

For time-saving purposes, click on any question in this part to be directed to its answer.

Good Luck!



CVS-Final 018

Theory Part:

- 1-The drug which works on PPAR- a (Peroxisome Proliferator Activated Receptor- to stimulate fatty acid oxidation, and consequently considered as drug of choice in the treatment of highly elevated triglyceride levels: Notincluded
 - a. Gemfibrozil.
 - b. Simvastatin.
 - c. Nicotinic acid.
 - d. Ezetimibe.
 - e. Cholestyramine.
- 2-Amiodarone is a very useful wide spectrum antiarrhythmic drug with a multitude of possible mechanisms of action. The one mechanism which can explain most of its activity:
 - a. Na+ channel blocking action . Not included
 - b. Ca++ channel blocking.
 - c. Beta and alpha receptor blocking actions.
 - d. K+ channel blocking action .
 - e. Alteration of lipid membrane permeability.

3-ONE of the following is correct regarding aneurysms:

- a. Ehlers-Danlos syndrome causes aneurysms by defective fibrillin.
- b. Aneurysms are disorders that only involve arteries .
- c. Abdominal Aortic Aneurysms maybe related to weak aortic media.
- d. False aneurysms and dissections are interchangeable terms.
- e. Chancre of primary syphilis may lead to aortic aneurysms.

4-Antiarrhythmic drugs: Not included

- a. Often cause an increase in cardiac output
- b. Are equally useful in atrial and ventricular arrhythmias.
- c. All affect Na+ channels in the cell membrane
- d. Many act by converting unidirectional block to bi- directional block
- e. As a group, they have mild side effects.

5-Which of the following pairs is INCORRECT concerning arteriolar tone.

- a. Metabolic control---- accumulation of waste products stimulate vasoconstriction.
- b. Neural control---- vasoconstriction activated by sympathetic nerves.
- c. Hormonal control----- catecholamines affect the adrenergic receptors of the vascular smooth muscle .
- d. Myogenic control----- vascular smooth muscle responds to changes in pressure.
- e. Oxygen demand--- vasodilation of arterioles.

6-The term "balanced coronary circulation" indicates that: Not included

- a. Left coronary artery supplies the posterior descending branch
- b. Right coronary artery supplies a major portion of the posterior wall of the left ventricle.
- c. Left and right coronary arteries supply individual posterior descending branches
- d. Anterior interventricular artery branches around the apex of the heart to the posterior wall.
- e. Left coronary artery is a large vessel and divides into anterior and circumflex branches.

7-The value of losartan and related drugs is because they:

- a. Have similar hemodynamic effects to ACEI.
- b. Do not affect bradykinin metabolism .
- c. Do not cause cough.
- d. Block the effect of Ang II generated from both pathways (chymase &ACE).
- e. All of the above are true.

8-The best term that you would use to describe a "hepatic vascular tumor that has a benign clinical behavior and composed of dilated large vascular spaces" is:

- a. Capillary hemangioma
- b. Pyogenic granuloma
- c. Cavernous hemangioma
- d. Angiosarcoma
- e. Kaposi sarcoma

9-A man with a history of colon diverticular disease come to ER for fever and murmur, three consecutive blood cultures taken during febrile periods revealed gram-positive cocci that were catalase-negative and coagulase- negative as well as a transthoracic echocardiography shows a vegetation. Which of the following organisms is the most likely cause?

- a. Staphylococcus epidermidis.
- b. Staphylococcus aureus.
- c. Streptococcus pyogenes.
- d. Streptococcus bovis.
- e. Eikenella corrodens.

10-All are possible conduits for coronary artery bypass graft EXCEPT

- a. Right internal thoracic artery .
- b. Inferior mesenteric artery
- c. The radial artery of nondominant upper extremity.
- d. Right great saphenous vein.
- e. Left internal thoracic artery.

11-All of the following would mostly lead to unstable angina EXCEPT:

- a. Partially occlusive thrombus
- b. Complete coronary obstruction
- c. Stenosis with superimposed spasm
- d. Distal embolus formation

e. Atheromatous plaque rupture

12-ONE is correct regarding rheumatic fever:

- a. Results in bicuspid aortic valve abnormality.
- b. A single JONES criterion is adequate for diagnosis.
- c. Associated with exclusive cardiac manifestations.
- d. Atrial fibrillation can be a symptom of chronic phase.
- e. Pulmonary valve is the most frequently damaged valve.

13-The dengue virus, one is correct:

- a. The virus is limitid to Karnataka State, India .
- b. A live attenuated vaccine is available for dengue.
- c. Infection with one serotype confers immunity only to the infecting serotype.
- d. Dengue virus has five serotypes that cause a variety of clinical manifestations .
- e. Is the least prevalent arbovirus in the world.

14-All of the following are complications of myocardial infarction EXCEPT:

- a. Papillary muscle rupture causing acute mitral regurgitation.
- b. Free wall rupture.
- c. Early pericarditis.
- d. Cardiogenic shock.
- e. Acute aortic regurgitation.

15-ONE of the following is correct regarding infective endocarditis:

- a. Rickettsiae microorganisms are the most frequent cause .
- b. Leads to the formation of Aschoff bodies on heart valves.
- c. High virulence microorganisms can infect even previously normal valves.
- d. Staph. Aureus usually results in a subacute disease course.
- e. Low virulence microorganisms result in acute and short lasting infection.

16-Which of the following is INCORRECT concerning turbulent blood flow?

- a. The resistance to turbulent flow is greater than laminar flow.
- b. Turbulence can create vibrations that can be detected as murmurs.
- c. Above a critical velocity, blood flow becomes turbulent.
- d. Turbulence is found normally in the aorta and in narrowed vessels.
- e. Turbulent flow rate is proportional to the cube root of the driving pressure.

17-Adenosine replaced verapamil in the treatment of paroxysmal supraventricular tachycardia.

This is mainly because adenosine: Not included

- a. Has shorter duration of action .
- b. Is a natural compound.
- c. Less toxic than verapamil.
- d. Has no effects on the ventricles.
- e. Is more effective in terminating the attacks.

18-The following is NOT effective in the termination of attacks of supraventricular tachycardia:

- a. Carotid massage. Not included
- b. Quinidine.
- c. Adenosine.
- d. Verapamil.
- e. Lidocaine.

19-The drugs which are useful in the treatment of heart failure and hypertension, can produce hyperkalemia but reduce salt and water retention are:

- a. Digitalis.
- b. Diuretics.
- c. Beta blockers.
- d. Angiotensin converting enzyme inhibitors
- e. Vasodilators.

20-ONE is correct regarding vascular dissections:

- a. Dissections do not result in hypotensive shock as blood remains inside the vascular system.
- b. Dissections rarely develop at sites of arterial aneurysms
- c. Superior and inferior vena cava gre the main affected vessels.
- d. Diabetes mellitus is the major risk factor of aortic dissections.
- e. Proximal aortic dissections are more life threatening than isolated descending aortic dissections.

21-The Filoviridae family of viruses, one is incorrect:

- a. Most pathogenic of the hemorrhagic fever viruses .
- b. Human-to-human transmission via body fluids and respiratory droplets.
- c. Virus primarily infects liver cells, resulting in fever, jaundice, and hemorrhage.
- d. Enveloped, nonsegmented, single-stranded, RNA viruses.
- e. The natural animal reservoir has never been determined.

22-Which of the following is not related to the development of THE RIGHT VITELLINE VEIN?

- a. The superior mesenteric vein.
- b. The hepatic sinusoids.
- c. The hepatocardiac portion of the inferior vena cava.
- d. The portal vein.
- e. Anterior cardinal vein.

23-Which one of the following is not related to the septum premium?

- a. The valve of foramen ovale.
- b. Foramen secundum.
- c. Floor of fossa ovalis.
- d. Foramen premium.
- e. Annulus ovalis.

24-Six hours after a heavy blood loss and hypovolemic shock. The plasma level of the following is decreased?

- a. Aldosterone.
- b. Angiotensin II.
- c. Renin.
- d. Vasopressin.
- e. Atrial natriuretic hormone.

25-At the site of a myocardial infarction, phagocytic macrophages are most abundant in which of the following time zones from infarct onset .

- a. After 6 weeks.
- b. Within the first 2 days.
- c. After 3 weeks.
- d. Within first 24 hours.
- e. By the end of first week.

26-Which of the following infecting agents is the most common cause of myocarditis?

- a. Poliomyelitis virus.
- b. Trypanosoma cruzi.
- c. Coxsackievirus type B.
- d. Echovirus.
- e. Coxiella burnetiid.

27-Your recommendation for a patient with multiple blood pressure readings of 128/86 mm Hg would be :

- a. To start him on 3 pills for high blood pressure.
- b. To start him on two pills for high blood pressure .
- c. To start him on one pill for high blood pressure.
- d. Reassurance as his readings are normal.
- e. Therapeutic lifestyle changes.

28-A vascular tumor is more likely to be malignant if it shows any of the following features, EXCEPT:

- a. High degree of Cytological atypia
- b. Contains normal-appearing endothelial cells
- c. Does not form well-organized vessels
- d. Associated with exposure to carcinogens
- e. Locally destructive and metastasize

29-In peripheral blood vessels, humoral agents:

- a. Have little effect because they only act only on peripheral tissue, not on vascular cells.
- b. Stimulate the same vasoactive response in all organs.
- c. Stimulate only vasodilation because their action is confined to the endothelium.

- d. Stimulate both vasodilation and vasoconstriction depending upon receptor distribution within vascular cells .
- e. Stimulate only vasoconstriction because they increase vascular smooth muscle calcium.

30-Which of the following chest electrodes is misplaced?

- a. V2: Left sternal edge, 4th intercostal space.
- b. VI: Right sternal edge, 4th intercostal space.
- c. V5: Left anterior axillary line, 5th intercostal space.
- d. V4: Left mid-clavicular line, 5th intercostal space.
- e. V6: Left posterior axillary line, 5th intercostal space.

31-ONE of the following is considered a late complication that may occur months after acute myocardial infarction:

- a. Infarct expansion
- b. Papillary muscle rupture
- c. fibrinous pericarditis
- d. Ventricular aneurysm
- e. Cardiogenic shock

32-Choose the WRONG match

- a. Right umbilical vein ligamentum teres hepatis
- b. Septum spurium fusion of cranial end of right and left venous valve of the sinoatrial valve
- c. Ductus venosus ligamentum venosum
- d. Ductus arteriosus ligmentum arteriosum
- e. The umbilical arteries medial umbilical ligaments

33-About the conducting system of the heart which one of the following is NOT TRUE?

- a. Bundle of His is in danger during surgical repair of ASD.
- b. The LBB is supplied by the right and left coronary arteries
- c. AV node is located in the lower part of the atrial septum.
- d. Bundle of His passes along the membranous part of the interventricular septum
- e. SA node is located to the right of the opening of the superior vena cava and in 60% of people it is supplied by the right coronary artery

34-Usually, antiarrhythmic drugs are toxic because they can suppress the heart. The antiarrhythmic drug that is safe in cases of heart failure and will be effective in treating both ventricular and supraventricular arrhythmias is: Notine uded

- a. Amiodarone.
- b. Propranolol.
- c. Quinidine.
- d. Mexiletin.
- e. Verapamil.

35-In a particular blood vessel, decreasing radius by one-half and increasing the hematocrit from 45% to 60% what this do to the resistance to flow through this vessel

- a. Cannot be calculated from this information .
- b. Decrease by a factor of 16.
- c. Increase by a factor of around 21.
- d. Increase by a factor of 12.
- e. Increase by a factor of 16.

36-Which of the following cases would be contraindicated for propranolol? Not included

- a. Hypertension.
- b. Congestive heart failure.
- c. Angina of effort.
- d. Bronchial asthma.
- e. Almost all cases of tachycardia.

37-Plasma level of atrial natriuretic peptide is least likely to be elevated in

- a. Heart failure due to acute aortic regurgitation.
- b. Heart failure due to dilated cardiomyopathy.
- c. Cardiac tamponade due to chest trauma.
- d. Acute mitral regurgitation .
- e. Heart failure due to post myocardial infarction.

38-What are the similarities between the right and left coronary arteries

- a. Both may give the posterior interventricular artery
- b. Both run in the coronary sulcus
- c. Both originate from the ascending aorta
- d. Both participate in the blood supply of the conducting system
- e. Both supply the interventricular septum

39-A 70-year-old man has been diagnosed with myocardial infarction. His main complaint was discomfort in the epigastrium. Which of the following arteries most likely has been occluded and by which nerves the pain most likely was transmitted?

- a. Posterior interventricular artery and (T 7,8 and 9) intercostal nerves.
- b. Posterior interventricular artery and greater splanchnic nerves .
- c. LAD artery and Phrenic nerve.
- d. LAD artery and supraclavicular nerve.
- e. LAD artery and T 7,8 and 9 intercostal nerves.

40-Pulmonary circulation as compared to systemic circulation

- a. Pulmonary vascular resistance is approximately one-tenth that of the systemic circulation .
- b. Blood flow to pulmonary circulation is larger the systemic blood flow.
- c. Receives its major blood flow during diastole of the heart.
- d. Pulmonary vascular resistance is increased in chronic hypoxia.
- e. Pulmonary resistance is controlled mainly by parasympathetic vagus nerves.

41-The change on the left imply that the change on the right must also have occurred. Choose the WRONG statement:

- a. A
- b. B
- c. C
- d. D
- e. E

A	A fall in diastolic pressure with constant mean blood pressure.	Rise in systolic pressure
В	A rise in heart rate with constant cardiac output.	Fall in stroke volume
С	Vasodilation in a localized vascular bed with constant mean blood pressure	Vasodilation in other vascular beds
D	Increase in mean arterial blood pressure	An increase in mean firing rate of baroreceptors in the carotid sinuses.
E	A fall in total peripheral resistance with constant mean blood pressure	

42-A tie is placed around a carotid artery distal to its bifurcation and then pulled to partially constrict the vessel (i.e the carotid sinus has increased in pressure). This procedure would most likely result in which set of acute physiological responses

- a. A
- b. B
- c. C
- d. D
- e. E

	Number of Impulses From the Carotid Sinus	Heart Rate	Total Peripheral Resistance
A	†	1	1
В	1	Ţ	1
C	1	1	1
D	J.	1	1
E	Ţ	1	1

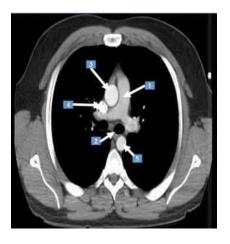
Answers

1	a	8	С	15	С	22	е	29	d	36	d
2	е	9	d	16	е	23	е	30	е	37	С
3	С	10	Ъ	17	е	24	е	31	d	38	حذف
4	d	11	Ъ	18	е	25	е	32	a	39	a
5	a	12	d	19	d	26	С	33	a	40	d
6	С	13	С	20	е	27	е	34	a	41	С
7	е	14	е	21	С	28	Ъ	35	a	42	Ъ

Practical part:

1-Obstruction of which of the pointed structures can cause raise in JVP?

- a. 2
- b. 4
- c. 5
- d. 1
- e. 3



2-What abnormality can be seen in the following ECG strip which was recorded with standard speed and

calibration?

- a. First degree heart block
- b. Second degree heart block
- c. Atrial flutter
- d. Third degree heart block
- e. Normal sinus rhythm.



3-This ECG was recorded with standard speed and calibration. What's your diagnosis?

- a. Third degree heart block.
- b. Second degree heart block.
- c. Myocardial ischemia.
- d. Sinus tachycardia.
- e. Sinus bradycardia

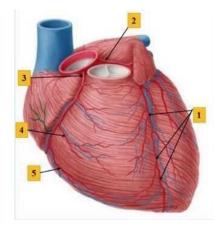


4-Which of the following is accompanied with Cardiac arrest

- a. A flat record of the ECG.
- b. The P-R interval is prolonged.
- c. The P wave is enlarged.
- d. The T wave is tall.
- e. Depression of the ST segment.

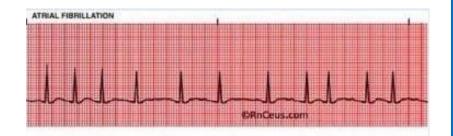
5-In almost 90% of people the posterior interventricular artery is a branch of.

- a. 5
- b. 1
- c. 3
- d. 4
- e. 2



6-An ECG was performed for a 60- year-old hypertensive male patient. What abnormality can be seen in this ECG?

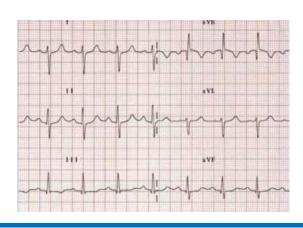
- a. Sinus tachycardia
- b. Ventricular fibrillation
- c. Atrial flutter
- d. Atrial fibrillation
- e. Second degree AV block



7-This ECG was recorded with

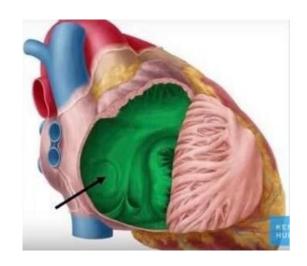
standard speed and calibration. It clearly shows:

- a. Sinus bradycardia
- b. Right axis deviation
- c. Left axis deviation.
- d. Peaked and tall T waves
- e. P mitrale



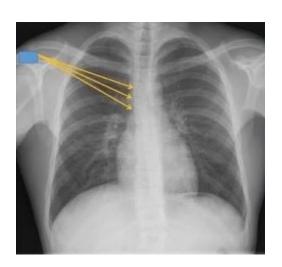
8-The pointed structure represents the:

- a. The proximal bulbar septum
- b. Septum primum
- c. The free edge of the septum secundum
- d. The septum spurium
- e. The distal bulbar septum



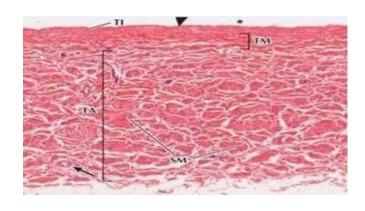
9-question

- a. It is the aortic knuckle
- b. It is formed by the right common cardinal vein and the proximal portion of the right anterior cardinal vein
- c. It is formed from the anastomosis between the anterior cardinal veins
- d. It is the right auricle
- e. It is formed from the terminal portion of the left posterior cardinal vein



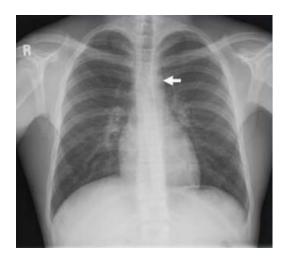
10-This vessel could be?.

- a. Inferior vena cava
- b. Radial artery
- c. Resistance small artery (arteriole)
- d. Aorta
- e. Femoral artery



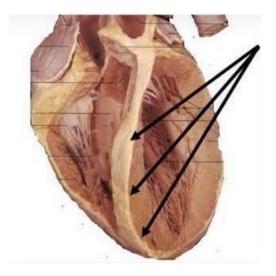
11-On this X-ray, the pointed structure is?

- a. Left auricle
- b. Superior vena cava
- c. Aortic knuckle
- d. Left ventricle
- e. Apex of the heart



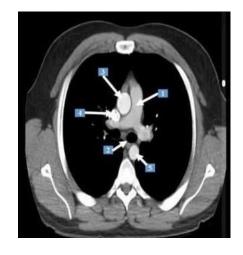
12-question

- a. It begins its development as a projection from the base of the ventricle
- b. It is supplied by LAD
- c. It is muscular
- d. During its development, it forms two horns which reach endocardinal cushions
- e. A defect in it, will cause a noncyanotic condition for the rest of patient's life



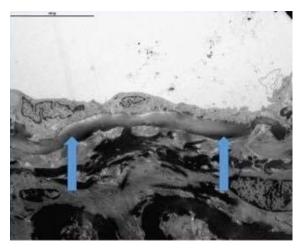
13-Which of the pointed structures are derived from truncus arteriosus.

- a. 1, 2
- b. 3, 5
- c. 3, 4
- d. 5, 3
- e. 1, 3



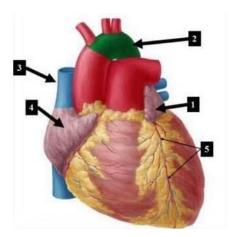
14-The pointed structure is well developed (prominent) in which one of the following?

- a. Pulmonary artery
- b. Brachiocephalic artery
- c. Common carotid artery
- d. Aorta
- e. Radial artery



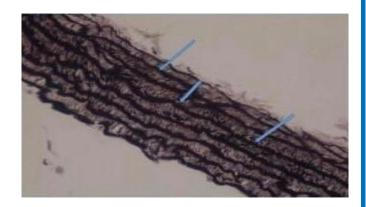
15-Which of the pointed structures originate from primitive atrium.

- a. 2 and 1
- b. 3 and 1
- c. 4 and 3
- d. 1 and 4
- e. 3 and 2



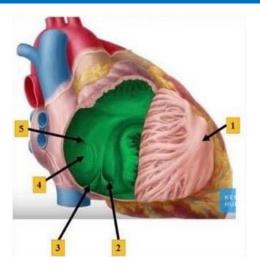
16-Damage to the pointed structures may be associated with?

- a. ASD
- b. Marfan's syndrome
- c. Tetralogy of fallot
- d. VSD
- e. Transposition of the great blood vessels

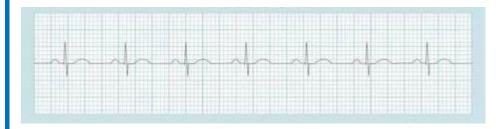


17-The inferior portion of the right sinuatrial valve develops into?

- a. 2, 3
- b. 3, 5
- c. 1, 3
- d. 1, 2
- e. 3, 4



18-Study the following ECG strip (Lead II) carefully and choose the correct statement. The strip was recorded with standard speed and calibration.



- a. The heart rate is 75 beats per minute.
- b. The PR interval is 0.24 seconds
- c. The ST shown in this ECG is due to myocardial ischemia
- d. The ECG shown above is normal sinus rhythm
- e. The QRS duration shown in this ECG is due to left bundle branch block.

Answers

1	b	7	b	13	е
2	b	8	b	14	е
3	е	9	b	15	d
4	а	10	а	16	b
5	С	11	С	17	а
6	d	12	е	18	d

اللهم إنّا نعوذ بك من فتور الهِمة وضياع المقاصد، اللهم بلوغ النهايات.