1) Select the period of the intrauterine life when hematopoiesis starts:
   a) from the 3 week of the intrauterine development
   b) from the 2-nd month of the intrauterine development
   c) from the 9-th week of the intrauterine development
   d) from the 4-th week of the intrauterine development
   e) from the 7-th month of the intrauterine development

2) Select the period of the intrauterine life when foetus liver starts to be a hematopoietic organ:
   a) from 2 weeks of the intrauterine development
   b) from 7 weeks of the intrauterine development
   c) from 6 weeks of the intrauterine development
   d) from 12 weeks of the intrauterine development
   e) from 10 weeks of the intrauterine development

3) Select the period of the intrauterine life when foetus hematopoiesis is preponderantly determined by the liver:
   a) at 9 months of the intrauterine development
   b) at 5 months of the intrauterine development
   c) at 2 months of the intrauterine development
   d) at 1 month of the intrauterine development
   e) at 8 months of the intrauterine development

4) Indicate the gestation term when begin to form the first neutrophils and megacaryocytes in foetus:
   a) at 5 months of gestation
   b) at 2 months of gestation
   c) at 8 months of gestation
   d) at 1 month of gestation
   e) at 7 months of gestation

5) Select the ratio between the fetal hemoglobin (HbF) and adult hemoglobin (HgA) in the foetus blood at birth:
   a) 80% / 20%
   b) 60% / 40%
   c) 50% / 50%
   d) 90% / 10%
   e) 70% / 30%

6) Select the period of the intrauterine life when spleen hematopoiesis starts:
   a) at 6 months of the intrauterine development
   b) at 8 months of the intrauterine development
   c) at 3 months of the intrauterine development
   d) at 9 months of the intrauterine development
   e) at the moment of birth

7) Select the period of the intrauterine life when hematopoiesis in the spleen is over:
   a) at 5 months of the intrauterine development
b) at 8 months of the intrauterine development

c) at the moment of birth

d) at 2 months of the intrauterine development

e) at 9 months of the intrauterine development

8) Indicate the term of the intrauterine development when at foetus the medullary hematopoiesis starts:
   a) at 7 months of the intrauterine development
   b) at 4 months of the intrauterine development
   c) at birth
   d) at 5 weeks of the intrauterine development
   e) at 6 months of the intrauterine development

9) Indicate the term of the intrauterine development when medullary hematopoiesis starts to have a predominant role:
   a) at 5 months of the intrauterine development
   b) at 7 months of the intrauterine development
   c) at the end of the intrauterine period
   d) at 16 weeks of the intrauterine period
   e) at 14 weeks of the intrauterine period

10) Select the normal hemoglobin level in the peripheral blood of new-borns at birth:
    a) 180-220 g/l
    b) 140-160 g/l
    c) 120-140 g/l
    d) 160-170 g/l
    e) 150-180 g/l

11) Indicate the age of the healthy new-born when hemoglobin level starts to decrease physiologically:
    a) beginning with the first day after birth
    b) 3 – 4 days after birth
    c) 5 – 6 days after birth
    d) 8 – 9 days after birth
    e) 10 days after birth

12) Indicate the life-span of erythrocytes in healthy new-born:
    a) 80-120 days
    b) 90-60 days
    c) 30 days
    d) 8-12 days
    e) 10-20 days

13) Indicate the the life-span of erythrocytes in children older than 3 years age:
    a) 80-120 days
    b) 60 days
    c) 30 days
    d) 8-12 days
    e) 10-12 days

14) Choose the normal red blood cells count in the peripheral blood of new-born in the first 5 – 7 days after birth:
a) $3.6 \times 10^{12}/l$

b) $4 - 4.5 \times 10^{12}/l$

c) $5 - 6 \times 10^{12}/l$

d) $3.2 - 3.8 \times 10^{12}/l$

e) $4.5 - 5 \times 10^{12}/l$

15) Indicate the child’s age for which physiologic leucocytosis is characteristic:
   a) until 5 day of life
   b) after 5 – 7 days of life
   c) in the 2-nd week of life
   d) in the 3-rd week of life
   e) at the end of new-born period

16) Indicate the age when takes place the first „crossing” of leucocyte formula in children:
   a) at the 3-rd day after birth
   b) at the 4 – 5 days after birth
   c) at 10 days after birth
   d) at 1 week after birth
   e) at 1 month

17) Indicate the age when takes place the second „crossing” of leucocyte formula in children:
   a) after 1 year age
   b) at the 10 years age
   c) at the 4 – 5 years age
   d) at the 7 – 12 years age
   e) at the 15 years age

18) Indicate the age when the leucocyte formula in children is similar to that in adults:
   a) at the age of 3 years
   b) at the 10 years age
   c) at the 12 years age
   d) after 1 year age
   e) at the 15 years age

19) Indicate the child’s age when physiologic lymphocytosis is a characteristic finding:
   a) 7 – 10 years
   b) until 4 – 5 years age
   c) after 18 years age
   d) at the 15 years age
   e) at the 8 – 11 years age

20) Indicate the term of intrauterine life when development of lymphocytes starts:
   a) 7 – 8 weeks of intrauterine development
   b) 3 months of intrauterine development
   c) 4 months of intrauterine development
   d) 7 months of intrauterine development
   e) 5 months of intrauterine development

21) Indicate the child’s age of physiologic lymphocytosis duration:
a) until 4 – 5 years of age  
b) until 10 years of age  
c) until 1 year of age  
d) until 6 months of age  
e) until 11 months of age

22) Indicate the level of hemoglobin characteristic for mild anemia in children:  
a) 90-110 g/l  
b) 110-115 g/l  
c) 60-90 g/l  
d) less than 60 g/l  
e) 80 g/l

23) Indicate the clinical condition characterized by a marked decrease or absence of reticulocytes in the peripheral blood of the child:  
a) hemolytic anemia  
b) intensive bleeding  
c) aplastic anemia  
d) mild nutritional anemia  
e) hemorrhagic vasculitis

24. Select the drug that is a frequently etiology of lymphadenopathy in children:  
A. Anticonvulsants (Phenytoin sodium)  
B. Anticoagulant (anti-clotting) medication (Heparin)  
C. Antibiotics (Amoxicillin)  
D. Antihistaminics (Diazolin)  
E. Iron supplements

25. Select the most frequent etiology of the postvaccinal lymphadenopathy in children:  
A. Vaccination against poliomyelitis  
B. Vaccination against hepatitis B  
C. Vaccination against tuberculosis  
D. Vaccination against diphtheria, tetanus, pertussis  
E. Vaccination against measles, mumps, rubella

26. Select the most frequent infectious etiology of the generalized lymphadenopathy in children:  
A. Dysentery  
B. Salmonellosis  
C. Parainfluenza  
D. Acute viral hepatitis A  
E. Mononucleosis

27. Select the diagnostic test that is most important for the definitive diagnosis of lymphadenopathies in children:  
A. Physical data obtained at examination of affected lymph nodes  
B. Biopsy of the affected lymph nodes  
C. Radiography of the affected lymph nodes  
D. Serologic tests  
E. Complete Blood Count
Multiple complement:

1) Which are the medium values of leucocytes in the peripheral blood of healthy new-borns in the first days after birth:
   a) \(4.5 \times 10^9/l\)
   b) \(7.5 \times 10^9/l\)
   c) \(10.5 \times 10^9/l\)
   d) \(15 \times 10^9/l\)
   e) \(18 \times 10^9/l\)

2) Indicate the clinical condition in children when reticulocytosis is a characteristic finding:
   a) hemolytic anemia
   b) intensive bleeding
   c) leukemia
   d) mild nutritional anemia
   e) transfusion of red blood cells

3) Indicate the clinical condition in children when increase of erythrocyte sedimentation rate (ESR) is a characteristic finding:
   a) acute pneumonia by bacterial etiology
   b) streptococcal pharyngitis
   c) acute viral respiratory infection
   d) septicemia
   e) jaundice

4) Enumerate changes in hematopoiesis that take place in foetus in the 5-th month of intrauterine development:
   a) the hematopoietic function of liver comes to a head
   b) begin to form the first megacaryocytes and neutrophils
   c) the megaloblastic type of hematopoiesis is replaced by normoblastic type
   d) the function of hepatic hematopoiesis is included
   e) the primary erythroblasts are forming

5) Enumerate clinical signs that are characteristic for the anemic syndrome in children:
   a) abdominal pains
   b) dizziness
   c) nasal hemorrhages
   d) pallor of skin and mucosae
   e) less of conscience

6) In which diseases can be observed the mucosal hemorrhages of oral cavity in children:
   a) in hypovitaminosis C
   b) in oral cavity candidosis
   c) in hemophylia
   d) in hemorrhagic vasculitis
   e) in rheumatic fever

7) Enumerate clinical conditions in children in which lymphocytosis is a characteristic finding:
   a) influenza
   b) acute pneumonia by bacterial etiology
   c) chronic inflammatory process
d) acute respiratory viral infection
e) streptococcal pharyngitis

8) Enumerate clinical conditions in children in which thrombocytopenia is a characteristic finding:
   a) the period after splenectomy
   b) platelet function disorders
   c) in thrombocytopenic purpura (Verlgoft's disease)
   d) in aplastic anemia
   e) in hepatic cirrhosis

9) Which are the peculiarities of „red blood” in new-born:
   a) lower hemoglobin level comparative to other ages
   b) polycytemia
   c) hyperchromy
   d) higher hemoglobin level comparative to other ages
   e) increased diameter of erythrocytes

10) Enumerate clinical conditions associated with hemorrhagic syndrome in children:
    a) hemorrhagic vasculitis
    b) hemophylia
    c) thrombocytopenic purpura (Verlgoft's disease)
    d) rickets
    e) leukemia

11) Enumerate factors that determine the intensification of erythropoiesis in newborns:
    a) hypoxia during the pregnancy and delivery
    b) short life-span of erythrocytes
    c) presence in the peripheral blood of undifferentiated erythrocytes
    d) predisposition of erythrocytes to hemolysis
    e) stimulation of bone marrow in the newborn

12) Enumerate symptoms that are characteristic for hemolytic syndrome in children:
    a) jaundice
    b) decreased level of hemoglobin
    c) reticulocytosis
    d) decreasing of erythrocytes osmotic resistance
    e) pallor

13) Enumerate laboratory tests that are characteristic for anemia in children:
    a) decrease of hemoglobin level under 110 g/1
    b) decrease of erythrocytes count under $4 \times 10^{12}/1$
    c) increase of reticulocytes count
    d) decrease of hemoglobin level under 120 g/1
    e) decrease of serum iron level

14) Enumerate clinical conditions in children in which lymphocytosis is a characteristic finding:
    a) whooping cough
    b) infectious mononucleosis
    c) acute pneumonia by bacterial etiology
d) chronic inflammatory diseases

e) acute viral respiratory infections

15) Enumerate clinical conditions in children in which leucocytosis is a characteristic finding:
   a) streptococcal pharyngitis
   b) whooping cough
   c) acute respiratory viral infection
   d) septicemia
   e) leukemia

16) Enumerate clinical conditions in children in which monocytosis is a characteristic finding:
   a) measles
   b) infectious mononucleosis
   c) diphtheria
   d) epidemic parotiditis
   e) streptococcal pharyngitis

17) Enumerate clinical conditions in children in which leucopenia is a characteristic finding:
   a) acute respiratory viral infections
   b) urinary pathways infections
   c) epidemic parotitis
   d) AIDS infection
   e) congenital immunodeficiency

18) Enumerate clinical conditions in children in which eosinophilia is a characteristic finding:
   a) scarlet fever
   b) hepatitis
   c) helminths infestation
   d) allergic dermatitis
   e) bronchial asthma

19) Enumerate clinical conditions in children in which hyperplasia of lymph nodes is a characteristic finding:
   a) tuberculosis
   b) acute respiratory viral infection
   c) leukemia
   d) AIDS infection
   e) systemic disease of conjunctive tissue

20. At physical examination of lymph nodes will be appreciated:
   A. Color of lymph nodes
   B. Number and consistence of lymph nodes
   C. Volume and form of lymph nodes
   D. Adherence of them with adjacent tissues
   E. Pain sensitivity at palpation

21. The adenopathy of mediastinal lymph nodes can be caused by:
   A. Inflammation after vaccination against tuberculosis
   B. Pulmonary tuberculosis
   C. Sarcoidosis
D. Neoplasms - lymphoma  
E. Seborrheic dermatitis

22. Enumerate causes of lymphadenopathies in children:  
A. Congenital hip dysplasia  
B. Infectious diseases  
C. Cancer  
D. Inflammatory diseases  
E. Congenital hydrocephaly

23. Enumerate manifestations characteristic for acute infectious lymphadenitis:  
A. Altered general condition, fever  
B. Nose bleeding  
C. Urticaria  
D. Enlarged and painful lymph nodes  
E. Leucocytosis in the Complete Blood Count

24. Lymphadenopathy in infectious mononucleosis is associated with following clinical and laboratory manifestations:  
A. Fever  
B. Pharyngitis  
C. Nose bleeding  
D. Leucocytosis, lymphocytosis, monocytosis  
E. Splenomegaly

25. Acute reactive hyperplasia of lymph nodes is characterized by following manifestations:  
A. There is the most rare form of benign adenopathy  
B. It is usually caused by nonspecific infections  
C. It is followed by fever and leucocytosis  
D. It is usually painful  
E. It is usually not painful
The semeiology of hematopoietic system in children:

*Simple complement*

1. A  
2. C  
3. B  
4. A  
5. B  
6. C  
7. A  
8. B  
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10. A  
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24. A  
25. C  
26. E  
27. B

*Multiple complement:*

1. DE  
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4. ABC  
5. BDE  
6. ACD  
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