**CVS Mid exam archive (divided by subject)**

**Histology (5 questions):**

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

**Embryology (3 questions):**

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

**Biochemistry (8 questions):**

1. **What is the cardiac biomarker that remains elevated for the longest time?**
   1. LDH
2. **A patient came to ER 12 hours after experiencing chest pain, what 2 cardiac biomarkers would be at their peak during this time?**
   1. Troponin and LDH ??
   2. Myoglobin and CK-MB
   3. AST and LDH
3. **Lipoprotein lipase breaks down TG in VLDL, what apoprotein acts as a catalyst for this enzyme?**
   1. Apoprotein CII
4. **What is the HDL receptor in the liver?**
   1. Scavenger receptor class B
5. **Why can’t the liver utilize the ketone bodies it produces?**
   1. Because it lacks one of the enzymes of ketolytic pathway
6. **An important factor for regulating cholesterol synthesis is sterol regulatory element, which pair contains this factor?**
   1. SREBP and SCAP ✓
   2. SCAP and Insig-1
7. **Which of the following correctly describes phosphorylation-dephosphorylation of PDH?** (مش هيك الصياغة)
   1. 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**
   1. 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?**
   1. Viridans strept
2. **Infective endocarditis associated with intravenous drugs users is caused by which organism?**
   1. Staph aureus

**Surgery (1 question)**

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

**Pharmacology (11 questions)**

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

**Community (6 questions)**

1. **Primary prevention of early stage of disease is called**
   1. Secondary prevention
2. **Novel risk factor for CVD** 
   1. Excess homocysteine levels
3. **What is incorrect about epidemiology of CVD?**
   1. 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?**
   1. Nicotine replaces oxygen
5. **When do carbon monoxide levels return to normal after smoking cessation?**
   1. After half a day of smoking cessation
6. **All of the following are unhealthy eating habits for CVD, except**
   1. Diet low in refined carbohydrates

**Pathology (9 questions)**

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

**Physiology (19 questions)**

1. **Precapillary sphincter would open and shut based on?**
   1. O2 availability
2. **What is not true about mean arterial blood pressure?**
   1. Equals systolic pressure minus diastolic pressure
3. **Which of the following is not matched regarding autoregulation mechanisms?**
   1. Increased metabolic demand -> increase resistance
4. **Which of the following is not true about plateau?**
   1. L type Ca channels are inactive and K are active
5. **Which of the following is not important for cardiac contraction?**
   1. Ca++ and calmodulin
   2. Troponin c
   3. Rynadine receptor 2
   4. Funny Na channels ✓
6. **Which of the following is not consistent with intrinsic cardiac conduction system?**
   1. Autonomic nervous system
7. **What is primary regulator of blood flow to muscles during rest?**
   1. Sympathetic vasoconstriction tone ✓
   2. Metabolic demand
8. **Main factor affecting coronary circulation?**
   1. Adenosine
9. **Diastolic filling of ventricles produces what sound?**
   1. Third heart sound
10. **Rushing of blood into aorta and pulmonary trunk produces what sound?**
    1. Second component of 1st sound
11. **Sounds of the heart are \_\_\_\_?** 
    1. Mainly due to closure of valves
12. **Arterioles are?**
    1. Resistance vessels
13. **Regarding cardiac cycle**
    1. Has 8 phases
14. **Filling of ventricles occurs in** 
    1. Atrial systole, maximum and minimum filling phases
15. **Which of the following is true about diastole?**
    1. Ventricles rest
    2. Complete coronary filling
    3. Ventricles filling
    4. Ventricle rest and filling
    5. All of the above are true ✓
16. **If blood pressure in the carotid artery falls, what changes will occur?**
    1. Carotid baroreceptors will decrease their inhibitory impulses
17. **Which of the following is not an effect of renin-angiotensin system?**
    1. Excess Sodium excretion
18. **Which of the following is true about cardiac cycle?**
    1. Increasing heart rate decreases duration
19. **Cardiac output in L/min divided by heart rate is?**
    1. Stroke volume
20. **Valves of heart are closed during?**
    1. Isometric relaxation and isometric contraction

**Anatomy (14 questions)**

1. **What can be seen in right atrium** 
   1. Opening of coronary sinus
2. **All are true about maxillary artery except?**
   1. Gives a branch to the upper eyelid
3. **Vein found in anatomical snuff box** 
   1. Cephalic vein
4. **All have posterior relation to base of heart except?**
   1. T3-T6 vertebrae ✓
   2. Pericardium
   3. Esophagus
   4. Aorta
   5. Oblique sinus
5. **Artery that supplies the infundibulum of right ventricle?**
   1. Right conus artery
6. **Artery that supplies the largest area of interventricular septum?**
   1. Anterior interventricular artery
7. **Which of the following does not participate in trochanteric anastomosis?**
   1. Obturator artery ✓
   2. Lateral circumflex
   3. Medial circumflex
   4. Superior gluteal
   5. Inferior gluteal
8. **Dorsalis pedis is a continuation of?**
   1. Anterior tibial artery
9. **Which of the transverse foramen of cervical vertebra does not have vertebral artery?**
   1. 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?**
    1. Brachiocephalic, left common carotid, left subclavian
11. **Which of the following is not found in the superior mediastinum?** 
    1. Right laryngeal recurrent nerve
12. **Which of the following is not true about arch of the aorta?**
    1. 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?**
   1. Increased ECG (or QRS I forgot) magnitude
   2. Increase myocardial cells/size (I also forgot)
   3. Blurry vision