

## Anatomy and embryology

- 1- Wrong about heart CT image – ascending aorta aneurysm causes dysphagia
- 2- Wrong about picture of posterior aspect of heart – connection between the two atria closes before birth
- 3- Wrong about picture of foetal circulation – all shunts close at birth
- 4- Wrong about right pulmonary artery CT image – pulmonary artery blood flow increases in right ventricular heart failure
- 5- Wrong about surface markings of the heart – mitral valve auscultation site (apex) is behind cardiac notch
- 6- Wrong about heart X-ray – blood flow between aorta and pulmonary trunk stops immediately after birth (or something like that)
- 7- Wrong about veins – a drug that increases compliance will increase venous return
- 8- Wrong about pulmonary trunk embolism – it increases left heart output
- 9- A child with a shunt between the two ventricles, later in life the shunt reversed, what is it – VSD with pulmonary hypertension
- 10- Wrong about development of the heart – the smooth parts of both ventricles are derived from the distal part of bulbus cordis (conus)
- 11- Wrong about portal vein – before its formation, ductus venosus connects between right umbilical and left venous veins
- 12- Wrong about coronary arteries – complete occlusion of LAD most likely will develop subepicardial infarction in the left ventricle
- 13- Wrong statement – equal pressure between pulmonary trunk and arch of aorta indicates coarctation of the aorta
- 14- Wrong about the heart – fixing ASD is likely to lead to complete AV block
- 49- Which event doesn't occur at or few hours after birth - decrease in systemic vascular resistance

## Physiology

- 15- In the ECG reading – 1st degree heart block
- 16- With fixed atrial pressure, increased cardiac output plateau involves – increased cardiac reserve
- 17- In a woman with heart rate of 80 and a volume-pressure plot in the picture, the second heart sound occurs at – at point D
- 18- Her resting mean cardiac output – 8000 ml/min
- 19- In an ECG, QRS of lead II was high and positive, and in lead aVL it was 0 – mean axis degree is +60
- 20- In an ECG, the heart rate indicated AV pacemaker, the rate would be – 50/min
- 21- Wrong about jugular vein pulsation – a wave is due to ventricular systole
- 22- A positive inotropic agent would – decrease mean atrial pressure and increase cardiac output (maybe)
- 23- What causes decreased heart rate – increased potassium permeability
- 24- Sympathetic stimulation can increase contractility by – increased calcium intracellularly
- 25- Doesn't directly increase venous return – parasympathetic stimulation
- 26- If the blood pressure is 110/70, what is correct about cardiac cycle – maximal pressure gradient around aortic valve is 70 mmHG

- 27- What would increase cardiac output plateau – sympathetic stimulation
- 28- SA node is the normal pacemaker because – it has the fastest discharge
- 29- Increased preload won't affect – ESV (or it was increased afterload won't affect/EDV)
- 30- Wrong about cardiac cycle – the largest amount of blood in the ventricle is after atrial diastole
- 31- True about cardiac cycle - during diastole, a backflow of blood causes incisura in aortic pressure

#### Microbiology

- 32- Not a predisposing factor for infective endocarditis – Immunodeficiency
- 33- Doesn't cause myocarditis – coronavirus
- 34- Wrong about hemorrhagic fever – vaccines are available for most viral infections
- 35- Wrong about dengue fever – incubation period is 3 to 4 weeks
- 36- Is not caused by parvovirus – granulomatous crisis (the question is out of the material)

#### Pathology

- 37- Doesn't cause obstruction and ischemia of downstream tissues – Monckeberg sclerosis
- 38- Wrong pair – atherosclerotic plaque rupture/prinzmetal angina
- 39- Wrong about giant cell vasculitis – pulmonary and renal circulation involvement
- 40- Child with fever, lymphangitis, mucocutaneous rash, coronary artery injury – Kawasaki disease
- 41- Wrong complication of MI – papillary muscle rupture/severe aortic regurgitation
- 42- True about syphilitic aortic aneurysm – histological feature is obliterative endarteritis
- 43- Not a true aneurysm – hemorrhage of renal graft
- 44- Wrong type of vessel with disease pair – saddle embolus/pulmonary veins
- 45- Common cause of acute lymphangitis – Streptococcus pyogenes
- 46- Mycotic aneurysm is – one that has microbes in it
- 47- Not implicated in atherosclerosis development – autoimmune response
- 48- Most common cause of secondary hypertension – chronic renal disease
- 50- A common cause of primary hypercoagulability - factor V Leiden