

CVS Mid exam archive (divided by subject)

Histology (5 questions):

- Which of the following is a wide and leaky capillary?**
 - Continuous
 - Fenestrated
 - Sinusoids ✓
- Which of the following is true about the cardiac cell?**
 - Has multiple large mitochondria ✓
 - Peripheral nuclei
 - High lipid content
 - Triad at A-I line
 - Diad at A line
- Which of the following does not have portal circulation?**
 - Muscle ✓
 - Kidney
 - Liver
 - Brain
 - All organs have portal circulation
- What is an artery with prominent internal and external elastic lamina called?**
 - Muscular ✓
 - Elastic
- Which of the following is not a component of intercalated disk?**
 - Terminal cisternae ✓
 - Desmosomes
 - Macula adherens

Embryology (3 questions):

- Which of the following does not form part of the aorta?**
 - Right dorsal aorta ✓
 - Left dorsal aorta
 - Left 4th pharyngeal arch
 - Aortic sac
 - Left horn of aortic sac
- What are the borders of foramen ovale?**
 - Septum primum and septum secundum
- Order of sacs in heart tube from cranial to caudal?**
 - Bulbus cordis – primitive ventricle – primitive atrium – sinus venosus

Biochemistry (8 questions):

- What is the cardiac biomarker that remains elevated for the longest time?**
 - LDH
- A patient came to ER 12 hours after experiencing chest pain, what 2 cardiac biomarkers would be at their peak during this time?**
 - Troponin and LDH ??
 - Myoglobin and CK-MB
 - AST and LDH
- Lipoprotein lipase breaks down TG in VLDL, what apoprotein acts as a catalyst for this enzyme?**
 - Apoprotein CII
- What is the HDL receptor in the liver?**
 - Scavenger receptor class B
- Why can't the liver utilize the ketone bodies it produces?**
 - Because it lacks one of the enzymes of ketolytic pathway
- An important factor for regulating cholesterol synthesis is sterol regulatory element, which pair contains this factor?**

- a. SREBP and SCAP ✓
- b. SCAP and Insig-1
- 7. **Which of the following correctly describes phosphorylation-dephosphorylation of PDH?** (مش ميك الصياغة)
 - a. Low ATP/ADP and Low acetyl CoA/CoA inhibits the inhibiting enzyme
- 8. **An explanation for the no changes in mechanical capacity of heart even with increased oxygen consumption during utilization of fatty acids**
 - a. Increased oxidative stress caused by oxidation of fatty acids

Medicine and Microbiology (2 questions, same topic so I don't know which is which)

1. **A patient presents with fever, chills, arthralgia, and he has a history of rheumatic disease, he had a dental procedure a while ago, no proof of endocarditis yet, but endocarditis is suspected, what is a possible pathogen causing it?**
 - a. Viridans strept
2. **Infective endocarditis associated with intravenous drugs users is caused by which organism?**
 - a. Staph aureus

Surgery (1 question)

1. **Which of the following is not a risk factor for CAD (coronary artery disease)?**
 - a. Female gender ✓
 - b. Rheumatoid arthritis
 - c. Family history of CAD
 - d. Oral contraceptive

Pharmacology (11 questions)

1. **Which of the following is not a class of anti-arrhythmic drugs?**
 - a. Chlorine channel blockers
2. **Which of the following is an HMG-CoA reductase inhibitor?**
 - a. Fluvastatin (other options didn't end with -statin)
3. **What is a derivative of Nicotinic acid?**
 - a. Niacin
4. **Which of the following is incorrect about treatment of heart failure?**
 - a. CCB (Ca channel blockers) are used for chronic heart failure
5. **Which of the following is incorrect about treatment of heart failure?**
 - a. Digoxin has long onset of action
6. **Which of the following is incorrect about heart failure treatment?**
 - a. ARBS increase bradykinin level
7. **Heparin is used for?**
 - a. Initial management of myocardial infarction
8. **Which of the following is not an anti-hypertensive drug?**
 - a. Amphetamine ✓
 - b. ACE inhibitors
 - c. ARBS
9. **Route of administration for isosorbide mononitrate?**
 - a. Orally ✓
 - b. Sublingually
 - c. IV
10. **Which of the calcium channel blockers used for hypertension causes gingival hyperplasia?**
 - a. Verapamil
11. **Alpha 1 adrenergic receptor blockers cause vasodilation by decreasing what action of norepinephrine?**
 - a. Vasoconstriction

Community (6 questions)

1. **Primary prevention of early stage of disease is called**
 - a. Secondary prevention

2. **Novel risk factor for CVD**
 - a. Excess homocysteine levels
3. **What is incorrect about epidemiology of CVD?**
 - a. Japanese people living in Japan have higher risk of CHD than Japanese people living in San Francisco
4. **Which of the following is incorrect about Smoking and CVD risk?**
 - a. Nicotine replaces oxygen
5. **When do carbon monoxide levels return to normal after smoking cessation?**
 - a. After half a day of smoking cessation
6. **All of the following are unhealthy eating habits for CVD, except**
 - a. Diet low in refined carbohydrates

Pathology (9 questions)

1. **When is the risk of serious arrhythmias after AMI the highest?**
 - a. 1 hour after
2. **Wave of macrophages that remove necrotic myocytes and neutrophil fragments after myocardial infarction?**
 - a. 1 to 3 days
 - b. 5 to 10 days ✓
3. **All of the following factors increase risk of rupture of plaque except**
 - a. Thick fibrous cap
4. **Which of the following is not true about temporal arteritis?**
 - a. Occurs before 50 years of age ✓
 - b. Granuloma
 - c. Involve temporal and ophthalmic
 - d. T cell mediated
5. **Patient with bilateral pneumonitis, with radiographically visible nodules with central cavitation, chronic sinusitis, mucosal ulceration of nasopharynx and renal involvement**
 - a. Granulomatosis with polyangiitis
6. **Most common cause of mitral stenosis?**
 - a. Chronic rheumatic valve disease ✓
 - b. Acute rheumatic fever
7. **Which of the following is wrong about myxomatous mitral valve?**
 - a. Secondary mitral prolapse happens more in men
8. **What is the cardiomyopathy where ventricular wall is severely thinned owing to myocyte replacement by fatty infiltration and lesser amounts of fibrosis?**
 - a. Arrhythmogenic right ventricular cardiomyopathy
9. **What defect causes aneurysms in Marfan syndrome?**
 - a. Defective synthesis of fibrillin ✓
 - b. Other options were Collagen types
10. **What is the normal thickness of left ventricular wall? (not sure it's patho)**
 - a. 1.3 cm

Physiology (19 questions)

1. **Precapillary sphincter would open and shut based on?**
 - a. O₂ availability
2. **What is not true about mean arterial blood pressure?**
 - a. Equals systolic pressure minus diastolic pressure
3. **Which of the following is not matched regarding autoregulation mechanisms?**
 - a. Increased metabolic demand → increase resistance
4. **Which of the following is not true about plateau?**
 - a. L type Ca channels are inactive and K are active
5. **Which of the following is not important for cardiac contraction?**
 - a. Ca⁺⁺ and calmodulin
 - b. Troponin c
 - c. Rynadine receptor 2
 - d. Funny Na channels ✓
6. **Which of the following is not consistent with intrinsic cardiac conduction system?**
 - a. Autonomic nervous system
7. **What is primary regulator of blood flow to muscles during rest?**
 - a. Sympathetic vasoconstriction tone ✓

- b. Metabolic demand
- 8. **Main factor affecting coronary circulation?**
 - a. Adenosine
- 9. **Diastolic filling of ventricles produces what sound?**
 - a. Third heart sound
- 10. **Rushing of blood into aorta and pulmonary trunk produces what sound?**
 - a. Second component of 1st sound
- 11. **Sounds of the heart are ____?**
 - a. Mainly due to closure of valves
- 12. **Arterioles are?**
 - a. Resistance vessels
- 13. **Regarding cardiac cycle**
 - a. Has 8 phases
- 14. **Filling of ventricles occurs in**
 - a. Atrial systole, maximum and minimum filling phases
- 15. **Which of the following is true about diastole?**
 - a. Ventricles rest
 - b. Complete coronary filling
 - c. Ventricles filling
 - d. Ventricle rest and filling
 - e. All of the above are true ✓
- 16. **If blood pressure in the carotid artery falls, what changes will occur?**
 - a. Carotid baroreceptors will decrease their inhibitory impulses
- 17. **Which of the following is not an effect of renin-angiotensin system?**
 - a. Excess Sodium excretion
- 18. **Which of the following is true about cardiac cycle?**
 - a. Increasing heart rate decreases duration
- 19. **Cardiac output in L/min divided by heart rate is?**
 - a. Stroke volume
- 20. **Valves of heart are closed during?**
 - a. Isometric relaxation and isometric contraction

Anatomy (14 questions)

- 1. **What can be seen in right atrium**
 - a. Opening of coronary sinus
- 2. **All are true about maxillary artery except?**
 - a. Gives a branch to the upper eyelid
- 3. **Vein found in anatomical snuff box**
 - a. Cephalic vein
- 4. **All have posterior relation to base of heart except?**
 - a. T3-T6 vertebrae ✓
 - b. Pericardium
 - c. Esophagus
 - d. Aorta
 - e. Oblique sinus
- 5. **Artery that supplies the infundibulum of right ventricle?**
 - a. Right conus artery
- 6. **Artery that supplies the largest area of interventricular septum?**
 - a. Anterior interventricular artery
- 7. **Which of the following does not participate in trochanteric anastomosis?**
 - a. Obturator artery ✓
 - b. Lateral circumflex
 - c. Medial circumflex
 - d. Superior gluteal
 - e. Inferior gluteal
- 8. **Dorsalis pedis is a continuation of?**
 - a. Anterior tibial artery
- 9. **Which of the transverse foramen of cervical vertebra does not have vertebral artery?**
 - a. 7th

10. **Given that there is an artery starting at the 2nd costal cartilage and ending at T4 vertebrae, what would be the names of branches coming out of it?**
 - a. Brachiocephalic, left common carotid, left subclavian
11. **Which of the following is not found in the superior mediastinum?**
 - a. Right laryngeal recurrent nerve
12. **Which of the following is not true about arch of the aorta?**
 - a. It is the first part of aorta
13.))axillary artery question is wrong so I won't write it))

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1. **All the following changes can happen in severe hypertension except?**
 - a. Increased ECG (or QRS I forgot) magnitude
 - b. Increase myocardial cells/size (I also forgot)
 - c. Blurry vision