acute inflammation.

**c.** neurohumoral dysregulation

**d.** malnutrition

**e.** renal hypoperfusion

**37. What is the cause of hydrostatic edema:**

**a.** congestive heart failure

**b.** acute inflammation.

**c.** neurohumoral dysregulation

**d.** malnutrition

**e**. renal hypoperfusion

**38. Which kind of cells are "heart failure cells":**

**a.** macrophages

**b.** lymphocytes

**c.** leukocytes

**d.** cardiomyocytes

**e.** histiocytes

**39. Which sign is characteristic for the left cardiac insufficiency:**

**a.** hepatomegaly

**b.** splenomegaly

**c.** ascites

**d.** inferior limbs edema

**e.** dyspnea

**40. All the listed clinical signs are characteristic for the right cardiac insufficiency, EXCEPT for:**

**a.** pulmonary edema

**b.** ascites

**c.** nutmeg liver

**d.** chronic venous stasis of the spleen

**e.** chronic venous stasis of kidneys

**41. Which of the pathological processes listed below usually associate with mitral insufficiency:**

**a.** thrombosis of pulmonary veins

**b.** thromboembolism of pulmonary artery

**c.** pulmonary edema

**d.** fibrinous pleuritis

**e.** cardiac tamponade

**42. What pathological process may develop in the liver during the progress of cardiac insufficiency:**

**a.** complete recovery

**b.** subtotal necrosis

**c.** stasis cirrhosis

**d.** chronic hepatitis

**e.** biliary stasis