The semeiology of cardio-vascular system in children:

*Single choice tests:*

1. When begins the ontogenesis of cardio-vascular system?

a) in the VIII week of intrauterine development

b) in the IV week of intrauterine development

c) in the II week of intrauterine development

d) in the III week of intrauterine development

e) in the first 7 days after conception

2. Which segment of cardiac tube will be developed the magistral vessels?

a) cardiac bulb

b) venous sinus

c) common arterial trunk

d) primitive ventricle

e) primitive atrium

3. Which segment of primitive cardiac tube will be developed the right ventricle?

a) cardiac bulb

b) venous sinus

c) common arterial trunk

d) primitive ventricle

e) primitive atrium

4. Which segment of primitive cardiac tube will be developed the great veins?

a) cardiac bulb

b) venous sinus

c)common arterial trunk

d) primitive ventricle

e) primitive atrium

5. Which segment of primitive cardiac tube will be developed the left ventricle?

a) cardiac bulb

b) venous sinus

c) common arterial trunk

d) primitive ventricle

e) primitive atrium

6. At which term of intrauterine development appears the heart conductibility system?

a) III week

b) IV week

c)VI week

d) VIII week

e)VII week

7. At which term of intrauterine development has place the dividing of common arterial trunk in the

pulmonary artery and aorta?

a) IV-V week after conception

b) V-VI week after conception

c) VI-VII after conception

d) III-IV week after conception

e) VIII week after conception

8. Which is the difference between the swoon and syncope?

a) absence of pulse

b) short time loss of consciounce

c) presence of neurological manifestations

d) maintenance of vital functions (circulation and respiration)

e) marked slowing down until stopping of cardiac beats

9. For which pathology in children is characteristic the systolic murmur at the basis of the heart?

a) myocarditis

b) anemia

c) acquired valvulopathy

d) congenital cardiac pathology

e) thyrotoxicosis

10. The systolic murmur at apex in children can suggest:

a) acquired cardiac pathology

b) myocarditis

c) acquired valvular stenosis

d) chronic intoxication

e) left ventricle myocardium hypertrophy

11. Which value of cardiothoracal index (CTI) can suggest the presence of cardiopathy in children

until 2 months age?

a) more than 0,45

b) more than 0,50

c) more than 0,55

d) more than 0,60

e) more than 0,70

12. Which value of cardiothoracal index (CTI) can suggest the presence of cardiopathy in children

until 2 years age?

a) more than 0,60

b) more than 0,55

c) more than 0,40

d) more than 0,45

e) more than 0,50

13. Which value of cardiothoracal index (CTI) can suggest the presence of cardiopathy in children

until 12 years age?

a) more than 0,55

b) more than 0,50

c) more than 0,45

d) more than 0,60

e) more than 0,40

14. Which value of cardiothoracal index (CTI) can suggest the presence of cardiopathy in children

after 12 years age?

a) more than 0,40

b) more than 0,50

c) more than 0,55

d) more than 0,45

e) more than 0,60

15) In which pathologies in children is forming „cardiac bulge”?

a) rhythm disorders

b) pericarditis

c) endocarditis

d) myocarditis

e) cardiac congenital malformation

16) What represents the term „embryocardia” in children of the first months of life?

a) cardiac block

b) equal intervals between I and II, II and I cardiac sound

c) bradycardia

d) extrasystoles

e) tachycardia

17)Indicate the auscultative localization of functional systolic murmur in little age healthy children:

a) on apex

b) on Botkin-Erb point

c) on pulmonary artery

d) on aorta

e) on tricuspid valve

18) Which is the sonority of cardiac sounds on the basis of the heart, characteristic for little age

children:

a) the sonority of I sound is more than of II sound

b) the sonority of II sound is more than of I sound

c) the sonority of I and II sound is identical

d) is heared only first sound

e) the sounds are attenuated

19) Which is the classic point of mitral valve auscultation in children?

a) on the right sternal line, in the III intercostal space

b) in the II right intercostal space

c) in the II left intercostal space

d) on apex

e) on the Botkin - Erb point

20) Which is the classic point of tricuspid valve auscultation in children?

a) at the inferior border of sternum

b) in the II right intercostal space

c) on apex

d) in the II left intercostal space

e) on the Botkin – Erb point

21) Where normally is palpated the apex beat in sucklings?

a) in the II intercostal space

b) in the III intercostal space

c) in the IV intercostal space

d) in the V intercostal space

e) in the VI intercostal space

22) Where normally is palpated the apex beat in children until 10 years age?

a) in the IV intercostal space

b) in the III intercostal space

c) in the V intercostal space

d) in the II intercostal space

e) in the VI intercostal space

23) What is at the basis of pathologic modifications in the cardiovascular diseases?

a) decreasing of myocardium contractibility

b) increasing of arterial pressure

c) rhythm disorders

d) increasing of vascular permeability

e) hemodynamic disorders

24) Which is the main condition for arterial channel Botallo closing after child birth?

a) increasing of venous pressure

b) increasing of vascular resistance

c) increasing of pressure in the small circle of circulation

d) decreasing of pressure in the pulmonary artery

e) arterial hypotension

25) Which is the normal level of systolic arterial pressure in the new-born period?

a) 50 mm Hg

b) 30 mm Hg

c) 100 mm Hg

d) 90 mm Hg

e) 70 mm Hg

26) Which is the pulse rate in 4 years age healty children?

a) 120 per minute

b) 140 per minute

c) 70 per minute

d) 80 per minute

e) 100 per minute

*Multiple complement*

1. Which congenital malformations are cyanotic?

a) dextrocardia

b) pulmonary artery stenosis

c) transposition of great vessels

d) common persistent arterial duct

e) tricuspide valve atresy

2. In which pathologies in children can be heared organic murmurs?

a) in anemia

b) in thyrotoxicosis

c) in congenital heart malformations

d) in acquired heart diseases

e) in the case of chronic infection

3. In which extracardiac pathologies in children will be the pulse pathologic changes?

a) in hypothyrosis

b) in anemia

c) in febrile states

d) in bronchites

e) in rickets

4. In which case has place the accentuation of both cardiac sounds in children?

a) emotions

b) in myocardites

c) at physical effort

d) at hyperthyroidism

e) in mitral stenosis

5. Which are characteristic for organic murmurs?

a) low intensity

b) high intensity

c) associated with thrill

d) propagation out of heart limits

e) disappear after effort

6. Which age peculiarities influence the ECG character in children?

a) body mass

b) position of heart in the chest

c) the report between the mass of left and right ventricle

d) thickness of ventricles walls

e) arterial pressure value

7. Which are the morpho-functional peculiarities of the new-born heart?

a) the muscular fibres of myocardium are thin

b) the conductibility system is undeveloped

c) the conjunctive tissue is undifferentiated

d) the sanguine coronary vessels have small calibre

e) the walls of left ventricle are relatively more thick that the right

8. Which are the characteristic peculiarities of heart image on the Xray in the suckling baby?

a) the position of the heart in the chest is similar to adults

b) the heart position is transversal

c) the supraposition of thymus shadow is characteristic

d) the heart shadow in comparison with the thorax is more than in adult

e) the heart shadow in comparison with the thorax is less than in adult

9. Which are the specific peculiarities of functional heart murmurs in children?

a) they are not associated with thrill

b) they are not propagated out from the heart borders

c) they are hear only at the heart basis

d) they are intensifying after physical effort

e) they disappear after physical effort or changing of body position

10. In which cardiovascular congenital pathology in children is establishing the right-left shunt?

a) in tetralogy of Fallot

b) in the case of great vessels transposition

c) in the case of tricuspide valve atresia

d) in the case of interatrial septal defect

e) in the case of interventricular septal defect

11. Which is correct for foetus hemodynamics?

a) small circle doesn’t functioning

b) the foetal pathways of blood communication function

c) the blood pressure in pulmonary artery is more than in aorta

d) the pulmonary artery transports the blood in lungs

e) the septal interventricular defect is present

12. Which morpho-functional peculiarities of cardiovascular system in children lighten the blood

circulation and respectively the loading of the heart?

a) relatively increased mass of the heart

b) relatively big dimensions of intracardiac communications

c) relatively big dimensions of vascular lumen

d) decreased arterial pressure

e) especial position, specific to the age, of heart in the thorax

**13.** In which cases has place in children the diminishing of both heart sounds intensity?

a) in arterial hypertension

b) in myocardites

c) in pericardites

d) in pulmonary emphysema

e) in hypotrophy

14. Which are the characteristics for organic murmurs in children?

a) big intensity

b) propagating out from the heart borders

c) auscultation in the Botkin-Erb point

d) association with thrill

e) they don’t modify after physical effort or changing of body position

15. Which symptoms are characteristic for cardio-vascular diseases in little age children?

a) oedemas

b) dyspnoea

c) malnutrition

d) cyanosis

e) cough

**16.** Which is characteristic for foetal circulation?

a) existance of communications between right and left part and between magistral vessels

b) the more munute-volume in the great circle

c) decreased pressure in the pulmonary artery

d) preferential ensurance with rich in oxygen blood of vital organs

e) practically equivalent pressure in aorta and pulmonary artery

**17.** Which are the changes of postnatal circulation, appearing at birth?

a) decreasing of pulmonary vascular resistance and increasing of pulmonary vascular debit

b) increasing of peripheral vascular resistance and decreasing of sanguine debit at periphery

c) closing of foetal pathways of communication

d) maturation of pulmonary vascularisation

e) increasing of pressure in the pulmonary artery

**18.** In which categories of new-borns can be established the syndrome of foetal circulation persistence?

a) premature new-borns

b) new-borns with intrauterine infection

c) new-borns having mothers with diabetus mellitus

d) immature new-borns

e) new-borns through caesarian operation

**19.** Which pathologies refer to anomalies of cardio-vascular system development without pathological connection between small and great circles?

a) pathologic sitting of pulmonary veins

b) dextrocardia

c) coarctation of the aorta

d) congenital stenosis of the aorta

e) stenosis of pulmonary artery

20. For which anomalies of cardio-vascular system is characteristic the presence of left-right shunt?

a) pathologic sitting of pulmonary veins

b) open arterial duct Botallo

c) dextrocardia

d) interatrial septal defect

e) interventricular septal defect

21. For which anomalies of cardio-vascular system is characteristic the presence of right-left shunt?

a) interatrial septal defect

b) common persistent arterial duct

c) transposition of magistral vessels

d) tricuspid valve atresia

e) tetralogy of Fallot

22. Which are the functional peculiarities characteristic for cardiovascular system in little age children?

a) presence of respiratory arrhythmia

b) systolic volume is relatively small

c) the minute-volume, reported to 1 kg of body mass, is less

d) the frequence of cardiac contractions is more

e) the arterial pressure is relatively small

**23.** Which hereditary antecedents are important in the anamnesis of child suspected for congenital

cardiopathy?

a) presence of congenital cardiopathy at another members of family

b) existence of consanguinity

c) inexplicable sudden deaths of another members of family

d) presence of cardiomegalies

e) presence of chronic pulmonary pathology

**24.** Which antecedents will be obligatory found at prenatal anamnesis in children suspected for cardiopathy?

a) toxic aggression ( intoxication or alcohol consumption in mother )

b) contact with viral infections (rubeola, influenza) in the first three months of pregnancy

c) exposition to radiations

d) hormonal treatments during pregnancy

e) antibacterial treatments during pregnancy

**25.** Which postnatal anamnestic antecedents are important for children suspected for cardiopathy?

a) fatigue

b) presence of difficulties of alimentation

c) presence of frequent pulmonary infections

d) presence of adverse reactions to vaccinations

e) convulsive syndrome

**26.** Which are the functional symptoms of cardiovascular system affection in children?

a) cyanosis

b) palpitations

c) precordial pains

d) cough

e) dyspnoea

**27.** Which is characteristic for syncope in children?

a) short time loss of consciounce, without keeping of vital functions

b) slowing down, until stopping, of pulse

c) slowing down, until stopping, of respiration

d) maintained arterial pressure

e) absence of pulse

**28.** Which are the peculiarities of cardio-vascular system inspection method in children?

a) its performance is recommended when the child is calm or during sleeping

b) only the precordial region and cardiovascular system will be examined

c) the anthropometric parameters will be obligatory appreciated

d) the cutaneous lesions, suggestive for cardiopathy, will be searched

e) the general inspection of the organism and local, at the level of cardiovascular system, will be

performed

**29.** Which information gives the palpation and examination of cardiovascular system in children?

a) about the cardiac volume

b) about the apex beat

c) about the thrill and gallop rhythm

d) about the quality of peripheral circulation

c) about precordial pain

**30.** Which are the auscultative characteristics of cardiac sounds in children?

a) they frequence is more

b) they are more intense

c) they have tendency to equalization (in sucklings)

d) they have less intensity than in adults

e) the respiratory arrhythmia can be present

31. Which are the characteristics of functional murmurs in children?

a) the intensity by Lewine scale is 4-6

b) the intensity by Lewine scale is 1-2

c) they are not followed by thrill

d) they disappear after changing of body position

e) they are not propagated out from heart borders

**32.** Which important information for diagnosis can offer the radiologic investigation in the

cardiovascular system examination in children?

a) patology of the thorax

b) characteristic of the pulmonary circulation

c) estimation of the pulmonary excursion

d) appearance of the cardiac shadow

e) assessing of the cardio-thoracic index (CTI)

**33.** Which information can give the ECG in the cardiovascular system examination in children?

a) state of myocardium

b) cardiac rhythm

c) atrial and ventricular function

d) myocardial contractility

e) possible dyselectrolytemias

**34.** Specify characteristic clinical symptoms for cardiac pathology in little age child:

a) oedemas

b) dyspnoea

c) acrocyanosis

d) cyanosis

e) jaundice of the skin

**35.** Determine most important functional hemodynamic parameters:

a) blood pressure

b) pulse

c) heart rate

d) pulmonary artery pressure

e) parietal pressure

**36.** Mark what swoon represents:

a) short time loss of consciounce

b) maintenance of circulation

c) maintenance of respiration

d) without keeping blood circulation

e) without keeping respiration

**37.** Specify structural elements of the pericardium in children:

a) a distinct structure surrounding the heart

b) contains connective tissue

c) contains elastic tissue

d) consists of two outer skins with a small amount of liquid between them

e) containing muscle tissue

**38.** Determine nervous regulation peculiarities of the cardiac activity in children:

a) predominance of sympathetic nervous system

b) the predominance of the parasympathetic nervous system

c) reduced influence of the vagus nerve

d) increased influence of the vagus nerve

e) has possibilities to adjust heart conductivity

**39.** Mark essential characteristics of the cardiovascular system in infant?

a) high diaphragm

b) short thorax

c) horizontally positioned of the heart, upper topic localization

d) the apex shock is located in the fourth left intercostals space, outside of the medioclaviculare line

e) lower localization of the diaphragm

**40.** Specify characteristic elements of the myocardium histological structure in newborns:

a) very thin myofibres

b) undeveloped connective tissue

c) increased vascularization of the myocardium

d) reduced vascularization of the myocardium

e) reduced amount of adrenergic β1β2 receptors

Semeiology of cardiovascular system in children:

*Single choice tests*

1. C

2. C

3. A

4. B

5. D

6. B

7. C

8. D

9. D

10. A

11. D

12. B

13. B

14. D

15. E

16. B

17. C

18. B

19. D

20. A

21. C

22. C

23. E

24. D

25. E

26. E

*Multiple choice tests*

1. C, E
2. C, D
3. A, B, C
4. A, C, D
5. B, C, D
6. B, C, D
7. A, B, C
8. B, C, D
9. A, B, E
10. A, B, C
11. A, B, C
12. A, B, C
13. B, C, D
14. A, B, D, E
15. A, B, C, D
16. A, B, D, E
17. A, B, C, D
18. A, B, C, D
19. B, C, D, E
20. A, B, D, E
21. B, C, D, E
22. A, B, D, E
23. A, B, C, D
24. A, B, C, D
25. A, B, D, E
26. A, B, D, E
27. A, B, D, E
28. A,C,D,E
29. A,B,C,D
30. A,B,C,E
31. B,C,D,E
32. A,B,D,E
33. A,B,C,E
34. A, B, C, D
35. A,B,C
36. A,B,C
37. A,B,C,D
38. A,C,E
39. A,B,C,D
40. A,B,C,E