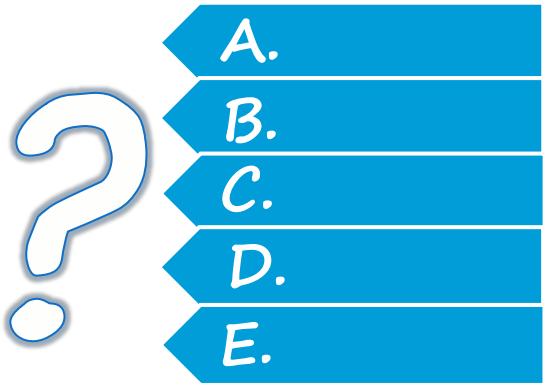
Archive

(Wareed + Nabed)

CVS



توكّلنا عَليك ، و سلّمنا أمرنا إليك لا منجأ ولا ملجأ إلّا إليك

Histology

1. **Which of the following is incorrect concerning cardiac muscle ?** **MW**
   a. Cardiac cells are smaller than skeletal muscle cells
   b. Electrical communication between cardiac cells is maintained via gap junctions , which are specialized
   c. Mechanical attachment of cardiac cells is at the intercalated disc
   d. The spread of excitation through the heart muscle is 3 dimensional
   e. Transverse tubules are larger in skeletal muscle than in heart muscle allowing more diffusion of Ca2+ into the interior of the cell

2. **All of the followings are correct regarding cardiac valves Except?** **FW**
   a. Inflammation of the valve is called pericarditis
   b. They insert into fibrous trigone
   c. They have collagen fibers and elastic fibers
   d. They are surrounded by endothelium

3. **Each of the following is true regarding the tunica intima Except?** **FW**
   a. It is the innermost layers of the vascular wall of large arteries
   b. It generally contains a single layer of flattened endothelium cells
   c. In elastic arteries it contains subendothelial C.T
   d. In large muscular arteries it contains an internal elastic membrane
   e. In large veins ,it contains a system of vessels termed the vasa vasorum

4. **One of the following is INCORRECTLY matched ? Select one:** **FW**
   a. Superior vena cava ====== thick tunica media with lots of smooth muscle
   b. Carotid artery ========== the thickest tunica intima
   c. Superior vena cava ======: the thickest adventitia
   d. Pulmonary artery ======== concentric lamellae of elastic fibers
   e. Inferior vena cava ======= bundles of longitudinal smooth muscle

5. **One of the following is CORRECTLY matched?** **MW**
   a. Saphenous vein========Weibel-Palade bodies
   b. Basilar artery ========= longitudinal smooth muscles
   c. Basilar artery ========= less prominent internal elastic lamina
   d. Saphenous vein ======= boundaries between intima and media is not clear
   e. Basilar artery========= thinner and little

6. **One of the following is CORRECTLY matched ? Select one :** **MW**
   a. Capillaries ========== endothelium. basal lamina and Pericytes
   b. Pinocytotic vesicles==== phagocytic function
   c. Continuous capillaries======== complete layer of Pericytes
   d. Fenestrated capillaries======= blood-brain-barrier
   e. Discontinuous capillaries ====== blood-brain-barrier

7. **The arterioles are ? Select one:** **MW**
   a. Elastic vessels
   b. Exchange vessels
   c. Resistance vessels
   d. Capacitance vessels
   e. Branches from Veins

8. **Which of the following is a wide and leaky capillary?** **FN**
   a. Continuous
   b. Fenestrated
   c. Sinusoids

9. **9. Which of the following is true about the cardiac cell?** **FN**
   a. Has multiple large mitochondria
   b. Peripheral nuclei
   c. High lipid content
   d. Triad at A-I line
   e. Diad at A line

10. Which of the following does not have portal circulation? FN

a. Muscle
b. Kidney
c. Liver
d. Brain
e. All organs have portal circulation

11. What is an artery with prominent internal and external elastic lamina called? FN

a. Muscular
b. Elastic

12. Which of the following is not a component of intercalated disk? FN

a. Terminal cisternae
b. Desmosomes
c. Macula adherins

Answers

1	e	2	a	3	e
4	a	5	d	6	a
7	c	8	c	9	a
10	a	11	a	12	a

Anatomy

1. Select the wrong one regarding the four surfaces of the heart? FW
   Select one:
   a. Right pulmonary surface forms the cardiac impression of the left lung
   b. Diaphragmatic (inferior) surface formed mainly by the left ventricle
   c. Anterior (sternocostal) surface formed mainly by the right ventricle
   d. Left pulmonary surface consists mainly of the left ventricle
   e. Right pulmonary surface formed mainly by the right atrium

2. Coronary sinus lies in? Select one: MW
   a. Left part of anterior atrioventricular groove
   b. Right part of posterior atrioventricular groove
   c. Coronary sulcus
   d. Left part of posterior atrioventricular groove
   e. Right part of anterior atrioventricular groove

3. The base of the heart. Which is true? Select one: MW
   a. Faces inferiorly toward the diaphragm
   b. Related to esophagus K
   c. Receives the pulmonary trunk
   d. The heart rest on its base
   e. is formed mainly by the right atrium

4. Right Ventricle have the following except? Select one: MW
   a. Two papillary muscles
   b. The conus arteriosus (infundibulum) which leads into the pulmonary trunk
   c. The septomarginal trabecula
   d. The supraventricular crest
   e. Form small part of the diaphragmatic surface

5. Right coronary artery arises from? Select one: MW

a. Anterior aortic sinus of the ascending aorta just above the valve
b. Anterior aortic sinus of the coronary sinus just above the valve
c. Right posterior aortic sinus of the ascending aorta just above the valve
d. Anterior aortic sinus of the descending aorta just above the valve
e. Left posterior aortic sinus of the ascending aorta just above the valve

6. With respect to right coronary, all are true. except? MW

a. Supplies the lower part of inter-ventricular septum.
b. Predominates in 50% of population.
c. Supplies All right ventricle.
d. Supplies the posterior wall of left ventricle
e. Supplies the upper part of inter-ventricular septum.

7. The superior mediastinum contains the following except? MW

a. Thymus
b. Phrenic nerves
c. Thoracic duct
d. Right recurrent laryngeal nerve
e. Trachea

8. Right coronary artery ends by? Select one: FW

a. Anastomosing with the posterior interventricular artery
b. Anastomosing with the left coronary artery
c. Anastomosing with the circumflex branch of the left coronary artery
d. Anastomosing with the right marginal artery
e. Anastomosing with the anterior interventricular artery

9. Which is the wrong regarding the right atrium? FW

a. Forms the right border of the heart
b. The SVC opens into it at the level of the right 5th costal cartilage

c. Have the opening of the coronary sinus
d. Have rough, muscular anterior wall
e. The oval fossa seen in interatrial septum separating the atria

10. All of the followings are paired branch of the abdominal aorta except?

a. Superior mesenteric artery **FW**
b. Renal artery
c. Lumbar artery
d. Middle suprarenal artery
e. Gonadal artery

11. All of the followings drain in the coronary sinus except? FW

a. Middle cardiac vein
b. Posterior vein of the left ventricle
c. Great cardiac vein
d. Anterior cardiac vein
e. Small cardiac vein

12. One of the followings does not pass in the posterior mediastinum? FW

a. Esophagus
b. Trachea
c. Azygous venous system
d. Descending thoracic aorta
e. Thoracic duct

13. Auscultation of the heart valves. Which is wrong? Select one: FW

a. The aortic valve over the medial end of the second right intercostal space
b. The pulmonary valve over the medial end of the second left intercostal space
c. The first sound is produced by the sharp closure of the aortic and pulmonary valves
d. The mitral valve at the level of the fifth left intercostal space, (9 cm) from the midline
e. c. The tricuspid valve over the left half of the lower end of the body of the sternum

14. Select the wrong one regarding the four surfaces of the heart? FW

a. Right pulmonary surface forms the cardiac impression of the left lung

b. Diaphragmatic (inferior) surface formed mainly by the left ventricle

c. Anterior (sternocostal) surface formed mainly by the right ventricle

d. Left pulmonary surface consists mainly of the left ventricle

e. Right pulmonary surface formed mainly by the right atrium

15. Right coronary artery ends by ? Select one: FW

a. Anastomosing with the posterior interventricular artery

b. Anastomosing with the left coronary artery

c. Anastomosing with the circumflex branch of the left coronary artery

d. Anastomosing with the right marginal artery

e. Anastomosing with the anterior interventricular artery

16. All have posterior relation to base of heart except?

a. T3-T6 vertebrae
b. Pericardium
c. Esophagus
d. Aorta
e. Oblique sinus

17. All of the followings are paired branch of the abdominal aorta except? Select one: FW

a. Superior mesenteric artery

b. Renal artery

c. Lumbar artery

d. Middle suprarenal artery

e. Gonadal artery

18. All of the followings are anterior relations of the first part of the right subclavian artery except ? Select one: **FW**

a. Sternothyroid muscle

b. Thoracic duct

c. Common carotid artery

d. Platysma muscle

e. Ansa subclavian

19. All of the followings drain in the coronary sinus except? Select one: **FW**

a. Middle cardiac vein

b. Posterior vein of the left ventricle

c. Great cardiac vein

d. Anterior cardiac vein

e. Small cardiac vein

20. All the followings are superior relations of the arch of the aorta except? Select one: **FW**

a. Left common carotid artery

b. Brachiocephalic artery

c. Left subclavian artery

d. Left subclavian vein

e. Left brachiocephalic vein

21. Regarding the arterial supply to the upper limb, ALL the following statements are WRONG, EXCPT: Choose one ANSWER? Select one: **FW**

a. is delivered via three main arteries

b. Right subclavian comes off the aorta

c. Radial artery is smaller than ulnar artery

d. Brachial artery has no branches in the upper half of the arm

e. Ulnar artery is the main blood supply of the forearm and hand.

22. One of the followings does not pass in the posterior mediastinum? Select one: FW

a. Esophagus

b. Trachea

c. Azygous venous system

d. Descending thoracic aorta

c. Thoracic duct

23. The profonda femoris artery arises from? Select one: FW

a. Lateral aspect of the femoral artery

b- Anterior aspect of the femoral artery

c. Medial aspect of the femoral artery

d. Posterolateral aspect of the femoral artery

e. Posterior aspect of the femoral artery

24. All of the followings are branches from internal carotid artery except ? Select one: FW

a. Posterior cerebral artery

b. Ophthalmic artery

c. Middle cerebral artery

d. Anterior choroidal artery

e. Anterior cerebral artery

25. Auscultation of the heart valves. Which is wrong ? Select one: **FW**

a. The aortic valve over the medial end of the second right intercostal space

b. The pulmonary valve over the medial end of the second left intercostal space

c. The first sound is produced by the sharp closure of the aortic and pulmonary valves

d. The mitral valve at the level of the fifth left intercostal space, (9 cm) from the midline

e.The tricuspid valve over the left half of the lower end of the body of the sternum

26. All true about right coronary except? **MN**

It supplies posterior 2/3 of interventricular septum

27. all of the following are Tributaries of coronary sinus except? **MN**

anterior cardiac vein of left ventricle

28. which is Wrong about thoracic duct? **MN**

enter the point of confluence of right internal jugular and subclavian vein

29. Heart weight ? **MN**

330

30. Inferior surface of the heart is formed mainly from ? **MN**

left ventricular

31. Ulnar artery separates from the median nerve by? **MN**

The ulnar head of pronator teres

32. Regarding the Blood supply to the upper limb, which is FALSE? **MW**

Select one

a. The subclavian artery is divided schematically by scalenus anterior

b. First part of the axillary artery gives one branch.

c. The ulnar head of pronator teres separates brachial artery from the ulnar nerve.

d. Pectoralis minor schematically divides the axillary artery into three parts.

e. Superficial palmar branch is from radial artery in the hand.

33. Which of the following artery passes through the foramen lacerum?

Select one: **MW**

a. Common carotid artery

b. Middle meningeal artery

c. External carotid artery

d. Internal carotid artery

e. Accessory meningeal artery

34.With respect to right coronary, all are true. except? **MW**

Select one:

a. Supplies the lower part of inter-ventricular septum.

predominates in 50% of population.

c. Supplies All right ventricle.

d. Supplies the posterior wall of left ventricle

e. Supplies the upper part of inter-ventricular septum.

35. All the followings are branches of the arch of the aorta except? **MW**

Select one:

a. Left common carotid artery

b. Thyroida ima artery

c. Superior thyroid artery

d. Brachiocephalic artery

e. Left subclavian artery

36. The superior mediastinum contains the following except? **MW**

Select one:

a. Thymus

b. Phrenic nerves

c. Thoracic duct

d. Right recurrent laryngeal nerve

e. Trachea

37. All of the followings are anterior relations of the first part of subclavian artery except? **MW**

Select one:

a. Vagus nerve

b. Sternohyoid muscle

c. Ansa cervicalis

d. Platysma muscle

e. Internal jugular vein

38. All of the followings are single branch of the abdominal aorta except?

Select one: **MW**

a. Superior mesenteric artery

b. Median sacral artery

c. Coeliac trunk

d. inferior mesenteric artery

e. Medial sacral artery

39. The vein that drains in the coronary sinus is derived from? (???) **MW**

a. Right horn of the sinus venosus

b. Left common cardinal vein

c. Left vitelline vein

d. Left horn of the sinus venosus

e. Right common cardinal vein

40. Regarding the ulnar artery. it passes deep to the following muscles EXCEPT, choose ONE ANSWER? **MW**

Select one:

a. Ulnar head of pronator teres

b. Flexor carpi radials

c. Palmaris longus

d. Flexor digitorum superficialis

e. Flexor digitorum profundus

41. Right Ventricle have the following except? MW

Select one:

a. Two papillary muscles

b. The conus arteriosus (infundibulum) which leads into the pulmonary trunk

c. The septomarginal trabecula

d. The supraventricular crest

e. Form small part of the diaphragmatic surface

42. The base of the heart. Which is true? MW

Select one:

a. Faces inferiorly toward the diaphragm

b. Related to esophagus

c. Receives the pulmonary trunk

d. The heart rest on its base

e. is formed mainly by the right atrium

43. Regarding the cardiothoracic ratio and borders. Which is wrong of the following?(not sure answer) MW

Select one:

a. The right border is slightly convex to the right

b. The left border consists mainly of the left ventricle

c. The ascending aorta and pulmonary trunk emerge from the superior border

d. The cardiothoracic ratio usually more the 50% in PA view of chest X Rays

e. The right border consists mainly of the right atrium

44. What can be seen in right atrium **FN**

a. Opening of coronary sinus

45. All are true about maxillary artery except? **FN**

a. Gives a branch to the upper eyelid

46. Vein found in anatomical snuff box **FN**

a. Cephalic vein

47. Artery that supplies the infundibulum of right ventricle? **FN**

a. Right conus artery

48. Artery that supplies the largest area of interventricular septum? **FN**

a. Anterior interventricular artery

49. Which of the following does not participate in trochanteric anastomosis?

a. Obturator artery **FN**

b. Lateral circumflex

c. Medial circumflex

d. Superior gluteal

e. Inferior gluteal

50. Dorsalis pedis is a continuation of? FN

a. Anterior tibial artery

51. Which of the transverse foramen of cervical vertebra does not have vertebral artery? FN

a. 7th

52. 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? FN

a. Brachiocephalic, left common carotid, left subclavian

53. Which of the following is not found in the superior mediastinum? FN

a. Right laryngeal recurrent nerve

54. Which of the following is not true about arch of the aorta? FN

a. It is the first part of aorta

55. All the following changes can happen in severe hypertension except? FN

a. Increased ECG (or QRS I forgot) magnitude

b. Increase myocardial cells/size (I also forgot)

c. Blurry vision

Answers

1	a	2	d	3	b
4	a	5	a	6	a
7	d	8	c	9	b
10	a	11	d	12	b
13	c	14	a	15	c
16	a	17	a	18	b
19	d	20	d	21	e
22	b	23	a	24	a
25	c	32	c	33	d
34	a	35	c	36	d
37	c	38	e	39	d
40	e	41	a	42	b
43	d	49	a		

Embryo

1. **The foramen ovale lies between?** **FW**

   Select one:

   a. Septum secondum below and septum primum above
   b. Septum primum and endocardial cushions
   c. Septum primum and roof of the atrial chamber
   d. Septum secondum above and septum primum below
   e. Septum secondum and endocardial cushions

2. **Which of the following does not form part of the aorta?** **FN**

   a. Right dorsal aorta
   b. Left dorsal aorta
   c. Left 4th pharyngeal arch
   d. Aortic sac
   e. Left horn of aortic sac

3. **What are the borders of foramen ovale?** **FN**

   a. Septum primum and septum secondum

4. **Order of sacs in heart tube from cranial to caudal?** **FN**

   a. Bulbus cordis – primitive ventricle – primitive atrium – sinus venosus

5. **Which of the following is false according to fate of derivatives of the right side of sinus venosus?** **MW**

Select one:

a. Right horn forms smooth part of the right atrium

b. Right vitelline vein gives suprahepatic part of the inferior vena cava

c. Right umbilical vein degenerated

d. Right vitelline vein gives subhepatic part of the inferior vena cava

e.Right common cardinal vein forms lower part of the superior vena cava

6. **The distal part of the left 6th pharyngeal arch forms?** **MW**

   Select one:

   a. Left common carotid artery
   b. Maxillary artery
   c. Arch of the aorta
   d. Ductus arteriosus
   e. Pulmonary artery

7. **The branch of the internal Carotid artery is formed from?** **MW**

   Select one:

   a. The first pharyngeal arch
   b. The 4th pharyngeal arch
   c. The 2nd pharyngeal arch
   d. The 3rd pharyngeal arch
   e. The 5th pharyngeal arch

Answers

1	d	2	a
5	d	6	d
7	d		

Pharma

1. One of the following drug is a fibric acid derivatives? MN

   Fenofibrate + Gemfibrozil

2. Which of the following drugs are considered bile acid sequestrants?

   Cholestyramine MN

3. one of the following is calcium channel blockers ? MN

   Verapamil

4. duration of nitroglycerin ? MN

   Three minute (3 min)

5. Which one of the following is not an adverse effect of quinidine?

   Select one: MW

   a. Diarrhea
   b. Atrial fibrillation.
   c. Tinnitus and dizziness
   d. Torsade de pointes
   e. A-V block

6. The following occur in digoxin toxicity except? MW

   Select one:

   a. Anorexia and vomiting
   b. Xanthopsia
   c. Ventricular bigeminy
   d. Complete heart block
   e. Convulsions

7. **Which one of the following is false ?** MW

Select one:

a. Flecainide does not prolong ERP of myocardia fibers
b. Verapamil helps to control most paroxysmal ventricular tachycardia
c. Procainamide is contra-Indicated in patients with history of SLE.
d. Sotalol may cause torsade de pointes
e. Ibutllide can stop atrial fibrillation

8. **Which of the following matches is wrong regarding antihyperlipidemic drugs? Select one:** FW

a. Statins-hypercholesterolemia
b. Nicotinic acid - familial hyperlipidemias
c. Fibrates- hypercholesterolemia.
d. Ezetimibe- Cholesterol Absorption Inhibitor
e. Cholestyramine- hypercholesterolemia

9. **All following about antihyperlipidemic drugs EXCEPT? Select one:**

a. Ezetimibe has short half life MW
b. Statin is contraindicated in children
c. Statin is contraindicated in pregnancy
d. Fibrates can cause Gallbladder stones
e. Fibrates can cause myositis

10. **Which of the following is false about digoxin ? Select one:** MW

a. It leads to acceleration of phase 3 of cardiac action potential in atrium and ventricle
b. It has selective cardiac vagal stimulant action on atrial muscle and AV node
c. In overdose, it can lead to formation of DADS in both atria and ventricles
d. It can easily control the ventricular rate in atrial fibrillation hyperthyroidism.
e. It has a very low therapeutic index

11. **All following about drug therapy of hyperlipidemia are TRUE EXCEPT ?**

Select one: MW

a. Statins cause 30% reduction in LDL levels

b. Niacin is the most potent agent to increase HDL.
c. Fibrates cause 30% decrease in triglyceride levels
d. Cholestyramine is bile acid sequestrant
e. Ezetimibe increases intestinal absorption of cholesterol.

12.All following about statins are TRUE EXCEPT? **MW**

a. First line therapy for reducing LDL
b. inhibit HMG Co reductase
c. They are given as single oral dose in the evening
d. Are administered immediately after AMI
e. Rare side effect: muscle pain.

13.All the following about therapeutic strategies in treatment of hypertension (HTN) are true except? **MW**

a. Mild HTN can be controlled with a single drug.
b. initial therapy with thiazide diuretics unless contraindicated. ‘
c. Beta - Blockers should add to thiazide if ABP is uncontrolled. when a thiazide is used initially.
d. Beta - Blockers. ACEI and diuretics are favored in treatment of HTN in elderly patients.
e. Patients with chronic renal disease respond better to ACEI.

14. One of the following drug is a fibric acid derivatives ? **MN**

Fenofibrate + Gemfibrozil

15. one of the following is calcium channel blockers? **MN**

Verapamil

16. all of the following drugs are use in HF except ? **MN**

alpha blockers

17. duration of nitroglycerin ? **MN**

Three minute (3 min)

18. ACEs inhibitors ,all of the following are true except ? **MN**

Increase vascular resistance

19. one is wrong about treatment of HF ? **MN**

ARB'S blockers produce cough

20. all of the following are side effect of alpha one agonist except ? **MN**

a. Dizziness
b. Syncope
c. Orthostatic hypotension
d. Sodium and water retention
e. Bradycardia

21. regarding atenolol , which is INCORRECT ? **MN**

a. Its cardioprotective
b. -ve inotropic
c. Increase oxygen demand during exercise and rest
d. Decrease ABP

22. Which of the following is not a class of anti-arrhythmic drugs? **FN**

a. Chlorine channel blockers

23. Which of the following is an HMG-CoA reductase inhibitor? **FN**

a. Fluvastatin

(other options didn't end with -statin)

24. What is a derivative of Nicotinic acid? **FN**

a. Niacin

26. Which of the following is incorrect about treatment of heart failure? **FN**

a. CCB (Ca channel blockers) are used for chronic heart failure

27. Which of the following is incorrect about treatment of heart failure? **FN**

a. Digoxin has long onset of action

28. Which of the following is incorrect about heart failure treatment? **FN**

a. ARBS increase bradykinin level

29. Heparin is used for? **FN**

a. Initial management of myocardial infarction

30. Which of the following is not an anti-hypertensive drug? **FN**

a. Amphetamine

b. ACE inhibitors

c. ARBS

31. Route of administration for isosorbide mononitrate? **FN**

a. Orally

b. Sublingually

c. IV

32. Which of the calcium channel blockers used for hypertension causes gingival hyperplasia? **FN**

a. Verapamil

33. Alpha 1 adrenergic receptor blockers cause vasodilation by decreasing what action of norepinephrine? **FN**

a. Vasoconstriction

34. Concerning organic nitrates, all the following are true EXCEPT ? Select one:

a. They contract all types of smooth muscles. **FW**

b. They relief cardiac pain by reducing cardiac work.

c. GTN is usually given sublingually.

d. They are highly lipid soluble.

e. Plasma half life of isosorbide dinitrate is 20 minutes.

35. All of the following drugs are Ca- antagonist except: Select one: **FW**

a. Nifidipine

b. Verapamil

c Diltlazem

d. Amlodipine

e. Acebutalol

36. All the following are adverse effects of thiazide diuretics except: Select one:

a. Hyperglycemia

b. Hypokalemia

c. Thrombocytopenia

d. Increase plasma cholesterol

e. Hypernatremia

37. Which one of the following is not an adverse effect of quinidine? Select one:

a. Diarrhea FW

b. Atrial fibrillation

c. Tinnitus and dizziness

d. Torsade de pointes

e. A-V block

38. The following can inhibit conduction in the accessory AV bundle of Kent except? FW

Select one:

a. Procainamide

b. Disopyramide

c. Lignocaine

d. Amiodarone

e. Quinidine

39. All of the following about ACE inhibitor are true except: FW

Select one:

a. Useful in treatment of hypertension particularly with chronic renal disease.

b. Useful in treatment of hypertension with left ventricular hypertrophy.

c. Cause dry cough and loss of taste sensation as adverse effects

d. They are contraindicated during pregnancy

e. Cause hypokalemia as adverse effects

40. Which one of the following is not effective in control or prevention of ventricular fibrillation? MW

Select one:

a. Lignocaine IV

b. Amiodarone IV

c. Quinidine oral

d. ICD

e. Procainamide oral

41. Concerning initial management of myocardial infarction, all the following are true EXCEPT! **MW**

Select one:

a. Oxygen.

b. Nitrates.

c. Morphine.

d. Adrenaline.

e. Aspirin.

42. All the following about K- sparing diuretics are true except? Select one:

a. Are low efficacy K-sparing diuretics. **MW**

b. Effective in Conn's syndrome and HTN associated with hypokalemia.

c. Cause Na retention and K excretion.

d. Spironolactone is contraindicated in renal failure.

e. Cause gynecomastia and impotence as adverse effects.

44. The following can inhibit conduction in the accessory AV bundle of Kent except? **WM**

Select one:

a. Procainamide
b. Disopyramide
c. Lignocaine
d. Amiodarone
e. Quinidine

Answers

5	b	6	e	7	b
8	c	9	a	10	d
11	e	12	e	13	d
20	e	21	c	30	a
31	a	34	a	35	e
36	e	37	b	38	a
39	e	40	e	41	d
42	c	44	a		

Patho

1. .One of the following is not a major Criteria in the Jones System for Acute Rheumatic Fever ? Select one MW
   a. Carditis.
   b. Arthralgia
   c. Erythema marginatum
   d. Migratory polyarthritis
   e. Sydenham chorea.

2. 19-year-old man has had a low-grade fever for 3 weeks. On physical examination, his temperature is 38.3° C, pulse is 104/min. respirations are 28lmin. and blood pressure is 95/60 mm Hg. A tender spleen tip is palpable. There are splinter hemorrhages under the fingernails and tender hemorrhagic nodules on the palms and soles. A heart murmur is heard on auscultation. Which of the following infectious agents is most likely to be cultured from this patient's blood? MW
   Select one:
   a. Coxsackievirus B
   b. Mycobacterium tuberculosis.
   c. Pseudomonas aeruginosa.
   d. Viridians streptococci.
   e. Trypanosoma cruzi.

3. 31-year-old healthy woman has a check of her health status and the only finding is a mid-systolic click on auscultation of the heart Within 5 years she has increasing dyspnea. Echocardiography now shows mitral regurgitation from prolapse of a leaflet. Which of the following pathologic changes is most likely present in this valve? Select one: MW
   a. Destructive vegetations
   b. Infective endocarditis
   c. Aortic regurgitation
   d. Senile degeneration

e. Rheumatic fibrosis

4. Al the following cardiac disease are correctly combined with their causes. EXCEPT ? MW

   Select one:

   a. Endomyocardial fibrosis: Nutritional deficiencies
   b. Restrictive Cardiomyopathy: insoluble B-pleated sheets
   c. Hypersensitivity myocarditis: Drugs
   d. Hypertrophic cardiomyopathy: Toxoplasma gondii
   e. Chagas disease: Trypanosoma cruzi

5. The following situations may lead to "culture negative" endocarditis EXCEPT ? select one : FW

   a. Non-bacterial etiologies.
   b. The etiological agent is the Gram-negative Cardiobatterium
   c. The use of antibiotics prior to blood culture sampling
   d. Subacute endocarditis in individuals with prosthetic valves following dental procedures.
   e. Infection by one of unusual organisms causing the endocarditis such a s Coxiella species

6. 10-year-old girl develops subcutaneous nodules over the skin of her arms and torso 3 weeks after a bout of acute pharyngitis. She manifests choreiform movements and begins to complain of pain in her knees and hips. Particularly with movement. A friction rub is heard on auscultation of her chest. An abnormality detected by which of the following serum laboratory findings is most characteristic of the disease affecting this girl? Select one: FW

   a. Anti-streptolysin O antibody titer
   b. Antinuclear antibody titer
   c. Creatinine level
   d. Rapid plasma test
   e. Troponin I level

7. 41-year-old woman has had increasing dyspnea for the past week. On physical examination, temperature is 373°C, and blood pressure is 150/95 mm Hg. There is dullness to percussion over the lung bases. A chest radiograph shows large bilateral pleural effusions and a normal heart size. Laboratory findings includes serum creatinine 3.1 mg/dL and positive ANA and anti-double-stranded DNA antibody test results. Which of the following cardiac lesions is most likely to be present in this patient?

   Select one: FW

   a. Calcific aortic stenosis
   b. Hemorrhagic pericarditis
   c. Nonbacterial thrombotic endocarditis
   d. Libman-Sacks endocarditis
   e. infective endocarditis

8. By an autopsy examination of a case of sudden death, the heart showed thinning of the ventricular wall, and the microscopic examination revealed myocyte replacement by massive fatty infiltration with mild fibrosis, the proper diagnosis is? Select one: FW

   a. Restrictive Cardiomyopathy
   b. Myocarditis
   c. Hypertrophic cardiomyopathy (HCM)
   d. Arrhythmogenic Right Ventricular Cardiomyopathy
   e. Dilated Cardiomyopathy

9. All the following effusion types are correctly combined with their causes, EXCEPT ? Select one: FW

   a. Fibrinous effusion: Malignancy
   b. Serous effusion: Hypoalbuminemia
   c. Serosanguineous effusion: Aortic dissection
   d. Chylous effusion: Mediastinal lymphatic obstruction
   e. Serosanguineous effusion: Blunt chest trauma

10. 25-year-old man was found dead at home by the apartment manager, who had been called by the decedent's employer because of failure to report to work for the past 3 days. An external examination by the medical examiner

showed splinter hemorrhages under the fingernails and no signs of trauma. The gross appearance of the heart at autopsy is shown in the figure .Which of the following laboratory findings is most likely to provide evidence for the cause of his disease ? Select one : FW

a. Elevated cardiac enzymes
b. Positive ANCA serology
c. Increased creatine kinase-MB (CK-M8) fraction
d. High double stranded DNA autoantibody titer
e. Positive blood culture for Staphylococcus aureus

11. When is the risk of serious arrhythmias after AMI the highest? FN

a. 1 hour after

12. Wave of macrophages that remove necrotic myocytes and neutrophil fragments after myocardial infarction? FN

a. 1 to 3 days
b. 5 to 10 days

13.All of the following factors increase risk of rupture of plaque except FN

a. Thick fibrous cap

14.Which of the following is not true about temporal arteritis? FN

a. Occurs before 50 years of age
b. Granuloma
c. Involve temporal and ophthalmic
d. T cell mediated

15.Patient with bilateral pneumonitis, with radiographically visible nodules with central cavitation, chronic sinusitis, mucosal ulceration of nasopharynx and renal involvement FN

a. Granulomatosis with polyangiitis

16.Most common cause of mitral stenosis? FN

a. Chronic rheumatic valve disease
b. Acute rheumatic fever

17. Which of the following is wrong about myxomatous mitral valve? FN

a. Secondary mitral prolapse happens more in men

18. What is the cardiomyopathy where ventricular wall is severely thinned owing to myocyte replacement by fatty infiltration and lesser amounts of fibrosis? FN

a. Arrhythmogenic right ventricular cardiomyopathy

19. What defect causes aneurysms in Marfan syndrome? FN

a. Defective synthesis of fibrillin

b. Other options were Collagen types

20. What is the normal thickness of left ventricular wall? (not sure it's patho)

a. 1.3 cm

21. Not small vessel vasculitis : MN

Kawazaki

22. Granulation tissue after myocardial infarction is most prominent at Boxcar nuclei found in? MN

systemic hypertensive disease

23. A kind of vasculitis associated with allergic rhinitis? MN

Churg Straus syndrome

24. the total peripheral resistance Increase in ? MN

hyperproteinemia

25. the total peripheral resistance Decrease in? MN

muscular exercise

26..Ventricular rupture after MI occur in? MN

One Week

27. Most common cardiovascular manifestation associated with marfan syndrome ? MN

Endocarditis

28. which of the following biomarker used in late diagnosis? MN

Troponin

29. All the following are true regarding Malignant hypertension, except?

Select one: MW

a. It measures as systolic pressures over 200 mm Hg or diastolic pressures over 120
mmHg.

b. Accounting (approximately 5%) of hypertensive patients.

c. Associated with renal failure and retinal hemorrhages.

d. Microscopically, marked by hyaline arteriolosclerosis.

e. It is most commonly superimposed on preexisting benign hypertension.

30. A 55-year-old woman experienced sudden severe substernal chest pain. She Fainted and woke up in the emergency room.

Examination revealed tachycardia and hypotension. Laboratory studies show an increased serum troponin I, and an ECG confirmed the presence of ST-segment elevated MI. Which of the following features would be most prominent by histopathologic examination of the involved myocardium in 8 weeks? MW

Select one:

a. Collagenous scar.

b. Neutrophilic infiltration.

c. Well established granulation tissue.

d. Wavy fibers.

e. Macrophages infiltration.

31. A 65-year-old male has had stable angina for the last-4 years. For the last week he has experienced multiple angina attacks while on rest, with the pain

severity has increased. Electrocardiogram revealed ST segment elevation. labs revealed elevated serum Troponin. Which of the following events is most likely to explain these findings? MW

Select one:

a. Atherosclerotic plaque disruption and superimposed thrombosis.
b. Fibrinous pericarditis.
c. Left ventricular mural thrombosis
d. Ventricular aneurysm.
e. Mitral valve prolapse.

32. The pathogenesis of atherosclerosis is based on response-to-injury hypothesis. Which of the following steps is considered to be the cornerstone of this process? MW

Select one :

a. Smooth muscle cell proliferation and extracellular matrix deposition.
b. Increased local oxygen free radical production.
c. Thrombosis superimposed on an ulcerated plaque.
d. Endothelial injury and dysfunction.
e. Accumulation of lipoproteins (mainly oxidized LDL) in the vessel wall.

33. Fatty streaks on arterial walls are recognized as early lesions for atheroma, lesions show increased attachment of monocytes to endothelium, the monocytes migrate and become macrophages: these macrophages transform themselves into FOAM CELLS. Which of the following substances is most likely to be responsible for the transformation of macrophages? MW

Select one:

a. C-reactive protein.
b. Homocysteine.
c Lipoprotein.
d. Oxidized LDL.
e. Platelet-derived growth factor.

34. Bilateral leg edema seen in the following except? MW

Select one:

a. heart failure

b. nephrotic syndrome (renal disease)

c. liver disease

d. immobility

e. asthma

35. A 17-month old boy presents with a three days history of fever and a skin rash. No accompanying cough or diarrhea. On physical examination, and in addition to the rash, he was found to have cervical lymphadenopathy and oral rash.

What is the most common fatal complication of the most likely diagnosis?

select one: MW

a. Asthma.

b. Glomerulonephritis.

c. Intracranial hemorrhage.

d. Septic shock.

e. Coronary artery aneurysm.

36..One of the following is incorrect about abdominal aortic aneurysm (AAA)?

Select one: FW

a. It is most common location of an aneurysm caused by atherosclerosis.

b. Risk for rupture is related to the size, 6 cm in diameter or less almost never burst

c. Typically located between the renal arteries and the aortic bifurcation.

d. Mortality rate in emergency surgery after rupture reaches 50%.

e. Most AAAs are asymptomatic.

Answers

1	b	2	d	3	b
4	d	5	d	6	a
7	d	8	d	9	a
10	e	12	b	14	a
16	a	19	a	29	d
30	a	31	a	32	d
33	d	34	e	35	e
36	b				

Microbiology & medicine

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?** **FN**
   a. Viridans strept
   b. S. aureus

2. **Infective endocarditis associated with intravenous drugs users is caused by which organism?** FN
   a. Staph aureus
   b. S. epidermidis

3. **A 72-year-old man with a history of endocarditis underneath prostate surgery 3 weeks ago. Last week he has had persistent fever and weakness, Echocardiogram suggests endocarditis. Blood cultures were done. If the patient is subsequently diagnosed with this infection. which of the following laboratory test results were aid In the diagnosis of the most likely causative organism?** MW
   Select one:
   a. Forming beta hemolytic colonies on blood agar.
   b. Catalase positive.
   c. Dark brown to black color in bile esculin agar.
   d. Coagulase positive.
   e. microscopic examination reveals Gram positive bacilli in chains.

4. **The following situations may lead to "culture negative" endocarditis EXCEPT ? Select one:** FW
   a. Non-bacterial etiologies.
   b. The etiological agent is the Gram-negative Cardiobatterium.
   c. The use of antibiotics prior to blood culture sampling.
   d. Subacute endocarditis in individuals with prosthetic valves following dental procedures.
   e. Infection by one of unusual organisms causing the endocarditis such as Coxiella species.

Answers

1	a	2	a
3	d	4	d

surgery

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

1. **Primary prevention of early stage of disease is called** **FN**

   a. Secondary prevention

2. **Novel risk factor for CVD** **FN**

   a. Excess homocysteine levels

3. **What is incorrect about epidemiology of CVD?** **FN**

   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? FN

a. Nicotine replaces oxygen

5. When do carbon monoxide levels return to normal after smoking cessation? FN

a. After half a day of smoking cessation

6. All of the following are unhealthy eating habits for CVD, except FN

a. Diet low in refined carbohydrates

7. Which one of the followings considered as a Novel risk factors for CVD?

Select one: FW

a. Physical inactivity

b. inflammatory markers (C-reactive protein)

c. Cigarette smoking

d. Obesity

e. Hypertension

8. No crepitation (crackles) seen in the following except?

Select one:

a. heart failure

b. asthma

c. influenza

d. acute bronchitis

e. tracheitis

9. **Some of atherosclerosis risk factors are constitutional and therefore less controllable), but others are acquired or related to modifiable behaviors. One of the following is correct about atherosclerosis disease risk factors? Select one:**

a. Hypercholesterolemia alone is not sufficient to induce lesions.

b. Smoking cessation reduces atherosclerosis risk.'

c. Women after menopause are protective against atherosclerosis consequences.

d. Type A personality is associated with lower risks.

e. Familial hypercholesterolemia is most important independent risk factor for atherosclerosis

10. **ONE of the following is FAISE?**

Select one:

a. Daily intake of fresh fruit and vegetables in an adequate quantity (400-500 g per day)

b. Potassium intake should be at a level which will keep the sodium to potassium ratio close to 10

c. Regular fish consumption (1 -2 servings per week) is protective

d. refined carbohydrates are harmful

e. Filtered coffee significantly lead to a decline in serum cholesterol

11. **Al the followings are Non-modifiable CVD risk factors EXCEPT? Select one:**

a. Diabetes mellitus

b. Heredity or family history

c. Age

d. Ethnicity or race

e. Gender

12. **A smoker gains almost 10 years of life expectancy when smoking cessation at which age? Select one:**

a. 30

b. 40

c. 50

d. 60
e. 70

13. ONE is FALSE about smoking in Jordan? Select one:

a. Jordan is among the countries with high smoking prevalence and medium consumption
b. Male sex is associated with increased prevalence of smoking.
c. Jordanian smokers smoke an average of 22-42 cigarettes per day per smoker.
d. Jordan aims to reduce tobacco use by 30% by 2025
e. 35% of University students in Jordan are smokers

Answers

7	b	8	b
9	c	10	b
11	a	12	a
13	c		

physio

1. **about Purkinje fibers all true except ?** **MN**
   stain darker with H&E than other cardiac cells

2. **the total peripheral resistance Increase in ?** **MN**
   hyperproteinemia

3. **the total peripheral resistance Decrease in?** **MN**
   muscular exercise

4. **All true except?** **MN**
   cardiac muscle can't be stimulated in relative refractory period

5. **Aortic valve closer in which phase ?** **MN**
   isometric relaxation

6. **Second heart sound in which phase ?** **MN**
   isometric relaxation

7. **First heart sound in which phase?** **MN**
   isometric contraction

8. **Second heart sound differ from first heart sound ?** **MN**
   Higher frequency ???

9. **in heterometric autoregulation?** **MN**
   End diastolic volume increase

10. **Cardiac index = ?** **MN**
    co and body surface area

11. **ejection fraction is?** **MN**
    SV and EDV

12. **Rushing of blood in the aortic and pulmonary arteries causes?** **MW**
    Select one:
    a. First component of 1st heart sound.
    b. Second component of 1st heart sound
    c. Second heart sound.
    d. Third heart sound.

e. Fourth heart sound.

13. Regarding the diastolic Period of the heart? **MW**

Select one:

a. It is the period of ventricular filling with blood
b. Complete Coronary filling occurs during it.
c. It is a period for ventricular rest.
d. Maximum ventricular pressure occurs during it.
e. It is the period of ventricular rest and filling with blood.

14. T wave of normal electro-cardiogram corresponds to ? **MW**

Select one:

a. Ventricular depolarization.
b. Ventricular repolarization
c. Atrial depolarization.
d. Atrial systole.
e. Papillary muscle repolarization.

15. An ECG revealed no P waves in any lead indicates damage of? **MW**

Select one:

a. Sino atrial (SA) node
b. Bundle of His.
c. Purkinje fibers.
d. Left bundle branch.
e. Right bundle branch.

16. Which of the following is not true? **MW**

Select one:

a. As you start to move from arterioles to capillaries the cross-sectional area and velocity are going to start rising
b. Increase the preload would increase the stroke volume and thus the perfusion blood pressure
C. Turbulent blood flow observed in both pathological and physiological conditions
d. Hypertension would increase afterload and thus decrease stroke

volume

e. Polycythemia would decrease perfusion blood pressure

17. Which of the following matched pairs regarding contraction of the cardiac muscle are not true? **MW**

Select one:

a. Calcium-Calmodulin

b. Calcium bind to ryanodine receptor type2- Calcium outflow from sarcoplasmic reticulum

c. Calcium bind to C troponin- Move tropomyosin away from the myosin head

d. Functional syncytium - Very slow synchronized contraction between nodal and myocardial cells

e.Cross bridge between actin and myosin- Heart pumping

18. Coronary blood flow occurs mainly in? **MW**

Select one:

a. Isometric contraction phase.

b. Isometric relaxation phase.

c. Maximum filling phase.

d. Reduced filling phase.

e. Atrial contraction phase.

19. All the following produces coronary Vasodilatation. Except? **MW**

Select one:

a. Renal ischemia

b. Adenosine.

C. EDRF.

d. Histamine.

e. Hypoxia.

20. Which of the following matched pairs are not true regarding cardiac muscles ? **MW**

Select one:

a. Repolarization of the cardiac muscle- Calcium proton ATPase

b. Repolarization of cardiac muscle- Sodium calcium exchanger
c. Refractory period- Cannot be tetanized
d. Phase 3- Only potassium channels are open
e. Relative refractory period - Phase 1 midway through phase

21. Cardiac output in decreased physiologically in? **MW**

Select one:

a. Marked increase in HR
b. Marked decrease in HR
c. Low temperature
d. Sudden standing from lying down
e. Severe hemorrhage.

22. Which of the following matched pairs are not true regarding conduction system and pathway of the cardiac muscle? **MW**

Select one:

a. Bachman's bundle -Conduct the electrical potential from the right to the left atrium
b. AV node - Fewer gap junction and small diameter
c. Moving loaded positive charges inside the nodal cells - Gap junction
d. Keep the cells tight together and prevent stretching of tight junction-Desmosomes
e. Plateau during contractile cell depolarization- L-type calcium inactive and potassium outflow

23. Which of the following does NOT show rapid initial depolarization at the start of an action potential? **MW**

Select one:

a. SA node.
b. Atrial muscle.
c. Purkinje fibers.
d. Ventricular muscle.
e. Bundle of His.

24. Precapillary sphincter would open and shut based on? **FN**

a. O2 availability

25. What is not true about mean arterial blood pressure? FN

a. Equals systolic pressure minus diastolic pressure

26. Which of the following is not matched regarding autoregulation mechanisms? FN

a. Increased metabolic demand → increase resistance

27. Which of the following is not true about plateau? FN

a. L type Ca channels are inactive and K are active

28. Which of the following is not important for cardiac contraction? FN

a. Ca++ and calmodulin
b. Troponin c
c. Ryanodine receptor 2
d. Funny Na channels

29. Which of the following is not consistent with intrinsic cardiac conduction system? FN

a. Autonomic nervous system

30. What is primary regulator of blood flow to muscles during rest? FN

a. Sympathetic vasoconstriction tone
b. Metabolic demand

31. Main factor affecting coronary circulation? FN

a. Adenosine

32. Diastolic filling of ventricles produces what sound? FN

a. Third heart sound

33. Rushing of blood into aorta and pulmonary trunk produces what sound? FN

a. Second component of 1st sound

34. Sounds of the heart are ____? FN

a. Mainly due to closure of valves

35. Arterioles are? FN

a. Resistance vessels

36. Regarding cardiac cycle FN

a. Has 8 phases

37. Filling of ventricles occurs in FN

a. Atrial systole, maximum and minimum filling phases

38. Which of the following is true about diastole? FN

a. Ventricles rest

b. Complete coronary filling

c. Ventricles filling

d. Ventricle rest and filling

e. All of the above are true

39. If blood pressure in the carotid artery falls, what changes will occur? FN

a. Carotid baroreceptors will decrease their inhibitory impulses

40. Which of the following is not an effect of renin-angiotensin system? FN

a. Excess Sodium excretion

41. Which of the following is true about cardiac cycle? FN

a. Increasing heart rate decreases duration

42. Cardiac output in L/min divided by heart rate is? FN

a. Stroke volume

43. Valves of heart are closed during? FN

a. Isometric relaxation and isometric contraction

44. Which of the following inhibits Vaso motor center? Select one:

a. Mild hypercapnia WM

b. Moderate hypoxia

c. Left ventricular baroreceptors

d. Peripheral chemo receptors

e. Central chemoreceptors

45. Ejection fraction is % ratio of? Select one: WM

a. SV and ESV.

b. Cardiac output and surface area.

c. ESV and Cardiac output.

d. SV and EDV. XXX

e. Cardiac output and SV.

46. Cardiac reserve in heart failure equals? Select one: WM

a. 300~400 %

b. 500-70096

c. 0%

d. 100%

e. 800%

48. Which of the following does NOT show rapid initial depolarization at the start of an action potential? WM

Select one:

a. SA node.

b. Atrial muscle.

c. Purkinje fibers.

d. Ventricular muscle.

e. Bundle of His.

49. Which of the following is not true? WM

Select one:

a. As you start to move from arterioles to capillaries the cross-sectional area and velocity are going to start rising
b. Increase the preload would increase the stroke volume and thus the perfusion blood pressure
c. Turbulent blood flow observed in both pathological and physiological conditions
d. Hypertension would increase afterload and thus decrease stroke volume
e- Polycythemia would decrease perfusion blood pressure

50. An ECG revealed no P waves in any lead indicates damage of?
Select one: WM
a. Sino atrial (SA) node
b. Bundle of His.
c. Purkinje fibers.
d. Left bundle branch. e. Right bundle branch.

51. With respect to cardiac cycle? WM
Select one:
a. It reflects the electrical activity of the heart.
b. Its duration equals 8 seconds.
c. It consists of 8 phases.
d. It consists of 8 phases and its duration equals 8 seconds. e. It starts by ventricular systole.

52. With respect to first heart sound, all are true, except? Select one:
a. It is of low pitch. WM
b. Occurs in isometric relaxation phase.
c. Occurs in isometric contraction and first part of maximum ejection phase. d. Longer in duration than second one.
e. It is of mitral and tricuspid components.

53. Immediately after Hemorrhage? WM

Select one:

a. There is increase in the muscle tone of abdominal wall muscles.

b. There is increase in the central venous pressure.

c. There is conversion of tissue proteins into plasma proteins.

d. There is Increase in sympathetic discharge to the heart due to increase the firing of baroreceptors.

e. Anemic hypoxia stimulates release of erythropoietin from the kidney to stimulate erythropoiesis.

54. Cardiac output in decreased physiologically in? Select one: WM

a. Marked increase in HR

b. Marked decrease in HR

c. Low temperature

d. Sudden standing from lying down

c. Severe hemorrhage.

55. QRS complex indicates? WM

Select one:

a. Atrial depolarization

b. Ventricular depolarization

c. Atrial repolarization

d. Ventricular repolarization

e. Papillary muscle repolarization.

56. The early filling of ventricles occurs in? Select one: WM

a. Reduced filling phase.

b. Maximum filling phase.

c. Atria Systole.

d. in both Reduced filling phase and Maximum filling phase.

e. In both Maximum filling phase and Atrial systole.

57. T wave of normal electro-cardiogram corresponds to ? Select one:

a. Ventricular depolarization. WM

b. Ventricular repolarization.

c. Atrial depolarization.

d. Atrial systole.
e. Papillary muscle repolarization.

58. Ventricular filling occurs in? **WM**

Select one:
a. Maximum filling.
b. Reduced filling.
d. In A. B and c
e. Both a and b

59. Which of the following is not true regarding electrophysiology of the heart? Select one: **WM**

a. Extrinsic cardiac conduction system
b. Automaticity
c. Nodal cells generates rhythm or the base
d. Contractile cells generates pumping action of the heart e. SA node is the primary sinus rhythm

60. In hemorrhage. all are true except? Select one: **WM**

a. The pulse rate is rapid.
b. Respiration Is accelerated.
C. Is accompanied by oliguria.
d. The lost RBCs are immediately restored by released of erythropoietin.
e. The volume and rate of blood loss determine its severity.

61. Which of the following matched pairs are not true? **WM**

Select one:
a. Basal blood flow to kidneys and liver- Highest compared to other organ and tissues
b. Blood flow during exercising - Highest in the skeletal muscles
c. Acute control of blood flow-Humoral changes and rapid
d. long term control- Slow response and conditioned
e. Vasodilator theory- Increase the vasoactive substances thus decrease the resistance and increases the blood flow

62. Which of the following sentence is not describing autoregulation mechanism? WM

Select one:

a. Within less than minute: after acute increase in blood flow and perfusion pressure: the blood flow and perfusion pressure would decrease

b. Regarding metabolic theory. Increased nutrients and decreased tissue levels of vasodilators would increase resistance

c. Regarding myogenic theory, High arterial pressure stretches the vessel. this in turn cause reactive vascular constriction and increase resistance

d. Increase the wall resistance by decreasing the wall tension in the phase of increase wall tension and increased blood pressure

e. The body reacts this way to prevent hyper perfusion or blood flow in the wrong places

63 . Cardiac output is decreased in? Select one: WM

a. Exercise.

b. Eating.

c. Marked tachycardia.

d. Pregnancy.

e. increased venous return.

64. Which of the following regulates the fine control of ABP? Select one: WM

a. Medulla oblongata

b. Midbrain

c. Hypothalamus d. Pons

e. Cerebellum.

65. The cerebral blood flow (ml/minute) is? Select one: WM

a. 250

b. 500

c. 1200

d. 750
e. 1500

66. Sounds of the heart? **WM**

Select one:

a. Mainly produced by closure of valves.
b. Opening of the valves produces inaudible sounds.
c. Heard by phonocardiograph.
d. Recorded by stethoscope only.
e. We have only two of them.

67. The vulnerable period of the heart is? **WM**

Select one:

a. Absolute refractory period.
b. Relative refractory period.
c. Negative after potential.
d. Positive refractory period.
e. Plateau.

68. Which of the following is not true? **WM**

Select one:

a. Perfusion pressure is equal the Mean arterial blood pressure minus Central Venus pressure
b. Systolic pressure on average is 120mmHg
c. Diastolic pressure on average is 80mmIHg
d. If a patient's blood pressure is 83 mm Hg/SO mm Hg. his MAP would be 50 mm Ha
e. Mean arterial blood pressure determines the actual pressure by which will propel the substances out of the capillary beds into the tissues

Answers

12	b	13	e	14	b
15	a	16	a	17	d
18	b	19	a	20	e
21	d	22	e	23	a
28	d	30	a	38	e
44	c	45	d	46	c
48	a	49	a	50	a
51	c	52	a	53	d
54	d	55	b	56	b
57	b	58	e	59	a
60	d	61	d	62	d
63	c	64	a	65	d
66	a	67	b	68	a

biochemistry

1. **What is the cardiac biomarker that remains elevated for the longest time?**

   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?** FN
   a. Troponin and LDH
   b. Myoglobin and CK-MB
   c. AST and LDH

3. **Lipoprotein lipase breaks down TG in VLDL, what apoprotein acts as a catalyst for this enzyme?** FN

   Apoprotein CII

4. **What is the HDL receptor in the liver?** FN

Scavenger receptor class B

5. **Why can't the liver utilize the ketone bodies it produces?** FN

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?** FN

a. SREBP and SCAP
b. SCAP and Insig

7. Which of the following correctly describes phosphorylation-dephosphorylation of PDH ? (مش هيك الصياغة) FN

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 FN

Increased oxidative stress caused by oxidation of fatty acids

9. Which of the following biochemical markers will be the most specific to acute myocardial infarction? FW

Select one:

a. Total creatine kinase.
b. Cardiac troponin I.
c. Creatine kinase/MM.
d. Lactate dehydrogenase-.
e. Myoglobin.

10. Which of the following mechanisms mainly explains atherosclerosis in familial hyperlipoproteinemia (broad beta; type III)? FW

Select one:

a. Improper removal of VLDL remnants and chylomicron remnants from circulation.
b. Deletion of ABC-Al transporters that leads to cholesterol accumulation within blood cells.
c. High blood level of free cholesterol due to defective Ape-Al.
d. Increased triglycerides in blood due to defect in its hydrolysis by lipoprotein lipase.
e. High level of Triacylglycerol due to mutation of microsomal transfer protein (MTP)

11.The most effective replacement for saturated fatty acids in terms of coronary heart disease outcome is? **MW**

a. linoleic and

b. trans fatty acids

C. saturated fatty acids

d. docosahexaenoic acid

e. eicosatetraenoic acid

12. All the followings are Monounsaturated fats EXCEPT? **MW**

Select one:

a. Avocado

b. Olive Oil

c. Peanut Oil

d. Ice cream

e. Cashews

13. which one of the following statements concerning high density lipoprotein (HDL) metabolism is CORRECT? Select one: **MW**

a. HDL is synthesized exclusively for intestine with Apo-C and Ape-E on its surface.

b. It esterifies free cholesterol to cholesterol ester via cholesterol ester transfer protein (CETP).

c. Cholesterol ester of HDL is selectively taken up by liver cells via scavenger receptors-B1.

d. High discoid HDL/HDL2ratio indicates effectiveness of reverse cholesterol transport.

e. Its main apolipoprotein is Apo-B100

14. Choose the statement that best describes the ubiquitin proteasome degradation pathway? Select one: MW

a. Ubiquitin molecules have the sterol sensing domain to start HMG COA reductase degradation

b. Signaling is not involving the targeted enzyme only

c. It requires a sterol sensing domain in SREBP and HMG-COA reductase

d. Ubiquitin small molecules are ligated to the targeted protein enzymatically

e. Monomeric ubiquitin is enough for signaling the targeted enzyme

15. Prenylated proteins and Coenzyme Q can be produced in order from the following intermediates of cholesterol synthetic pathway? Select one MW

a. Farnesyl pyrophosphate and HMG-COA

b. Squalene and geranylgeranyl pyrophosphate

c. Dimethylallyl pyrophosphate and 2,3 oxidosqualene

d. Geranylgeranyl pyrophosphate and Farnesyl pyrophosphate

e. Mevalonate 5 phosphate and mevalonate 5 pyrophosphate

16. Which of the following biochemical markers would you prefer to diagnose early acute myocardial infarction? Select one: MW

a. Total creatine kinase and lactate dehydrogenase.

b. Heart fatty acid binding protein and copeptin.

c. Cardiac troponin and Ischemia modified albumin.

d. Creatine kinase/MM and aspartate transaminase.

e. miRNA-499 and troponin C.

17. Which of the following is CORRECT as regards micro-RNA (miRNA)?

Select one FW

a. It is a single stranded coding RNA.

b. miRNA-499 decreases in all patients with acute myocardial infarction.

c. miRNA-122 expression is up- regulated in acute myocardial infarction.

d. Blood levels of miRNA never changes upon acute MI.

e. It acts by targeting specific mRNA for degradation or translational repression.

18. Pyruvate dehydrogenase multien7yme complex IS a key regulatory enzyme in glucose utilization: it can be inhibited by all of the following except? MW

a. ATP/ADP

b. NADH+H+INAD

c. Acetyl CoA/COA

d. Citrate/pyruvate

e. NADPH+H+/NADP

19. In cholesterol synthetic pathway, which of the following coenzymes is serving as a hydrogen donor in the reactions catalyzed by HMG-COA reductase and squalene epoxidase? FW

Select one:

a. NAD

b. Pantothenic acid

C. NADP .

d. Lipoic acid

e. FAD

20. PFK-I is catalyzing the conversion of fructose 6-phosphate into fructose l,6 biphosphate, all of the following can inhibit this enzyme except? Select one: MW

a. decrease ADP/ATP ratio

b. increase NADH+H+/NAD ratio

C. decrease Activity of PI3 kinase

d. increase Activity of electron transport chain

e. decrease Activity of PFK-2

21. Which of the following statements best describes chylomicron (CM) remnant? MW

Select one:

a. lts size is larger than nascent CM.

b. it contains high triglycerides content and low cholesterol concentration.

c. Apo-E is the only protein present on its surface.

d. It is enriched in cholesteryl ester and fat soluble vitamins.

e. It is recognized by liver because they contain Apo-Al on its surface.

22. Which of the following Lipoproteins best matches its description? Select one: MW

a. Chylomicrons-> composed mainly of triglycerides synthesized in hepatic

cells.

b. LDL> contains Ape-848 and Apo-CII on its surface.

c. VLDL-> migrates faster to anode than LDL during electrophoresis.

d. HDL-> the major donor of free cholesterol to peripheral tissues.

e. Lipoprotein (a)-> protects against thrombogenesis

23. Phosphorylated PP1-1 is one of the enzymes that play a critical role in regulating cholesterol synthesis through the direct inhibition of the following enzyme? MW

Select one:

a. Liver kinase B1

b. Protein phosphatase 2C

c. Protein kinase A

d. Calcium calmodulin-dependent protein kinase kinase (caMKK)

e. AMP activated kinase

24. in the high altitude, you stayed for an hour, the following changes will happen in metabolic pathways of your cardiomyocytes except? Select one MW

a. increase Glycolysis

b. decrease B oxidation of fatty acids

C. increase production of phosphocreatine

d. Accumulation of NADH+H and lactic acid

e. decrease Oxidative electron transport chain activity

25. A 29-year-old man was admitted to hospital because of severe abdominal pain with a clinical diagnosis of acute pancreatitis. The fasting triglyceride level was 8000 mgjclL at admission. His serum had a milky appearance at admission and a nearly normal clear appearance on day 5 after insulin therapy. Which of the following mechanisms best explains the response to insulin therapy in this patient? Select one MW

a. Insulin induces adipose tissue lipoprotein lipase (LPL).

b. Insulin is the main activator of Lecithin: cholesterol acyltransferase (LCAT).

C. Insulin promotes the exchange of Apo-E between LDL and chylomicrons.

d. Insulin helps transfer of Apo-B48 from chylomicrons to HDL.

e. Insulin increases the expression of hepatic scavenger receptors-81.

26. One of the following is a feature of hypertension? (??) MW

a. The cutoff point in Diastolic pressures is greater than 90 mm Hg.

b. 15% of persons in the general population are hypertensive.

c. The cutoff point in Systolic pressures is excessed of 150 mm Hg.

d. Preeclampsia is an adrenal hyperfunction associated with hypertension.

e. The secondary causes of hypertension accounting 15%

Answers

2	b	6	a	9	b
10	a	11	b	12	d

13	c	14	d	15	d
16	b	17	e	18	e
19	c	20	a	21	d
22	c	23	b	24	c
25	a	26	e