Test questions for a unit «Cardiac surgery»

1. Syncope
   1. Followed by facial flushing suggests a tachyarrhythmia
   2. Without warning suggests a vaso-vagal episode
   3. On exercise is a typical feature of mitral valve insufficiency
   4. All correct
   5. All wrong

   1. A,C,D
   2. B,E
   3. A,B,D
   4. All correct
   5. All wrong

   1. A,B,C,D
   2. C,D,E
   3. A,C,D,E
   4. All correct
   5. All wrong

   1. A,C,D,E
   2. A,B,C
   3. A,B,E
   4. All correct
   5. All wrong

5. Characteristic feature of ventricular septum defect include: A. A left-to-right shunt. B. Most of ventricular septal defect are conal. C. Most of ventricular septal defect are paramembranous. D. Ventricular septal defect can be restrictive. E. Ventricular septal defect can be nonrestrictive.
   1. A,B,C,E
   2. A,C,D,E
   3. A,B,D,E
   4. All correct
   5. All wrong

   1. B,C,E
   2. A,B,C
   3. A,B,E
   4. All correct
   5. All wrong
   1. A,B,C,D
   2. A,C,D,E
   3. A,B,C
   4. All correct
   5. All wrong

8. Tetralogy of Fallot: A. Is the most common cause of cyanotic heart diseases. B. Is caused embryologically by the anterior displacement of the infundibular septum. C. Is caused embryologically by the superior displacement of the infundibular septum. D. Is caused embryologically by the posterior displacement of the infundibular septum. E. Is caused embryologically by the anterior displacement of the infundibular septum.
   1. A,E
   2. A,B,E
   3. A,B,C
   4. All correct
   5. All wrong

   1. A,B,D,E
   2. A,C,D,F
   3. B,D,E,G
   4. All correct
   5. All wrong

    1. A,B,C
    2. A,B,D
    4. All correct
    5. All wrong

11. Right ventricular hypertrophy is an expected finding in adults with the following persistent disorders: A. Tricuspid stenosis. B. Constrictive pericarditis. C. Cor pulmonale. D. Atrial septal defect. E. Mitral stenosis.
    1. A,D,E
    2. C,D,E
    3. A,B,E
    4. All correct
    5. All wrong

    1. A,B,E
    2. A,B,D
    3. A,B,C
4. All correct
5. All wrong

   1. A,E
   2. B,C,D
   3. B,D
   4. All correct
   5. All wrong

14. Typical clinical features of the aorta coarctation include: A. An association with bicuspid aortic valve. B. Cardiac failure developing in male adolescents. C. Palpable collateral arteries around the scapulae. D. Rib-notching on chest X-ray associated with weak femoral pulses. E. Continuous murmur at the left upper sternal edge associated with a heaving and displaced apex beat.
   1. A,C,D
   2. A,D,E
   3. A,B,D
   4. All correct
   5. All wrong

15. In atrial septum defect: A. There is a male preponderance. B. The initial shunt is right to left. C. Spilling of the second heart increases in expiration. D. A tricuspid systolic flow murmur is usually present. E. Surgery should be deferred until reversal occurs.
   1. A,B,C,D
   2. A,C,D,E
   3. A,B,D,E
   4. All correct
   5. All wrong

16. In small ventricular septum defects: A. A mid-systolic murmur is maximal at the left sternal edge. B. The heart is usually enlarged and CRBBB on electrocardiogram is often present. C. There is a risk of infective endocarditis. D. Most small ventricular septum defects require surgical repair before adolescence. E. Most patients are asymptomatic.
   1. A,B,C
   2. D,E
   3. C,E
   4. All correct
   5. All wrong

17. In right-to-left shunt reversal (Eisenmenger’s syndrome) of congenital heart disease: A. Pulmonary arterial hypertension is usually present. B. Prompt closure of the atrial septum defect or ventricular septum defect produces symptomatic relief. C. Recurrent respiratory infections are characteristically present. D. Most patients have central cyanosis and finger clubbing. E. Shunt murmurs are prominent when polycythemia is severe.
   1. A,B,D
   2. A,C,D
   3. A,C,E
   4. All correct
   5. All wrong
18. The following statements about cardiac murmurs are true: A. Diastolic murmurs are a recognised feature of normal pregnancy. B. Ventricular septal defects produce pansystolic murmurs. C. An early high-pitched diastolic murmur suggests mitral stenosis. D. Late-systolic murmurs suggest mitral valve prolapse. E. Mitral diastolic murmurs are best heard at the apex with the patient leaning on the left side and the breath held in expiration.
   1. B,D
   2. B,C,E
   3. A,B,D,E
   4. All correct
   5. All wrong

   1. A,B,C
   2. A,C
   3. A,C,D,E
   4. All correct
   5. All wrong

20. The following statements about tricuspid valve disease are true: A. Murmurs are best heard in mid-sternum at the end of expiration. B. Ascites can occur from insufficiency but not stenosis. C. In sinus rhythm, stenosis produces cannon waves in the JVP. D. Both stenosis and incompetence produce a pulsatile liver. E. Tricuspid stenosis or insufficiency due to rheumatic heart disease is invariably associated with mitral valve disease.
   1. A,C,E
   2. A,B,D,E
   3. E
   4. All correct
   5. All wrong

   1. A
   2. A,B,E
   3. B,C,D
   4. All correct
   5. All wrong

22. Clinical features compatible with hypertrophic cardiomiopathy include: A. Family history of Friedreich's ataxia or sudden cardiogenic death. B. Angina pectoris and exertional syncope. C. Heaving apex beat. D. Murmurs suggesting both aortic stenosis and mitral incompetence. E. Syncope improved by beta blockade but exacerbated by digoxin or calcium antagonists.
   1. A,D
   2. B,C,D,E
   3. B
   4. All correct.
   5. All wrong

   1. A
2. A,D  
3. A,B,C,E  
4. All correct  
5. All wrong  

1. A,B  
2. A,B,D,E  
3. A,B,C  
4. All correct. 
5. All wrong.  

26. In patients with severe mitral stenosis: A. The mitral valve orifice is reduced from 5 cm² to about 1 cm². B. A history of rheumatic fever or chorea is elicited in over 90%. C. Pulmonary hypertension. D. The risk of systemic embolism is trivial if sinus rhythm is present. E. Mitral valvotomy is indicated if the valve is pliart and incompetent.  
1. B,E  
2. A,C  
3. A,B,D,E  
4. All correct  
5. All wrong  

27. Clinical features of mitral valve prolapse include: A. Mid-systolic click and late-systolic murmur. B. Auscultatory finding which vary with posture. C. An association in young adults with embolic stroke. D. Predisposition to tachyarrhythmias. E. Predisposition to infective endocarditis.  
1. B,C,D,E  
2. A,B,C  
3. A,C,D,E  
4. All correct  
5. All wrong  

28. In the investigation of patients with cardiac failure: A. The cardiothoracic ratio (CTR) on chest X-ray is usually >0.6. B. Pulmonary venous congestion is the earliest change on chest X-ray. C. Two-dimensional echocardiography can estimate cardiac output. D. Doppler echocardiography can estimate pressure gradients. E. Radionuclide myocardial scanning can identify areas of ischemia.  
1. B,D,E  
2. A,B,D,E  
3. A,B,C,E  
4. All correct  
5. All wrong  

1. A,C,E  
2. B,C,D,E  
3. A,B,D  
4. All  
5. None
1. A,B,D
2. A,B
3. A,B,C
4. All correct.
5. All wrong

35. Clinical indications for Coronary Artery Bypass Grafting: Clinical indications for Coronary Artery Bypass Grafting: A. Stable Class II angina. B. Stable class IV angina. C. Failed percutaneous transluminal coronary angioplasty (PTCA) with acute ischemia. D. Acute myocardial infarction <12 hours. E. Acute myocardial infarction <24 hours.

37. The normal right coronary artery: A. Supplies the inferior aspect of the left ventricle. B. Supplies the AV node. C. Divides into the circumflex and marginal arteries. D. Supplies the right ventricle and part of the septum. E. Arises from the left sinus of Valsalva.
1. A,B
2. A,C,E
3. A,B,D
4. All correct
5. All wrong

38. The normal left coronary artery: A. Supplies the anterior and apical parts of the left ventricle. B. Divides into the anterior descending and circumflex arteries. C. Supplies part of the interventricular septum. D. Arises from the left sinus of Valsalva. E. Supplies the lateral and posterior parts of the left ventricle from the circumflex artery.
1. A,C,D
2. A,B,D,E
3. D,E
4. All correct
5. All wrong

1. B,D
2. A
4. All correct
5. All wrong

40. In patients with suspected angina pectoris: A. The resting ECG is usually abnormal. B. Exercise-induced elevation in BP indicates significant ischemia. C. A normal ECG during exercise excludes angina pectoris. D. Coronary angiography is indicated if an exercise test is normal. E. Coronary artery bypass improves survival in asymptomatic patients with triple vessel disease.
1. A,D
2. A,B,C,E
3. A,C,D,E
4. All correct
5. All wrong

41. In patients with angina pectoris: A. Lowering a high plasma cholesterol has no effect on survival. B. Regular exercise should be avoided if angina occurs daily. C. Nitrate-induced tachycardia usually persists despite beta blockade. D. Nifedipine is a potent systemic and coronary anteriolar dilator. E.
Cardio-selective beta blockers are more effective than non-selective beta blockers especially in variant angina.
1.A,B,C
2.D
3.B,D,E
4.All correct
5.All wrong

42. In a patient with central chest pain, the diagnosis of angina pectoris is likely performed in consideration of the following features: A. Burning retrosternal pain in the early evening. B. Waking from sleep with nocturnal pain and angor animi. C. Exercise-induced pain relieved within 5 minutes by rest. D. Left sided anterior chest wall tenderness. E. Exercise ECG changes with >2 mm ST depression without chest pain.
1.B,C,E
2.C,E
3.A,B,C
4.All correct.
5.All wrong.

43. The pain of myocardial ischemia: A. Is typically induced by exercise and relieved by rest. B. Radiates to the neck and jaw but not the teeth. C. Rarely lasts longer than 10 seconds after resting. D. Is easily distinguished from oesophageal pain. E. Can disappear if exercise is continued.
1.A
2.A,E
3.B,D,E
4.All.
5.None.

44. Which of the following symptoms have adverse prognostic significance in patients with aortic stenosis: A. Angina pectoris. B. Congestive heart failure. C. Heartbeat. D. Dyspnia with exercise. E. Syncope
1.A,B
2.B
3.E
4.A,B,C
5.D

1.A,B
2.A,B,C,F
3.A,B,D,E
4.All correct
5.All wrong

1.A,B,C
2.D
3.C
47. Left-to-right shunt in patients with atrial septal defect occurs due to: A. Pulmonary artery pressure less than the pressure in the aorta. B. Tricuspid valve opens a little earlier than the mitral. C. Right ventricle is more elastic and pliable than the left ventricle, due to which increased its komplayns. D. Left atrium is situated above toward the right atrium. E. Right atrium is bigger than the left atrium
1. B
2. A,C
3. D
4. C
5. A,D,E

48. Which factor has an adverse prognostic value in assessing the risk bypass surgery: A. ECG. B. The degree of narrowing of the coronary artery. C. End-diastolic pressure of left ventricle. D. Left ventricular ejection fraction. E. Recurrent myocardial infarction
1. B,E
2. A,B,C
3. D
4. A
5. B,D

49. What structures of the heart may be damaged during mitral valve replacement: A. Circumflex branch of left coronary artery. B. Anterior descending artery. C. Aortic valve. D. Coronary sinus. E. Pathways of the heart
1. A,C,D,E
2. A,B
3. B,D,E
4. All correct
5. All wrong

1. A,E
2. A,C,D,E
3. C,D
4. A,B,D,E
5. All correct
5. All correct

1. C
2. A,B
3. A,B,E
4. C,D
5. All correct

52. Indications for permanent pacemaker implantation: A. Sick sinus syndrome. B. Complete heart block after surgery. C. Heart block. D. Persistent atrial fibrillation accompanied by a syndrome of Morgan-Adams-Stokes
1. A,B
2. A, C, D
3. C
4. B
5. All correct

53. Early treatment of acute purulent pericarditis should include: A. Puncture aspiration of the contents of the pericardium. B. Parenteral antibiotics. C. Introduction antibiotics into the pericardial cavity. D. Repeated puncture of the pericardium. E. Thoracotomy and pericardectomy
   1. A, B, C, D
   2. A, C, D, E
   3. A, B, C
   4. All correct
   5. All wrong

54. Ebstein's anomaly include: A. Atrial septal defect. B. Ventricular septal defect. C. Arrhythmias. D. Tricuspid valve insufficiency. E. Pulmonic stenosis
   1. A, B, C
   2. A, C, D
   3. B, C, D
   4. A, D, E
   5. All correct

55. A patient with an artificial mechanical heart valve prosthesis must take anticoagulants: 1. During hospital period. 2. During the first year after surgery. 3. Life. 4. In the presence of thromboembolic complications. 5. During one month after surgery

56. Prosthetic aortic heart valve biological prostheses appropriate: A. With rheumatic etiology of the defect. B. In the presence of aortic valve calcification. C. In infective endocarditis. D. Age over 60 years old.
   1. C, D
   2. A
   3. A, B
   4. A, C, D
   5. All correct

   1. Coronary bypass
   2. Coronary bypass and mitral valve prosthesis
   3. Heart transplant
   4. Coronary angioplasty and stenting
   5. Drug therapy

58. The patient 42 years. Diagnosis: Rheumatoid disease with combined mitral valve defects with predominance of stenosis. Mention the X-ray and fluoroscopic signs which are characteristics of mitral stenosis: A. Deviation of the esophagus in an arc of minor radius. B. No Welman’s sign. C. Enlarged left ventricle. D. Deviation of the esophagus at arc of major radius. E. Lack of increased in size of left ventricular

1. B,D
2. A,D
3. C,D,E
4. B,E
5. C,E

60. The patient was treated twice in the surgical department due to the purulent pericarditis. In recent years, there are increased symptoms of heart failure. Pronounced cyanosis, edema of the legs, ascites. Liver is enlarged, firm, on inspection on apex of the heart there is visible systolic retraction of intercostal space. No murmurs. What is the diagnosis?

1. CHD
2. Pericardial effusion
3. Cirrhosis
4. Chronic heart failure
5. Adhesive pericarditis

61. Patient 42 years. Diagnosis - mitral stenosis. Echocardiography revealed marked restriction of mobility of mitral valve with marked calcification. What surgery is indicated in this patients:

1. Open mitral commissurotomy.
2. Mitral valve mechanical prosthesis.
3. The replacement of the mitral valve with biological prostheses.
4. Closed instrumental mitral commissurotomy.
5. Balloon dilatation of the left mitral orifice.

62. The patient 16 years. Complains of angina heart pain, dizziness, fainting. On palpation on the heart region over the aorta systolic tremor is revealed, the apical impulse is displaced to the left. On auscultation: 1st heart sound is weak on the apex, 2nd heart sound over the aorta is weakened, rough systolic murmur over the aorta. What is the diagnosis?

1. Tricuspid regurgitation
2. Combined mitral defect
3. Aortic stenosis
4. Aortic valve
5. The narrowing of the left atrioventricular opening


1. F
2. A, B, F
3. A, B, D, E
4. A, B, C, E
5. All correct
64. The patient was first diagnosed pericardial effusion. Which treatment strategy?
1. Appointment of antiarrhythmic drugs
2. Appointment of diuretics
3. Appointment of anticoagulants
4. Pericardiocentesis
5. Subtotal perikardektomiya

65. The patient had coronary artery disease. Angina functional class III. According to a coronary stenosis in the left anterior descending artery up to 80%. Exercise tolerance test was positive. Which treatment strategy?
1. Drug therapy
2. Spa treatment
3. Coronary artery bypass
4. Coronary angioplasty and stenting
5. Shock wave therapy

66. Characteristics of fetal circulation include: A. The main volume of blood from the superior vena cava is directed through the foramen ovale into the left atrium. B. The main volume of blood from the inferior vena cava is directed directly through the tricuspid valve. C. The main volume of blood from the right ventricle is directed through the ductus arteriosus into the descending aorta. D. Pulmonary vascular resistance increased. E. Left atrial pressure is higher than right atrial pressure
1. A,B
2. C,D
3. A,C,D,E
4. All correct
5. All wrong

67. What are the complications of myocardial infarction require mandatory surgical correction? A. Ventricular septal defect. B. Rupture of papillary muscles. C. Aneurysm of the left ventricle. D. Rupture of myocardium
1. C,D
2. A
3. A,B
4. A,B,D
5. All correct

68. The most frequently localized in cardiac myxoma:
1. The apex of the left ventricle.
2. Atrial septum.
3. Left atrium with a fixation on the leg to the septum.
4. Subendocardial.
5. Right ventricle

1. B,C
2. A,B,D
3. A,C,E
4. A,E
5. B,D
1. B
2. A, B
3. B, C
4. B, D
5. All correct