

Examen MMD-6512

1-Which of the following causes an increase in HR in a denervated heart?

- A Pancuronium
- B Atropine
- C Propranolol
- D Norepinephrine
- E Neostigmine

2-Which of the following causes increased inotropy and chronotropy ?

- A Ca gluconate
- B Glucagon
- C Atropine
- D Digoxin
- E Phenylephrine

3-Which is true regarding pacemakers?

- A ESWL (cauter) may result in inadvertent reprogramming of pacemaker
- B MRI does not interfere with pacemaker
- C A magnet over the pacemaker eliminates the possibility of inadvertent Reprogramming
- D Inhalational anesthetics do not affect pacing threshold

4-Which occurs with captopril in a patient with CHF?

- A Increased MVO<sub>2</sub>
- B Decreased stroke volume
- C Decreased cardiac output
- D Decreased coronary flow
- E Decreased Left Ventricular Stroke Work Index (LVSWI)

5-In which part of the heart is normal conduction velocity the slowest?

- A SA node
- B Atrial muscle
- C AV node
- D Purkinje fibers
- E Ventricular muscle

6-Which cardiovascular effect occurs in the elderly?

- A Decreased resting heart rate
- B Decreased cardiac output
- C Decreased response to adrenergic stimulation in the periphery
- D Increased LV filling
- E All of the above

7-Magnesium therapy post ACB will improve which arrhythmia?

- A Atrial fibrillation
- B Atrial flutter
- C PVC
- D Junctional rhythm
- E PAT

**8-**Most sensitive monitor for myocardial ischemia:

- A ST upsloping
- B Tachycardia with Premature ventricular complexes
- C New wall motion abnormalities on Transesophageal echocardiography
- D V waves on pulmonary artery catheter tracing
- E Increased CK

**9-**All are true about aortic stenosis, EXCEPT:

- A Decreased pulse pressure
- B Decreased LV compliance
- C Increased coronary vascular reserve
- D Increased atrial contribution to stroke volume
- E Concentric LVH

**10-**All the following will be seen in the ECG in pulmonary HTN, EXCEPT:

- A Biphasic P wave in V6
- B RBBB
- C Right ventricular hypertrophy
- D Tall P wave in II (2.5 mm)
- E Right axis deviation

**11-**All are important in determining right coronary artery flow, EXCEPT:

- A RCA autoregulation
- B Diastolic time
- C Adenosine levels
- D Epicardial coronary flow
- E Peak RV systolic pressure

**12-** All of the following are true regarding TEE, EXCEPT:

- A More sensitive at detecting early venous air emboli than precordial doppler
- B Contraindicated in esophageal stricture
- C Accurately determines cardiac output
- D Can assess valvular function
- E Good at assessing dissection / aneurysm of the ascending aorta

**13-**Regarding verapamil, which is true:

- A Indicated in WPW
- B Decreases conduction in the His Purkinje system
- C Increased free fraction of verapamil with lidocaine
- D Mainly excreted unchanged in kidney
- E Facilitates passage of calcium via calcium channels

**14-**Which of the following would not cause more than a 10mmHg drop in systolic pressure on inspiration?

- A Chronic LV failure
- B Constrictive pericarditis
- C RV infarction
- D COPD
- E Cardiac tamponade

**15-**Which of the following may result in PCWP < LVEDP?

- A Aortic stenosis
- B Pulmonary hypertension
- C Mitral stenosis
- D Atrial myxoma
- E Mitral regurgitation

**16-**Regarding RV and LV function:

- A LV is more compliant in diastole
- B LV end-diastolic PV ratio is a useful measure of contractility
- C RV Starling curve is higher and to the left
- D In patients with normal LV function LVEDP is linearly correlated to LVEDV

**17-**Which of the following has the least deleterious cardiac effect with clonidine 5 mcg/kg?

- A Alcohol withdrawal
- B Aortic stenosis
- C Hypovolemia
- D Acute pericarditis
- E Chronic cardiac therapy

**18-** What is the most sensitive, non-invasive test for ischemia?

- A Dipyridamole/Thallium
- B Exercise EKG
- C Exercise Echo
- D Echo dobutamine
- E Exercise/Thallium

**19-**You will find either peaked T waves or inverted T waves in the all of the following conditions, EXCEPT

- A SAH
- B MI
- C Hypocalcemia
- D Hyperkalemia
- E Rewarming post-bypass

**20-**Which of the following is an indication for inserting a pacemaker before induction?

- A RBBB + RAD
- B RBBB + LAD
- C Type II AV Block with symptomatic bradycardia and bundle branch block
- D HR < 50 bpm
- E 1st degree AV block

**21-** Least likely symptom of Cardiac Tamponade

- A Bradycardia
- B Increased CVP
- C Hypotension
- D Pulsus Paradoxus
- E Decreased pulse pressure

**22-**What medication is indicated in a patient with mitral stenosis who drops their blood pressure?

- A Ephedrine
- B CaCl<sub>2</sub>
- C Epinephrine
- D Phenylephrine

**23-**Left axis deviation is found in a patient with:

- A Ascites
- B Cor Pulmonale
- C Pulmonary Embolism
- D Right Ventricular Hypertrophy
- E Left Posterior Hemiblock

**24-**Q-waves II, III, and AVF. Where is ischemia?

- A LAD
- B Prox circ
- C Left main
- D RCA

**25-**Associated with increased ventricular compliance :

- A AI
- B AS
- C Pericardial tamponade
- D LVH
- E Myocardial ischemia

**26-**What causes constriction of normal coronary arteries ?

- A PGE<sub>1</sub>
- B Acetylcholine
- C Adenosine
- D Hyperoxia
- E Histamine type II

**27-**Least risk of ischemia during periop. period

- A Stable angina
- B MI within last 6 months
- C Symptomatic aortic stenosis
- D Sustained moderate persistent hypertension
- E Tachycardia

**28-**Treatment of post-MI diastolic dysfunction:

- A Increase preload --- volume
- B Type phosphodiesterase inhibitor & increased inotropy
- C Neosynephrine to increase perfusion pressure
- D inotropy & B1 agonists
- E Nitroglycerin

**29-**Persistent PSVT, BP 80/50. Adenosine 6mg already administered with no effect. Next step?

- A Adenosine 12 mg
- B Lidocaine
- C Bretyllium
- D Procainamide
- E Verapamil

**30-**Which will increase the risk of perioperative cardiac ischemia?

- A Increased opioid dose
- B Isoflurane
- C Hypertension
- D Tachycardia
- E Hyperthermia

**31-**Which of the following is true concerning coronary arteries?

- A Dipyridamole dilates large epicardial vessels
- B Hypoxemia constricts resistance vessels
- C The AV node is supplied by the left coronary
- D The O<sub>2</sub> sat is less in the coronary sinus than in the pulmonary artery

**32-** Cannon A waves are seen in

- A Atrial fibrillation
- B Atrial flutter
- C VSD
- D Complete AV block

**33-**Which of the following is not true concerning aortic stenosis?

- A A pulse pressure of less than 30 is indicative of severe disease
- B Symptoms appear when area is < 0.8 cm<sup>2</sup>
- C Systolic arterial pressure > 175 mmHg is indicative of minimal stenosis
- D LV compliance is decreased
- E Atrial kick contributes 40% to stroke volume

**34-**Which of the following are true concerning the benefits of intraaortic balloon pump?

- A It increases coronary diastolic flow
- B It decreases the left ventricular end-diastolic pressure
- C It increases the ejection fraction
- D It decreases afterload
- E It decreases myocardial oxygen consumption
- F All of the above

- 35-**Which of the following should not be given in IHSS (septal hypertrophic cardiomyopathy)?
- A Phenylephrine
  - B Propranolol
  - C Halothane
  - D Nitroglycerine
  - E Narcotics
- 36-**When faced with a post-op heart patient whose BP=85/50 PCWP=10 CI=1.0 SVR=2500 and HR=120, what should one do?
- A Administer a vasopressor
  - B Decrease afterload
  - C Increase preload
  - D Administer an inotrope
- 37-**Tamponade is associated with all but
- A Decreased effective transmural pressure
  - B Decreased biventricular compliance
  - C Equalization of R and L diastolic pressures
  - D Loss of "y" descent
  - E Loss of "x" descent
- 38-**All the following are consistent with pulmonary embolism EXCEPT :
- A Increased pulmonary artery diastolic pressure
  - B Increased right ventricular systolic pressure
  - C Increased central venous pressure
  - D Increased left ventricular end-diastolic pressure
  - E Low or normal PCWP
- 39-**In the Goldman cardiac risk index, which of the following is LEAST relevant
- A Age > 70
  - B Jugular venous distension
  - C S3
  - D Hypertension
  - E Emergency Surgery
- 40-**Increasing heart rate may be beneficial in which of the following situations?
- A Acute aortic insufficiency
  - B Chronic aortic insufficiency
  - C Mitral stenosis
  - D Aortic stenosis
- 41-**An S3 is caused by
- A Turbulent filling of the left atrium
  - B Turbulent rapid filling of the ventricle
  - C Turbulent flow after mitral valve opening
  - D Turbulent flow after aortic valve opening

**42-**Myocardial ischemia is associated with an increase in:

- A SGOT
- B LDH
- C SGPT
- D Alk phos
- E None of the above

**43-**High PA diastolic pressures with a normal PCWP is most in seen in :

- A Pulmonary embolism
- B Pulmonary edema
- C Dehydration
- D Right ventricular failure

**44-**The most common cause of death following vascular surgery is:

- A Hemorrhage
- B Pulmonary Edema
- C Myocardial infarction
- D Sepsis
- E Renal Failure

**45-**Myocardial ischemia is easier to detect in

- A Lead I
- B Lead II
- C Lead II + V5
- D aVF
- E V5

**46-**Compatible with the diagnosis of unstable angina:

- A Increase in intensity of pain
- B Increase in duration of pain
- C Pain occurring at rest
- D ST segment change on ECG
- E All of the above

**47-** Which of the following may result in Wedge > Pulmonary artery diastolic pressure

- A R BBB
- B Tachycardia
- C Mitral Regurgitation
- D Aortic Insufficiency
- E Tamponnade

**48-**Definition of coronary reserve:

- A Difference between coronary flow with autoregulation intact and coronary flow with maximum vasodilation
- B Ratio of coronary flow to cardiac output
- C Difference between diastolic BP and LVEDP
- D Difference between coronary sinus O<sub>2</sub> saturation and arterial SaO<sub>2</sub>

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**49-**All of the following are indications for open cardiac massage EXCEPT:

- A Tamponade
- B Penetrating trauma
- C Severe aortic stenosis
- D Asystole
- E Hypothermia

**50-**Which is TRUE concerning cardiac physiology?

- A During phase 3, Na is leaving the cell
- B K is entering during phase 1
- C Ca permits cell to remain depolarized and isoelectric
- D Threshold for action potential is -90mV
- E All of the above