FINAL CLASS WITH GRADING TEST
Academic discipline «Pediatric Propedeutics»

Self-study guide for the 3rd year
English medium students

ПІДСУМКОВЕ ЗАНЯТТЯ
ТА ДИФІРЕНЦІЙОВАНІЙ ЗАЛІК
з дисципліни «Пропедевтика педіатрії»

Методичні вказівки
dо самостійної роботи студентів 3-го курсу
медичного факультету

Затверджено
вченію радою ХНМУ.

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**Number of class periods:** practical trainings – 2.

**Contents**

Evaluation of the knowledge obtained by a student and the level his/her practical training is one of the final stages of student learning activities and definition of learning success.

Evaluation makes it possible to assert that the student receives the necessary knowledge, understanding, skills and competence. Competence means the proven ability of students to use knowledge, learned behavior and personal skills in educational or work situations. Competence is the ability to transfer knowledge into practice.

The forms of monitoring and evaluating are listed pursuant to the program of the work practice "Pediatric Propedeutics” and the Instruction on the evaluation of academic activities in the course of the European credit transfer system in the organization of the educational process”.

**Specific goals:**

- to prepare for evaluation by the teacher mastering of the knowledge and skills of Pediatric Propedeutics.

**To know:**

1. The main historical stages of pediatrics world development in XIX–XX centuries.
2. Growth and development of a child.
4. Methods of clinical examination in pediatrics. What is the role of observation in pediatric practice?
6. Mane symptoms and syndromes of diseases in childhood.

**Be able to (list of practical skills to the subject):**

- To interpret the child health criteria.
- To analyze the basic statistical indices of medical institutions.
- Interpret the historical stages of pediatrics in Ukraine.
- Determination of the period of childhood of a child taking into account anatomical and physiological characteristics.
- Identification of pathological factors and their hazardous influence on a child during different age periods.
- Training of the use of terminology related the periodization (embryopathies, early and late-term fetopathies, prenatal, anthenatal, intranatal, postnatal and so on).
- Use of the age criteria for identification of the period of childhood to which the child belongs.
• Determinate of the meaning of perinatal and exogenous factors on the development of a child of different age.
• Collect of the medical history of a newborn child.
• Evaluate of the state of a newborn child using Apgar score and Silverman score.
• Determination of the maturity of a newborn child, maturity or prematurity
• Carry out anthropometric measurements, assessment of the physical development of children.
• Carry out clinical examination of a newborn child.
• Determinate of transient states of newborn children.
• Identificate of high-risk newborn children (according to their medical history).
• Carry out the primary hygienic care of newborn children.
• Maintenance of the sanitary and hygienic conditions in the neonatal.
• Measure of the main body parameters (weight, height, head, chest, hip, calf, shoulder circumferences, body mass index).
• Calculate of anthropometric indexes.
• Calculate of appropriate parameters of the physical development according to the empirical equations, sygmal and empirical tables, alignment charts.
• To assess of the physical development based on the received data.
• To assess of psychomotor development of children under 1 year of life by months.
• To assess of psychomotor development of preschool children, preschool, junior and senior school age.
• To interpret the results of clinical investigation (statics, motility, sensory reactions, speech, mental development).
• To conduct syndrome diagnosis of the nervous system diseases of children.
• To collect anamnesis of infants and evaluate it.
• To calculate the amount of food per day for child, according to the age.
• To make a one-day menu for child one year with breastfeeding, taking into account the needs in food ingredients.
• To evaluate the correct techniques of breastfeeding.
• Issues in the prevention of hypogalactia and mastitis.
• To demonstrate the methods of calculation for child with introduction of solid foods, taking into account the needs in food ingredients.
• To explain the definition of mixed or artificial feeding, the classification and characteristics of milk formulas.
• To collect anamnesis of children with mixed or artificial feeding and evaluate it.
• To calculate the amount of food per day for children with mixed and artificial feeding, according to the age.
• To make a one-day menu for child with mixed and artificial feeding, taking into account the needs in food ingredients.
• To evaluate the correct techniques and schemes of mixed and artificial feeding.
• To demonstrate the methods of calculation for child of mixed or artificial feeding with introduction of solid foods, taking into account the needs in food ingredients.
• To demonstrate the technique of interrogation and inspection of the nervous system.
• To interpret the results of clinical and paraclinical investigations.
• To appoint laboratory and instrumental methods of investigations of the nervous system of children.
• To conduct syndrome diagnosis of the nervous system diseases of children.
• To get skills of care of children with diseases of the nervous system.
• To fulfill examinations of the skin and subcutaneous tissue, taking into consideration peculiarities in the methods of examination in children.
• To fill in a case history for performing an objective examination of the osteomuscular system in children.
• To prescribe a complex of methods for laboratory and instrumental examinations of the osteomuscular system.
• To interpret the received data of examination with taking into consideration morphofunctional peculiarities of a child’s organism.
• To make syndromic diagnosis in children with pathology of their skin, bone system, and muscular system.
• To be able to fulfill examinations of the respiratory system, taking into consideration peculiarities in the methods of examination in children.
• To be able to fill in a case history for performing an objective examination of the respiratory system in children.
• To prescribe a complex of methods for laboratory and instrumental examinations of the respiratory system.
• To interpret the received data of examination with taking into consideration morphofunctional peculiarities of a child’s organism.
• To make syndrome diagnosis in children with pathology of respiratory system.
• To collect anamnesis for a patient with diseases of the respiratory system.
• To prescribe the number of laboratory and instrumental investigations in case of respiratory system diseases in children.
• To provide syndrome-based diagnosis of respiratory system diseases in children.
• To interpret the survey data.
• To collect anamnesis of a patient with diseases of the cardiovascular system.
• To conduct an objective examination of the cardiovascular taking into account the child's age characteristics.
• To interpret the results of investigation.
• To prescribe the laboratory investigations in case of the cardiovascular system diseases in children.
• To prescribe the instrumental investigations in case of the cardiovascular system diseases in children.
• To provide syndrome-based diagnosis of the cardiovascular system diseases in children.
• To demonstrate the technique of interrogation, inspection, palpation and percussion of the abdomen.
• To interpret the results of clinical and paraclinical investigations.
• To appoint laboratory and instrumental methods of investigations of the digestive system of children.
• To conduct syndromic diagnosis of the digestive system diseases of children.
• To get skills of care of children with diseases of the digestive system.
• To demonstrate the technique of interrogation and inspection of the urinary system.
• To interpret the results of clinical and paraclinical investigations.
• To appoint laboratory and instrumental methods of investigations of the urinary system of children.
• To conduct syndromic diagnosis of the urinary system diseases of children.
• To get skills of care of children with diseases of the urinary system of children.
• To collect anamnesis of children with diseases of the blood and immune system.
• To demonstrate the conduction of the objective examination of the immune system and blood in children according to age.
• To identify the major syndromes diseases of the blood and immune system.
• To differentiate the clinical signs of immunodeficiency, anemia.
• To interpret the results of laboratory and instrumental methods of investigation of the blood and immune system. Peculiarities of myelogram in children.
• To demonstrate the technique of interrogation and inspection of the endocrine system.
• To interpret the results of clinical and paraclinical investigations.
• To appoint laboratory and instrumental methods of investigations of the endocrine system of children.
• To conduct syndrome diagnosis of the endocrine system diseases of children.
• To get skills of care of children with diseases of the endocrine system.
• To collect anamnesis of a patient with diseases of the metabolism disorder.
• To conduct an objective examination of the child with metabolic diseases.
• To interpret the results of investigation.
• To be able to fulfill examinations of the child, taking into consideration peculiarities in the methods of examination in children;
• To be able to fill in a case history for performing an objective examination of the child.
• To prescribe a complex of methods for laboratory and instrumental examinations of the child.
• To interpret the received data of examination with taking into consideration morpho-functional peculiarities of a child’s organism;
• To make syndrome diagnosis in children.
Basic knowledge, abilities, and skills, which are necessary for studying the topic (interdisciplinary integration)

<table>
<thead>
<tr>
<th>The names of previous disciplines</th>
<th>Skills</th>
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<tbody>
<tr>
<td>1. Human Anatomy.</td>
<td>To know the structure and functions of various systems and organs, pathological anatomy and physiology.</td>
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<td>2. Histology.</td>
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<td>3. Physiology.</td>
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<td>4. Pathological Anatomy.</td>
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<td>5. Pathological Physiology.</td>
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<tr>
<td>6. Care for patients</td>
<td>To be able to figure the basic statistical rates of the pediatrician and medical institutions activities</td>
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Structures of individual issues of the topic
See self study guides for previous topics and Appendix 1.

The list of study materials:

Main:

Additional:

Test questions to the class:
1. Define the subject of Pediatrics, determine its role and basic functions.
2. Determine the main historical stages of Pediatrics in Ukraine.
3. Determine the role of such scientists like S.H. Hotovytskyi and I. V. Troyitskyy in development of Pediatrics in Ukraine.
4. What is the concept of children's health, criteria for health assessment, and health groups?
5. Name the main statistical indexes of child health-care institutions (neonatal mortality, mortality etc.).
7. Name the periods of the intrauterine development.
8. Name the periods of development after the birth of a child.
9. Conception of "embryopathies", "early fetopathies", "late fetopathies" and their characteristics.
10. Characterize the period of intrauterine development (duration, main patterns of physical, neurological and psychical development, typical pathologies).
11. Characterize the neonatal period (duration, main patterns of physical, neurological and psychical development, typical pathologies).
12. Characterize the infancy period (duration, main patterns of physical, neurological and psychical development, typical pathologies).
13. Characterize the pre-school period (duration, main patterns of physical, neurological and psychical development, typical pathologies).
14. Characterize the period of primary school age (duration, main patterns of physical, neurological and psychical development, typical pathologies).
15. Characterize the period of senior school age (duration, main patterns of physical, neurological and psychical development, typical pathologies).
16. What the term “gestation age” means?
17. What the terms “mature, premature and overmature newborn child” mean?
18. List the signs of maturity, prematurity and overmaturity.
19. What the term “low weight at the birth” means?
20. What do you know about the physiology of the respiratory system of a newborn child (mechanism of the first breath, physiological lymphocytolysis tachypnea, abdominal type of breathing)?
21. What do you know about the physiology of the digestive system of a newborn child: (beginning of the enteral feeding, forming of the biocoenosis of the gastrointestinal tract)?
22. What do you know about the physiology of the urinary system of a newborn child: (physiological proteinuria, uric acid infarct of kidneys)?
24. List the characteristics of the clinical examination of a newborn child: questioning; visual inspection; palpation; percussion; auscultation.
25. What is the purpose of Apgar score and Silverman score?
26. Which special features has care of a newborn child?
27. What the term “high-risk newborn” means?
28. How to feed a newborn child?
29. Which are the requirements to the sanitary and hygienic conditions in the neonatal department?
30. Characterize the value in pediatric practice of anthropometric measurements.
31. Describe the techniques of anthropometric measurements of weight, height, head and chest circumferences.
32. Describe the term ‘acceleration’ of physical development.
33. What does the term ‘retardation’ mean of physical development?
34. Semiotics of deviations of children’s physical development.
35. Presentation of existent equations of calculation of weights, height and head and chest circumferences in different age.
36. Listing of clinical methods of children’s physical development assessment.
37. Dynamics of physical development parameters at the child’s first year.
38. What first and second retraction means?
39. Characterization of the main signs of deviations of the children’s physical development.
40. Typical characteristics of somatometry of children of more than two years old.
41. What do the indexes of physical development mean (Erisman, Chulitskaya)?
42. Listing of factors which influence the physical development (genetic, environmental and so on).
43. Listing of children’s diseases which are accompanied by changes of body height and weight (endocrine, chromosomal, chronic infections and so on).
44. What basic criteria and parameters psychomotor development of children of different ages are exist?
45. What features of psychomotor development newborns are exist?
46. How to make assessment of psychomotor development of children under 1 year of life by months?
47. How to make assessment of psychomotor development of preschool children, preschool, junior and senior school age.
48. What history factors affect injuries of psychomotor development?
49. What the notion of psychomotor development includes?
50. What are the criteria of mental development of children?
51. What features of motility of newborns?
52. What signs of static functions do you know?
53. What permanent reflexes do you know?
54. What groups of transitory reflexes do you know?
55. Name the basic oral reflexes.
56. Name the basic spinal reflexes.
57. Name the basic myeloencephalical reflexes.
58. Assessment of psychomotor development of the child comparatively to the age.
59. What is the basic breast anatomy and physiology, including the process of milk production and the composition of human breast milk?
60. What is mean term «breastfeeding»?
61. What are the stages of lactogenesis, or milk production?
62. What is mean term «contact skin to skin»?
63. What are the ten steps to successful breastfeeding according to guidelines WHO/UNICEF?
64. What is mean term «free breastfeeding» and practice «rooming in»?
65. What is correct breastfeeding technique?
66. What are the benefits of breastfeeding for infants, mothers, and society?
67. What are the limited contraindications to breastfeeding?
68. What are the clinical recommendations regarding the use of medications in the breastfeeding mother based upon the pharmacology of the medication, the condition of the baby, and available research, while considering the risks of not breastfeeding?
69. What is the mean term «artificial feeding»?
70. What is the mean term «mixed feeding»?
71. What is correct technique of mixed and artificial feeding?
72. What are absolute indications for the conversion to mixed and artificial feeding?
73. What types of formulae are used for artificial feeding?
74. What is the difference in content of high adapted, partly adapted and non adapted formulae?
75. What are peculiarities of introduction of solid foods in children with mixed or artificial feeding?
76. What are reasons for mixed feeding?
77. How you can know the quantity of the breastmilk if the child has mixed feeding?
78. What are the methods of calculation for child of mixed or artificial feeding with introduction of solid foods?
79. What are the needs in food ingredients in children with mixed or artificial feeding and after introduction of solid foods in different age period?
80. Morphological and functional features of the sensory organs in children at different age.
81. Morphological and functional features of the nervous system in children at different age.
82. Semiotics of disorders of psychomotor and emotional development of the child.
83. The semiotics of diseases of the nervous system. Down syndrome.
84. Semiotics of diseases of the nervous system in children, liquor hypertensive syndrome.
85. State the main clinical and paraclinical methods of examination of the nervous system in children.
86. Semiotics of the nervous system disorders.
87. Convulsive syndrome.
88. Meningeal syndrome.
89. Hydrocephaly syndrome.
90. Morpho-functional peculiarities of the skin and subcutaneous tissue in the different age period.
91. Name the main clinic and paraclinic methods of investigation of the skin and subcutaneous tissue in children.
92. Morphological and functional features of the bones system in children at different age.
93. Name the main clinical and paraclinical methods of examination of the bone system?
94. Semiotics of the bone system diseases in children.
95. Morphological and functional features of the muscular system in children at different age.
96. Name the main clinical and paraclinical methods of examination of the muscle system in children.
97. Semiotics of the muscle system disorders in children.
98. Morpho-functional peculiarities of the respiratory system in the different age period of child.
100. Name the main clinical and paraclinical methods of examination of the respiratory system in children.
101. Methods of clinical examination in pediatrics – percussion of the lung. Describe the technique of percussion depends on the age. What is the role of percussion of the lungs for diagnosing of their disorder (in pediatric practice)?
102. Methods of clinical examination in pediatrics – auscultation of the lung. Describe the technique of auscultation depends on the age. What is the role of auscultation of the lungs for diagnosing of their disorder (in pediatric practice)?
105. Semiotics of respiratory diseases in children, determined by percussion.
107. State the main clinical and paraclinical methods of examination of respiratory system in children.
110. Methods of clinical examination in pediatrics: percussion of the heart; the technique of percussion and it features depends on the age. What is the role of percussion of the heart for diagnosing of their disorder (in pediatric practice)?
111. Methods of clinical examination in pediatrics: auscultation of the heart; the technique of auscultation of the heart and it features depends on the age of child. What is the role of auscultation of the heart for diagnosing of their disorder (in pediatric practice)?
112. Name the main clinical and paraclinical methods of examination of the cardiovascular system in children?
113. Semiotics of the cardiovascular system disorders determined by percussion.
114. Semiotics of cardiovascular system diseases determined by auscultation.
116. What is the role of palpation in pediatric practice? What are peculiarities of palpation of children? What is the role of palpation of abdominal cavity for diagnoses of diseases?
117. The main clinical method of investigation in pediatrics: auscultation of the abdominal cavity in children of different age, its methodology and features. The role of auscultation of the abdominal cavity in diagnostic processes.
119. Semiotics of the digestive system disorders. Name the typical symptoms of the gall bladder disorder.
120. Semiotics of the of the digestive system disorders. Acute abdomen syndrome.
121. A chronic disease of the stomach is suspected by clinical examination of the child. What additional methods of the examination are necessary to carry out?
122. Morpho-functional peculiarities of the kidney and the urinary tract in the different age period.
123. Semiotics of kidney diseases in children.
125. State the main clinical and paraclinical methods of urinary system examination in children.
126. Main clinical and paraclinical methods of examination of blood system.
128. Morphological and functional features of the immune system in children at different age.
129. Name the main clinical and paraclinical methods of examination of the immune system in children?
130. Semiotics of diseases of the immune system in children. AIDS.
131. Morpho-functional peculiarities of the adrenal gland and the pancreas in the different age period.
132. Name the main clinical and paraclinical methods of examination of the endocrine function of the thyroid gland and adrenal gland in children?
133. Morpho-functional peculiarities of the hypophysis and thyroid gland in the different age period of child.
134. Semiotics of the parathyroid gland disorders: hypoparathyroidism, hyperparathyroidism.
136. Semiotics of the hypophysis and adrenal gland disorders.
137. Metabolism and its peculiarities in children in different age periods.
   Metabolism of vitamins, proteins.
139. Semiotics of the metabolism of carbohydrates and fats diseases in children.
140. Water-electrolites and acid-base balance in the different age period of child.
141. Semiotics of water-electrolyte metabolism and acid-base balance disorders.
   Dehydration syndrome.
142. Metabolism of lipids and vitamins and its peculiarities in children in different age periods.
143. Semiotics of disorders of body temperature in children.
144. Assess the blood test.
145. Assess the urinary analysis.
146. Assess the coprogram.
147. Assess the Zemnitsky test.
148. Assess the Nechiporenko test.
149. Assess the immunogramm.
150. Assess the cerebral spinal fluid test.
151. Assess the blood analysis for calcium.
152. Assess the blood glucose test.
153. Assess the cerebrospinal fluid analysis.
154. Assess the level of bilirubin in the blood.

Tests for grading test

MODULE 1

Topic 1. The subject and place of pediatrics in the general medicine, basic stages of development

1. The criteria for health assessment are the following except:
   A. Physical and neuro-psychological development and the degree of harmony.
   B. Functional state of basic systems.
   C. Social and living conditions.
   D. Body resistance and reactivity.
   E. The presence and absence of chronic disease.
2. What does Pediatrics deal with?
   A. Anatomical and physiological children features.
   B. Peculiarities of feeding of healthy and sick children of different ages.
   C. Etiology and pathogenesis of diseases.
   D. Diagnosis, treatment and prevention of diseases.
   E. All of the above mentioned.
3. What criteria are used for the child health assessment?
   A. State of basic systems.
1. What is the normal duration of intrauterine development of a child?
   A. 240–250 days starting from conception.
   B. 250–260 days starting from conception.
   C. 260–270 days starting from conception.
   D. 270–280 days starting from conception.
   E. 280–290 days starting from conception.

2. What is the normal duration of the embryonic phase of development of a child?
   A. Up to 2 weeks starting from conception.
   B. Up to 1 month starting from conception.
   C. Up to 1,5 months starting from conception.
   D. 2–3 months starting from conception.
   E. Up to 3–4 months starting from the conception.


**Topic 2. Periods of Childhood**

4. The infant mortality rate is a number of deaths of children under one year of age, per:
   A. 10,000 live births.
   B. 100 live births.
   C. Number of children born in a given reporting year.
   D. 1,000 live births.
   E. The number of child population in the region.

5. Who from noted pediatricians used the antituberculous serum for the first time?
   A. Chernov V. Y.
   B. Arkavin Y. S.
   C. Frishman N. M.
   D. Belousov V. A.
   E. Kogemiaka A. I.

6. First Pediatric department in Kiev was established in:
   A. 1890.
   B. 1887.
   C. 1770.
   D. 1654.
   E. 1920.

7. Pediatric departments were established in all the Faculties of Medicine of all the Ukrainian universities:
   A. At the early XX century.
   B. At the end of XX century.
   C. In XXI century.
   D. At the end of XIX century.
   E. In XIX century.

8. What is the name of the pediatrician who described the clinical characteristics of infectious mononucleosis firstly?
   A. Filatov N. F.
   B. Chernov V. Y.
   C. Arkavin Y. S.
   D. Frishman N. M.
   E. Belousov V. A.

9. The first Hospital for sick children was established in:
   A. New York.
   B. Kiev.
   C. Moscow.
   D. Paris.
   E. London.

10. Who was the author of a book “The Nature of The Child” (460–377 BC)?
    A. Solomon.
    B. Antaeus.
    C. Hippocrates.
    D. Mikel Angelo.
    E. Raphael.

3. Which periods of childhood are combined into one perinatal period?
   A. Germinal, embrional, fetal.       D. Early and late fetal, intranatal.
   B. Embrional, neo fetal, early fetal. E. Late fetal, intranatal, early neonatal.
   C. Neofetal, early and late fetal.

4. Name the period of childhood when the influence of teratogenic factors is identified.
   A. Germinal.                  C. Fetal.       E. Late neonatal.

5. During the examination of a newborn child in the delivery room severe anatomical birth defects were noticed – absence of a right arm, malformations of inner organs. What is the name of this pathology?
   A. Gamethopathy.          C. Early fetopathies.   E. Stigmas of dysembryogenesis.
   B. Embriopathy.           D. Late fetopathies.

6. The child is 6 days old. Name the period of childhood to which the child belongs.
   A. Early neonatal.    C. Infancy.      E. Late fetal.
   B. Late neonatal.    D. Toddler.

7. Which physiological processes are the most important characteristic of the neonatal period?
   A. Intensive physical development.       D. Sexual maturity.
   B. Intensive psychomotor development.    E. Organogenesis.
   C. Adaptation processes.

8. During the questioning of the mother of a newborn child, it was established that the period from the beginning of labors till the umbilical ligation was 15 hours. What is the name of this period?
   B. Intranatal.               D. Perinatal.

9. District pediatrician is carrying out examination of a child aged 20 days at home. During the questioning it was established that the child was born in term with weight 3100 g, height 50 cm. Delivery is without complications. The child is breastfed. Determine the period of childhood of this child.
   A. Early neonatal.    C. Infancy.       E. Fetal.
   B. Late neonatal.    D. Pre-preschool period.

10. The child is 8 years old and is in the second year of the school. The physical development has slowed down. Milk teeth have started to change to permanent teeth. Determine the period of childhood of this child.
    B. Primary school age. D. Perinatal.

**Topic 3. Features of neonatal period**

1. Early neonatal period lasts:
   - A. The first day of life of a child.
   - B. The first 7 hours of life.
   - C. The first 8 days of life.
   - D. The first 10 days of life.
   - E. The first 42 hours of life.

2. To functional sign of prematurity belongs, except:
   - A. Umbilicus is lower than an average point of the body.
   - B. Decreased muscular tonus.
   - C. Underdevelopment of nails.
   - D. Prevalence of the brain part of the skull over the facial part of the skull.
   - E. Divergence of rectus abdominis muscles.

3. To transient conditions of a newborn belongs:
   - A. Erythema of newborn.
   - B. Anaemia of newborn.
   - C. Pemphigus of newborn.
   - D. Mastitis of newborn.
   - E. Asphyxia of newborn.

4. Mature newborn has:
   - A. Cyanotic skin.
   - B. Pink color of skin.
   - C. Lanugo over the whole body, no hair on the head.
   - D. Subcutaneous fat tissue is decreased.
   - E. Auricle and nose cartilages are dense.

5. The condition of a newborn is evaluated as severe if it was assessed by Apgar score for:
   - B. 8.
   - C. 7.
   - D. 3.
   - E. 10.

6. A full-term newborn’s condition should be assessed after birth according to the score:
   - A. Willebrand.
   - B. Apgar.
   - C. Silverman.
   - D. Shalkov.
   - E. Kisel-Johnson.

7. Physiological decrease of newborn’s body weight constitutes:
   - A. 1–2 %.
   - B. 3–4 %.
   - C. 6–8 %.
   - D. 11–12 %.
   - E. 14–20 %.

8. To sign of maturity belongs:
   - A. Development of subcutaneous fat.
   - B. Frequency of breathing.
   - C. Number of defecations.
   - D. Heart beat frequency.
   - E. Frequency of urinations.

9. Newborn’s sexual crisis is manifested by:
   - A. Obstruction of sebaceous glands.
   - B. Swelling of mammary glands and metrorrhagia.
   - C. Swelling of the face.
   - D. Fever.
   - E. Protein in urine.

10. What is the name of the childhood’s period from 28 weeks of gestation till the 7th days of life?
    - A. Prenatal.
    - B. Intranatal.
    - C. Postnatal.
    - D. Perinatal.
    - E. Neonatal.
11. What is not typical for the healthy newborn during the first days after birth?
   A. Decrease of the initial weight by 6 %.
   B. General hyperaemia of skin.
   C. Jaundice on the third day.
   D. Swelling of mammary glands.
   E. Absence of the sucking reflex.

12. At the birth, the skin of a healthy newborn is covered by:
   A. Vernix caseosa.
   B. Impetigo.
   C. Naevus vasculosus.
   D. Seborrhoea.
   E. Acne vulgaris.


**Topic 4. Physical development of children, and anthropometry.**

**Evaluation of physical development of children**

1. Low value of the ratio of “weight/height” according to the alignment chart means:
   A. Normal body weight.
   B. Increased body weight.
   C. Insufficient body weight.
   D. Insufficient height.
   E. Accelerated height.

2. Choose the equation used for the calculation of the head circumference of a child older than 6 months?
   A. 50 cm – 1 × (5 – n).
   B. 50 cm + 0,6 × (n – 5).
   C. 43 cm – 1,5 × (6 – n).
   D. 43 cm + 0,5 × (n – 6).
   E. 45 cm – 2 × (6 – n).

3. For individual assessment of children’s physical development, following methods are used:
   A. Sigma deviations.
   B. Using of alignment charts.
   C. Centile method.
   D. Using of empirical equations.
   E. All abovementioned.

4. Body weight of the full-term child is three times increased after the birth
   A. At the age of 1 year.
   B. At the age of 1,5-2 years.
   C. At the age of 6 months.
   D. At the age of 8 months.
   E. At the age of 10 months.

5. Body height during the first year is increased by:
   A. 15 cm.
   B. 20 cm.
   C. 27 cm.
   D. 35 cm.
   E. 24 cm.

6. Embryo weight at the term of 36 weeks approximately equal:
   A. 2,0 kg.
   B. 2,5 kg.
   C. 2,8 kg.
   D. 3,0 kg.
   E. 3,3 kg.

7. Body weight of the full-term child is doubled after the birth:
   A. At the age of 4–4,5 months.
   B. At the age of 6 months.
   C. At the age of 9 months.
   D. At the age of 1 year.
   E. At the age of 10 months.

8. Choose the equation used for the calculation of child’s body weight during the first half-year of life.
   A. Body mass at the birth + 800 × n.
B. 10,5 kg + 2 × n.
C. Body mass at the birth + 800 × 6 + 400 × (n – 6).
D. 19 kg + 3 × (n – 5).
E. 19 kg – 2 × (5 – n).

9. How does a child increase body weight each month during first 3 months of life?
   A. 600 g.  B. 700 g.  C. 800 g.  D. 500 g.  E. 400 g.

10. Chest circumference of the full term newborn is:

11. Choose the equation used for the calculation of child’s body weight in age after 6 month
    A. Birth weight + 800 × n.
    B. Birth weight × 600 – 2n.
    C. Birth weight + 800 × 6 + 400 × (n – 6).
    D. Birth weight + 400 × 6 + 200 × (n – 6).
    E. Birth weight – 800 × 4 + 400 × (10 – n).

12. Choose the equation used for the calculation of the average height of a child older than 4 years:
    A. 100 cm – 8 × (4 – n).
    B. 100 cm + 6 × (n – 4).
    C. 130 cm – 7 × (8 – n).
    D. 130 cm + 5 × (n – 8).
    E. 66 cm + 1,5 × (n – 6).

13. Normal value of the body weight of a full-term newborn is:
    A. 200–4500 g.  C. 4000–5000 g.  E. 6000–6500 g.
    B. 3500–4500 g.  D. 2800–4000 g.

14. Average body weight of a child at the age of one year is:
    A. 14,5 kg.  B. 12,5 kg.  C. 13 kg.  D. 10,5 kg.  E. 9 kg.

15. How does head circumference increases during the first half-year each month?
    A. For 0,5 cm.  C. For 2,5 cm.  E. For 2,0 cm.
    B. For 1 cm.  D. For 1,5 cm.

16. Body height at the term of 36 weeks of gestation is approximately:
    A. 40 cm.  B. 36 cm.  C. 46 cm.  D. 50 cm.  E. 56 cm.

17. How does body height of a child increase in age of 4-6 months (each month)?
    A. In 4 cm.  B. In 3 cm.  C. In 2,5 cm.  D. In 1,5 cm.  E. In 1 cm.

18. Chest and head circumferences are equal at the age of:
    A. 1 year.  B. 4 months.  C. 5 months.  D. 6 months.  E. 7 months.

19. Alignment chart “body weight/age” is not used for identification of:
    A. Exhaustion.
    B. Insufficient body weight.
    C. Dynamics of the body weight increase.
    D. Obesity.
    E. Deviation of the neurological/psychological development.
20. How does an infant increases body weight in age of 6–12 months (each month)?
   A. 800 g.    B. 400 g.    C. 600 g.    D. 1 kg.    E. 500 g.


   1. The child begins to perform simple actions (hello, by-by) at the request of an adult at the age of:
   2. Physiological hypertonia of the legs flexors disappears at the age:
   3. Which of the following reflexes may be accompanied by involuntary urination and defecation?
      A. Robinson’s reflex.    C. Moro’s reflex.    E. Kussmaul’s reflex.
      B. Bauer’s reflex.    D. Peres’s reflex.
   4. Moro reflex disappears
      A. 2\textsuperscript{nd} month.    B. 4\textsuperscript{th} month.    C. 6\textsuperscript{th} month.    D. 8\textsuperscript{th} month.    E. 10\textsuperscript{th} month.
   5. What does 6-months-old child should be able to do?
      A. Stand without supporting.    C. Good crawl.    E. Try to sit.
      B. Walk with supporting.    D. Well sit.
   6. What analyzer is completely developed in 3-month-old children?
   7. What is typical for a newborn?
      A. Loud sounds speech.    D. Visual concentration.
      B. “Revival” complex.    E. Chaotic movements of limbs.
      C. Absence of hypertonia of flexors.
   8. What is the food transitory reflex?
      A. Robinson’s.    C. Babkin’s.    E. Galant’s.
      B. Bauer’s.    D. Swallowing.
   9. Formation of voluntary grasping reaction begins at
      A. Newborn period.    C. The 4 month age.    E. The 3 month age.
   10. Kernig’s reflex disappears to the age
   11. When does a child start to take a toy and keep it?
   12. In 2 months the child is able to
      A. To find the object anywhere by itself.    D. Sit.
      B. Briefly sounds (u-u, a-a-a).    E. Crawl.
      C. Laugh loudly.
13. How long does "embrionic pose" continue after birth?
14. When does a child start to babble?
   A. At the 1st week of life.   C. After 3rd month.   E. After 4th month.
   B. At the 1st month of life.   D. After 8th month.
15. Motility of the newborn has the following features
   A. Flexors muscle tone is increased.   D. Purposeful movement.
   B. Muscle tone is reduced.   E. Spasm of muscles.
   C. Chaotic movements.
16. Physiological nystagmus disappears at the age of:
   A. 2 weeks.   B. 2,5 month.   C. 1,5 month.   D. 2 month.   E. 1 month.
17. Upper Landau reflex appears to
18. The child turned on his abdomen at the age of
19. The child begins to walk without supporting at the age of


Topic 6. Natural (breastfeeding) of infants

1. Which statement is not the absolute contraindication for breastfeeding from
   the mother’s part?
   A. Malaria.   D. Angina, flu, pneumonia.
   B. Severe neuroses and postpartum psychoses.   E. Typhoid fever.
   C. Breast cancer.
2. Which statement is not the absolute contraindication for breast feeding from
   the child’s part?
   A. High degree of the pre-maturity.
   B. Severe forms of respiratory insufficiency.
   C. Severe disturbances of brain blood circulation with threat of intracranial
      hemorrhage.
   D. Low body weight.
   E. Conditions after resuscitation measures.
3. Which statement is not the relative contraindication for breast feeding from
   the mother’s part?
   A. Measles, chicken pox.   D. Low degree of the pre-maturity.
   B. Angina, flu, pneumonia.   E. Active tuberculosis.
   C. Breast cancer.
4. Which statement is not contraindication of breast feeding from the mother’s part?
   B. Acute infections.   D. Retracted nipples.
5. Which statement is not contraindication of breast feeding from the child’s part?
   B. Thrush.               E. Idiosyncrasy to female milk.
   C. Pathology of lips and the hard palate.

6. How often 2 month-old child should be fed?
   A. 5 times.     D. 8 times.     E. 9 times.
   B. 6 times.     C. 7 times.

7. How often 6-month-old child should be fed?
   A. 5 times.     D. 8 times.     E. 9 times.
   B. 6 times.     C. 7 times.

8. How often 11 month-old child should be fed?
   A. 5 times.     D. 8 times.     E. 9 times.
   B. 6 times.     C. 7 times.

9. When is the first introduction of solid foods starting if the mother has good lactation and child has the weight gain according to the age?
   A. After 3 months.     E. After 7 months.
   B. After 4 months.     D. After 6 months.

10. How long does colostrum produce?
    A. 3–5 days.     B. 10–14 days.    C. 4–6 weeks.    D. 2 days.    E. 3 month.

11. What is content of proteins (g/100 ml) in breastmilk?
    A. 0,6 g.     B. 1,2 g.     C. 2,0 g.     D. 2,7 g.     E. 3,2 g.

12. What is content of carbohydrates (g/100 ml) in the breastmilk?
    A. 3,0 g.     B. 4,5 g.     C. 5,0 g.     D. 7,5 g.     E. 8,5 g.

13. What is content of fats (g/100 ml) in the breastmilk?
    A. 2,0 g.     B. 3,5 g.     C. 4,5 g.     D. 6,0 g.     E. 6,5 g.

14. How many calories per one liter (kcal/l) are in the breast milk?

15. What are the signs of sufficient lactation?
    A. The pronounced pigmentation of areola.
    B. The pronounced veins of mammary glands.
    C. The increased temperature of the skin under the breast more than 0,1–1,0ºS.
    D. The milk stream flows from the breast.
    E. All about it.

16. What is the name of saccharides in breast milk promotes bifidum-bacteria in the child’s gut?

17. What are reasons of hypogalactia?
    A. Enocrine disorder.     C. Chronic disease.     E. All of the above.
    B. Stressful conditions.     D. Irrational diet.

18. What is the protein’s proportion for infants of 6–12 month old?
    A. 50 %.     B. 75 %.     C. 80–90 %.     D. 100 %.     E. 40 %.

19. What is the protein’s proportion for infants of 1–6 month old?
    A. 50 %.     B. 75 %.     C. 80–90 %.     D. 100 %.     E. 45 %.

Topic 7. Artificial and mixed feeding. Feeding of toddlers

1. What is the term "artificial feeding"?
   A. Feeding with expressed breast milk.
   B. The daily diet chart containing less than 20% of breast milk.
   C. Feeding with donor breast milk.
   D. Feeding with breast milk and formula.
   E. Feeding with unadapted infant formula.

2. How many grams of fat should be in adapted formulas?
   A. 3.5–3.6 g.  B. 1.5–1.8 g.  C. 2.6–3.0 g.  D. 4.0–4.5 g.  E. 5.0–5.5 g.

3. What is the proportion of protein and casein in highly adapted infant formulas?

4. How many grams of protein (per kg of body weight) should be in adapted milk formula for feeding children during the first three months of life?
   A. 2.0–2.2 g/kg.  B. 1.2–1.5 g/kg.  C. 2.5–2.8 g/kg.  D. 3.0–3.2 g/kg.
   E. 4.5–5.0 g/kg.

5. What is the need of carbohydrates (grams per kg of body weight) for feeding children during the first three months of life with feeding of adapted milk formula?
   A. 5.0–5.5 g/kg.  B. 4.0–4.5 g/kg.  C. 12.0–14.0 g/kg.  D. 9.0–11.0 g/kg.
   E. 15–16 g/kg.

6. What is the need of carbohydrates (grams per kg of body weight) for children with feeding of adapted milk formula after introduction of solid foods?
   A. 16–20 g/kg.  B. 12–14 g/kg.  C. 10–11 g/kg.  D. 5.0–5.5 g/kg.
   E. 7–8 g/kg.

7. What should be the temperature of a formula for feeding an infant?

8. What is the range of proteins in 100 ml of adapted milk formula?
   A. 2.0–2.5 g.  B. 1.0–1.3 g.  C. 2.6–3.0 g.  D. 1.5–1.8 g.  E. 3.5–4.0 g.

9. What is the range of carbohydrates in 100 ml of adapted milk formula?
   A. 4.0–4.5 g.  B. 7.0–7.3 g.  C. 5.0–6.0 g.  D. 1.8–2.5 g.  E. 7.5–8.0 g.

10. What is the osmolarity of the most adapted milk formulas?
    E. 150–160 mOsm/l.

11. What is the need of fats (grams per kg of body weight) for children with feeding of adapted milk formula?
    A. 2.0–2.2 g/kg.  B. 3.0–3.5 g/kg.  C. 2.7–2.9 g/kg.  D. 6.0–6.5 g/kg.
    E. 4.5–5.0 g/kg.

12. What is the need of calories (calories per kg of body weight) for children with feeding of adapted milk formula?
    A. 130 kcal/kg.  B. 120 kcal/kg.  C. 110 kcal/kg.  D. 100 kcal/kg.
    E. 95–100 kcal/kg.

13. Introduction of solid foods in children with artificial feeding as compared with the breastfeeding should be:
    A. In one week later.  C. In three weeks earlier.  E. In one month earlier.
    B. In one week earlier.  D. In three weeks later.
14. The child, aged 4 months has feeding 6 times per day, 3 times – breastfeeding, 3 times – formula. What is the type of feeding according to WHO recommendations?
   A. The breastfeeding.  D. The supplementing while breastfeeding.
   B. The mixed feeding.  E. The symbolic feeding.
   C. The artificial feeding.

15. What are the indications for mixed feeding?
   A. A hypogalactia.  D. Social conditions.
   B. An inadequate breast milk.  E. All of the above.
   C. Subcompensated congenital heart disease in the mother.

16. The child, aged 4 months take at most 120 ml of breast milk during breastfeeding and at most 740 ml of formula during artificial feeding. What is feeding regime should be in this child?
   A. 8 times.  B. 7 times.  C. 6 times.  D. Free feeding.  E. 5 times.

17. Introduction of solid foods in children with mixed feeding as compared with the breastfeeding should be:
   A. 2–4 weeks earlier.  C. 2 months before.  E. Does not matter.
   B. 1 month later.  D. 2–4 weeks later.

18. The child, aged 2,5 months with the mixed feeding. How many grams of proteins (per 1 kg body weight) should the child receive?
   A. 2,0 g.  B. 2,5 g.  C. 3,5 g.  D. 4,0 g.  E. 1,5 g.

19. The child, aged 1 month with the mixed feeding. How many grams of carbohydrates (per 1 kg body weight) should the child receive?
   A. 13,0 g.  B. 10,0 g.  C. 8,0 g.  D. 16,0 g.  E. 20,0 g.

20. The child, aged 6,5 months with the mixed feeding. How much energy (calories per 1 kg body weight) should a child receive?

21. The child, aged 4 months with the mixed feeding. How many grams of fats (per 1 kg body weight) should the child receive?
   A. 6,0 g.  B. 2,0 g.  C. 3,0 g.  D. 10 g.  E. 8,0 g.

22. When should a child with mixed feeding start eating the chicken egg yolk?

23. When should a child with mixed feeding start eating meat?

24. When should a child with mixed feeding start eating fish?

25. The child, aged 5 months with the mixed feeding. How many grams of proteins (per 1 kg body weight) should the child receive?
   A. 5,0 g.  B. 2,0 g.  C. 3,5 g.  D. 1,5 g.  E. 6,0 g.

MODULE 2
Topic 8. Anatomo-physiological peculiarities, methods of evaluation, paraclinical methods of investigation and semeiology of the nervous system diseases in children

1. Formation of the brain and spinal cord of a fetus occurs:
   A. At 5–6 weeks of gestation.
   B. At 5–6 days of gestation.
   C. At 1 month of gestation.
   D. At 2 month of gestation.
   E. At 3 month of gestation.

2. What is the critical period for the central nervous system formation?
   A. 4–5 weeks of gestation.
   B. 5–6 weeks of gestation.
   C. 8–9 weeks of gestation.
   D. 10–18 weeks of gestation.
   E. 20–24 weeks of gestation.

3. What is the main antenatal risk factor of the nervous system alteration?
   A. Sepsis.
   B. Trauma of the skull.
   C. Incorrect feeding.
   D. Chronic diseases of mother.
   E. Damage of the brain tissue during delivery.

4. The brain tissue is rich of:
   A. Albumins.
   B. Lipids.
   C. Carbohydrates.
   D. Cerebrospinal fluid.
   E. Blood.

5. What is the most underveloped part of the brain at birth?
   A. The cerebellum.
   B. The cerebral cortex.
   C. The midbrain.
   D. The medulla oblongata.
   E. The thalamus.

6. The quantity of cerebrospinal fluid in comparison to an adult is:
   A. More.
   B. Less.
   C. The same.
   D. Gradually decreases.
   E. Constant.

7. The cerebral tissue is characterised by
   A. Weak vascularization.
   B. Abundant vascularization.
   C. Abundant outflow of blood.
   D. All above is correct.
   E. All above is wrong.

8. Mark the most widespread stigma:
   A. Hydrocephaly.
   B. Down’s syndrome.
   C. Polydactyly.
   D. Meningitis.
   E. Single kidney.

9. What is not typical for hydrocephaly:
   A. Congenital.
   B. Acquired.
   C. Transient.
   D. Internal.
   E. External.

10. What is the pathognomonic sign of hydrocephaly?
    A. Sun set sign.
    B. Microcephaly.
    C. Macroglossia.
    D. Cross-line on the palm.
    E. Lessage’s symptom.

11. The reason of the Down’s syndrome is the trisomy of the
    A. 15th chromosome.
    B. 18th chromosome.
    C. 21st chromosome.
    D. 23rd chromosome.
12. What is not the pathognomonic sign of the Down’s syndrome?
   A. ‘Mongoloid’ eye.       D. The reduction of the size of the skull.
   B. Short neck.           E. ‘Sandals’ view of feet.
   C. Brahydactyly.

13. What is not a sign of meningeal syndrome?
   A. Rigidity of occipital muscles.      D. Kernig’s symptom.
   B. General hyperesthesia.       E. Macroglossia.
   C. Headache.

14. What is not a symptom of meningeal syndrome?
   A. Kernig’s symptom.    C. Trauma.       D. Lessage’s symptom.
   B. Brudzinski’s symptom.    E. Zygomatic symptom.
   C. Graefe’s symptom.

15. The main cause of meningitis is

16. Serous meningitis is caused by
   A. Bacterial infection.   C. Trauma.       E. Tumor.
   B. Viral infection.       D. Parasites.

17. Purulent meningitis caused by
   A. Bacterial infection.   C. Trauma.       E. Tumor.
   B. Viral infection.       D. Parasites.

18. What is the compulsory method for the differential diagnosis of viral and
   purulent meningitis?
   A. Clinical blood test.         C. USD.       E. X-ray.
   B. Lumbar puncture.             D. MRI.

19. What type of exudate is not exist?
   B. Purulent.              D. Fibrinous.

20. What method is not informative for investigation of the nervous system?
   B. Neurosonography.       D. ECG.

The answers for the tests:

Topic 9. Anatomo-physiological peculiarities, methods of evaluation
and semeiology of the skin, subcutaneous tissue, bones
and muscles diseases in children

1. White or yellowish specks of 1.0 × 1.0 mm, reminding grains of millet are appeared
   on a nose of the child on 3rd day after birth. How these elements are termed?
2. A child is suffering from atopic dermatitis. Some elements of the rash are marked on the skin by observation. Name the primary element of the rash.
   B. Cracks.  D. Lichenification.
3. A child suffers from chicken pox. Which elements are considered secondary? Choose the more detailed answer.
   B. Erosion, crusta, excoriations.  E. Papula, erosion, crusta, excoriations.
   C. Excoriation, papula, macula, vesicle.
4. A child was admitted to the intensive care unit due to clinical sings of mercury poisoning. It is known from anamnesis morbi that the child used “Unquentum Hydrargyri album” as antiseptic substance on the skin during 10 days. What morpho-functional peculiarities of the child’s skin are caused this pathological condition?
   A. An incomplete formation of melanin on the basal layer of epidermis.
   B. An underdevelopment of the basal membrane between the epidermis and derma.
   C. The thinning of stratum corneum and an abundant vascularisation of the skin.
   D. The poorly developed fibroelastic connective tissue and muscular fibers in the derma.
   E. The prevalence of the cells elements in the derma.
5. What morpho-functional peculiarities of the child’s skin are caused epidermolysis?
   A. Incomplete formation of melanin in the basal layer of epidermis.
   B. Underdevelopment of the basal membrane between epidermis and derma.
   C. Thinning of stratum corneum and an abundant vascularisation of the skin.
   D. Poorly developed fibroelastic connective tissue and muscular fibers in the derma.
   E. Prevalence of the cells elements in the derma.
6. The doctor examined the 5 years old child and revealed yellowing tinge of the skin. The yellowing is particularly pronounced on the palms, soles and face, but the mucous membranes were rose without icterus and conjunctiva was white. The general condition of the child was satisfactory and it didn’t have any complains. What is the probable reason of this changing of the skin’s color?
   A. Hepatitis.
   B. Atresia of biliary ducts.
   C. Excessive consumption of carrots, tomatoes and tangerines.
   D. Dyskynesia of gall-bladder
   E. The hemolytic syndrome.
7. A child is examined on the first day of the life. It was born from II pregnancy with icteric coloring of the skin. The group of blood of the mother is 0(I), Rh-(Rhesus factor is negative). The child’s group of blood is 0(I), Rh-positive.
The first pregnancy of mother has ended with a birth of the boy with weight 3200g. What is the probable reason of yellowish colour of the skin?

A. Physiological jaundice.  
B. Incompatibility by the ABO system.  
C. Incompatibility by Rh-factor.  
D. Hepatitis A.  
E. Atresia of biliary ducts.

8. A 12-days old child was born from 1st pregnancy without any complications during pregnancy and delivery. The skin of newborn became yellowish on the third day after birth. The jaundice disappeared on 10 day. What is the probable reason of yellowish color of the skin in this child?

A. Physiological jaundice.  
B. Incompatibility by system ABO.  
C. Incompatibility by Rh-factor.  
D. Hepatitis A.  
E. Atresia of bilious tract.

9. A infant has cyanotic color of the skin, which particularly pronounced on extremities and around mouth and increased when the child was eating or crying. What system’s affection may be the reason of these pathological symptoms?

A. The cardiovascular system.  
B. The cardiovascular and gastrointestinal systems.  
C. The gastrointestinal, skin and respiratory systems.  
D. The skin, adipose tissue and respiratory systems.  
E. The cardiovascular and respiratory systems.

10. A doctor examined a premature newborn. It determined the sclerema on the child’s back (the indurations or diffuse hardening of the skin). What morphofunctional peculiarities of the child’s adipose tissue is caused the occurrence of sclerema?

A. The abundant vascularization and immaturity of an immune system of the skin.  
B. The thinning of epidermis of the skin.  
C. The prevalence of solid fatty acid (palmitic acid) in the subcutaneous adipose tissue.  
D. The prevalence of fluid fatty acid (oleic acid) in the subcutaneous adipose tissue.  
E. The low melting point of the child’s fat.

11. A doctor checks the response reaction of a child’s skin to mechanical irritation caused by tracing blunt instrument over it. The doctor fixes the type of reaction (red, white or mixed); the time interval between the irritation of the skin and appearance of the response and the time interval when line disappears. Name this method of investigation.

A. Dermatogliphica.  
B. Dermography.  
C. Patch test.  
D. Diascopy.  
E. Palpation.

12. A child is suffering from vesiculopustulosis – an infection of the skin, which is characterized for newborns and early infants. What paraclinical method of investigation should be used in this case?

A. Bacterioscopy from pustules.  
B. Bacteriological investigation from nose, throat and umbilical wound.  
C. Skin biopsy.
D. Dacteriological investigation from healthy skin and mucous membranes.
E. Bacteriological investigation from pustules.

13. A doctor revealed some small red macula on child’s face. They were painless and didn’t accompany by itching. What method of investigation should be used to establish the origin of these elements?

14. A 6-months-old girl takes a course of vitamin D in case of rickets. For the last 3 weeks she has developed worsening of appetite, irritability, inertness, frequent vomiting, loss of body weight, enlargement of the liver and spleen. The large fontanel is closed. Laboratory evidences: hypercalcemia, hypophosphatemia, hypomagnesemia, azotemia, Sulkovich’s test is dramatically positive. What diagnosis can be established in this case?
   A. Thyroid gland insufficiency syndrome.  D. Hypervitaminosis D.
   B. Parathyroid gland insufficiency syndrome.  E. Pylorostenosis.
   C. Pyelonephritis.

15. A 10-months-old infant develops laryngospasm: hoarse inhalation, respiratory standstill for several seconds; skin pallor which develops into cyanosis, carpopedal spasm. Laboratory tests: reduction in calcium level in the blood serum. What can be the cause for it?
   B. Encephalitic syndrome.  E. Epileptic seizure.
   C. Rachitis, spasmodilia.

16. A boy 10-years-old complains on a pain in the limbs muscles which grows worse during movements; painful carnification of the muscles. Elevation of the temperature is not observed. What pathology is it can be?
   A. Structural lesion of the central nervous system.  D. Hypermyotonia.
   B. Reduction in muscular tone.  E. Myositis.
   C. Meningitis.

17. A 9-year-old girl complains on involuntary movements of the limbs, increased inertness, and inexact handwriting. In the past history of the child: frequent quinsies; additional examination of the nasopharyngeal mucus revealed β-hemolytic streptococcus. What pathology can be in this case?
   A. Cerebral paralysis.
   B. Rachitis.
   C. Rheumatic lesion of the nervous system (chorea).
   D. Poliomyelitis.
   E. Hyperkinesia as a consequence of the thyroid gland lesion.

18. A 6-months child’s mother expressed her anxiety in connection with the open large fontanel. When the large fontanel should be closed in full-term infants?
19. A pediatrician is examining a 7-months-old child. The child is healthy, can sit unassistedly. What physiological spinal curvatures must be at this age?

   A. Cervical lordosis, pectoral kyphosis.  
   B. Pectoral kyphosis, lumbar lordosis.  
   C. Coccygeal kyphosis.

The answers for the tests:

**Topic 10. Anatomo-physiological peculiarities, methods of evaluation of the respiratory system in children**

1. The bronchial tree forms to:
   A. 16 weeks of gestation.  
   B. 20 weeks of gestation.  
   C. 28 weeks of gestation.  
   D. 32 weeks of gestation.  
   E. 38 weeks of gestation.

2. The surfactant system insufficiency is the base of:
   A. Lung’s agenesis.  
   B. Congenital cysts of the lungs.  
   C. Intrauterine pneumonia.  
   D. Respiratory distress syndrome.  
   E. Intrauterine infection.

3. The respiratory system is composed of:
   A. Upper, middle and lower respiratory tract.  
   B. Anterior, middle and lower respiratory tract.  
   C. Upper, anterior and posterior respiratory tract.  
   D. Anterior, middle and posterior respiratory tract.  
   E. Upper, right and left respiratory tract.

4. There are features of the upper respiratory tract in newborns, except:
   A. Relatively small size.  
   B. Narrowness of the nasal passages.  
   C. Abundant vascularization of the mucous membranes.  
   D. Absence of all paranasal sinuses.  
   E. Good development of lymphatic vessels.

5. Functions of the nose are, except:
   A. Air warming.  
   B. Air moistening.  
   C. Air cleaning.  
   D. Immunoglobulin g secretion.  
   E. Mucous secretion.

6. Normal percussion sound is:
   A. Tympanic.  
   B. Dullness.  
   C. Resonance.  
   D. Bend box.  
   E. Sound of the «cracked pot».

7. Which type of the lung’s percussion is absent?
   A. Topography.  
   B. Comparative.  
   C. Indirect.  
   D. Straight.  
   E. Direct.
8. Typical percussion sound for emphysema is:
   B. Bend box.  D. Sound of the «cracked pot».

9. Normal auscultation sound in children older 5–7 years is:
   A. Vesicular.  C. Amphoric.  E. Rough [exaggerated].

10. Which method isn’t clinical?
    A. Examination.  C. Interrogation.  E. X-RAY.

11. What is the norm for the newborn baby of a 7 days life?
    A. Breathing rate up to 40 per min.  D. Depressed respiratory noises.
    B. Superficial , azythmic breathing.  E. Intensified voice trembling.
    C. Dullness percussion sound.

12. Normal respiratory rate of a 2-years-old child is:

13. What kind of breathing is normal for a 4-month-child?
    B. Pueril.  D. Amphoric.

14. Describe pueril breathing.
    A. Only inhalation can be auscultated.
    B. Only exhalation can be auscultated.
    C. All inhalation and exhalation can be auscultated.
    D. All inhalation and slight exhalation can be auscultated.
    E. All exhalation and slight inhalation can be auscultated.

15. What is the normal auscultative sound in a 2-year old child?
    A. Depressed vesicular breathing.  D. Vesicular breathing.
    B. Pueril breathing.  E. Bronchial breathing.
    C. Exaggerated breathing.

16. When do palatine tonsils rise out of the arches?
    A. At ones after birth.  C. After 2 years.  E. After 4 years.
    B. After 1 year.  D. After 3 years.

17. The lower respiratory tract consists of:
    A. Nose, pharynx, larynx.
    B. Larynx, trachea, lobes and segmental bronchi.
    C. Lobes, segmental bronchi, bronchioles.
    D. Segmental bronchi, bronchioles.
    E. Bronchioles, alveoles.

18. There are features of the upper respiratory tract in newborns, except:
    A. Relatively small size.
    B. Narrowness of the nasal passages.
    C. Abundant vascularization of the mucous membranes.
    D. Absence of all paranasal sinuses.
    E. Good development of lymphatic vessels.
19. Respiratory volume in children less because of:
   A. Intensive vascularization of the lung.
   B. Narrowness of the tracheobronchialis tree.
   C. Features of the thorax structure.
   D. Respiratory center depression.
   E. Low oxygen needs.

20. The middle respiratory tract consist of:
   A. Nose, pharynx, larynx.
   B. Larynx, trachea, lobes and segmental bronchi.
   C. Lobes, segmental bronchi, bronchioles.
   D. Segmental bronchi, bronchioles.
   E. Bronchioles, alveoles.

The answers for the tests:

Topic 11. Paraclinical methods of investigation and semiology of the respiratory system diseases in children

1. Which type of dyspnoea is appeared in case of foreign body?

2. Which type of dyspnoea is typical for bronchial asthma?

3. Typical percussion sound for pneumonia is:
   A. Tympanic sound.  C. Dullness sound.  E. Resonance.
   B. Bend box sound.  D. Sound of the «cracked pot».

4. What can cause high frequency of lung’s collapse in infancy?
   A. Surfactant insufficiency.
   B. Elastic tissues insufficiency.
   C. Abundant development of connective tissue.
   D. Abundant development of blood vessels.
   E. Bronchioles narrowness.

5. Which complaints doesn’t typical for respiratory diseases?
   A. Forced position.  C. Dyspnea.  E. Icteritiousness of the sclera.
   B. Cough.  D. Change of voice.

6. Typical symptom of laryngitis is:
   C. Reprise cough.
7. True croup is caused by:
   A. Viruses.           D. Quinsy.
   B. Streptococcus infection.    E. Chlamidia trachomatis and mycoplasma.
   C. Diphtheria.

8. Which type of dyspnea is absent?

9. The typical dyspnea for pneumonia is:

10. Voice trembling becomes stronger above:
    B. Pulmonary collapse.       E. Pneumothorax.
    C. Presence of exudates in the lung.

11. Which method of diagnosis don’t used in infancy?
    A. X-RAY of thorax.        C. Bronchoscopy.   E. Sputum investigation.
    B. Spirography.           D. Rhinoscopy.

12. Name typical symptom of upper respiratory tract affection:

13. Which symptom haven’t attitude to the bronchitis?
    A. Cough.                     D. Resonance sound.
    C. Dullness percussion sound.

14. Which signs are pathological for a 3-month-old child?
    A. Respiratory rate up to 35–40 per min.  D. Superficial breathing.
    B. Complicated nose breathing              E. All mentioned above.
    C. Small thorax excursion.

15. Which symptom is the most typical for pneumonia for a 10-month-old infant?
    A. Deep productive cough.
    B. Nasolabial triangle cyanosis.
    C. Local fine moist [small bubbling] rales in the lungs.
    D. Body temperature 37,8C.
    E. Respiratory rate 70 per min.

16. What kind of forced position does take a patient with exudative pleurisy?
    A. On a back.          C. On a sick side.   E. With shoulder girdle fixing.

17. What are the symptoms of the lung parenchyma damage?
    A. Resonance percussion sound       D. Vesicular breathing.
    B. Dull percussion sound.           E. Pueril breathing.
    C. Exaggerated breathing.
18. Pleura friction murmur may be auscultated at:
   A. Pneumonia.     C. Pleurisy.     E. Whopping cough.
   B. Tracheitis.     D. Bronchial asthma.

19. Crackles may be auscultated at:
   A. Pneumonia.     C. Emphysema.     E. Pneumothorax.

20. What kind of pathological type of respiration is absent?
   A. Cheyne-Stokes. C. Biot’s respiration. E. Grocco-Frugony.
   B. Adams’s.      D. Kussmaul’s.

Answers for the tests:


1. What is the main function of the cardiovascular system?
   A. Transport.     C. Respiratory.     E. All answers are correct.

2. When four-chambered heart is formed?
   B. 6–5 weeks of gestation.  E. 14–17 weeks of gestation.
   C. 7–8 weeks of gestation.

3. When abnormalities of the cardiovascular system is formed?
   C. 17–20 week of gestational.

4. Which fetal communications does exist?
   A. Two umbilical veins, umbilical artery, Arantsev duct, Botllov duct, foramen ovale.
   B. Two umbilical arteries, Arantsev duct, Botllov duct, foramen ovale.
   C. Two umbilical arteries, umbilical vein, Arantsev duct, Botllov duct, foramen ovale.
   D. Two umbilical arteries, umbilical vein, Arantsev duct, Botllov duct, foramen ovale.
   E. Umbilical artery, umbilical viena, Arantsev duct, Botllov duct, foramen ovale.

5. Location of the apical impulse on the vertical line in a child older 12 years is:
   A. 0.5 cm outwards from the left sternocleidomastoideus line.
   B. 1 cm outwards from the left sternocleidomastoideus line.
   C. On sternocleidomastoideus line.
   D. 1–2 cm outwards from the left sternocleidomastoideus line.
   E. 0.5 cm medially from the left sternocleidomastoideus line.
6. Bulging of the chest in the heart region is named as:
   B. Cardiac hump.  D. Cardiac impulse.

7. What methods of clinical examination of the cardiovascular system are exist?
   A. Survey, external inspection.  D. Assessment of the heart rate, blood pressure.
   B. Palpation, percussion.  C. Auscultation.
   E. All answers are correct.

8. Place of auscultation of the tricuspid valve (fourth point):
   A. The apex.
   B. Point of attachment III–IV on the left edge to the edge of the sternum.
   C. Second intercostals interval to the right of the sternum.
   D. Second intercostals space to the left of the sternum.
   E. Place of attachment of the xiphoid process to the sternum, slightly to the right.

9. The pulse rate of a newborn is:
   A. 120–140 beats per minute.  D. 70–80 beats per minute.
   B. 100 beat per minute.  E. Less than 70 beats per minute.
   C. 80–90 beats per minute.

10. The place of mitral and aortic valves auscultation (fifth point) is:
    A. The apex.
    B. Point of attachment III–IV on the left side to the sternum.
    C. Second intercostal space to the right of the sternum.
    D. Second intercostal space to the left of the sternum.
    E. Place of attachment of the xiphoid process to the sternum, slightly to the right.

11. The pulse rate for a teenager of 15 years-old is:
    A. 140 beats per minute.  D. 70–80 beats per minute.
    B. 100 beats per minute.  E. Less than 70 beats per minute.
    C. 80–90 beats per minute.

12. The criteria for the apical impulse is, except:
    B. Distribution.  D. Quantity.

13. The place of auscultation the mitral valve (first point) is:
    A. The apex.
    B. Point of attachment III–IV on the left edge to the edge of the sternum.
    C. Second intercostal space to the right.
    D. Second intercostal space to the left.
    E. Place of attachment of the xiphoid process to the sternum, slightly to the right.

14. The place of auscultation of aortic valve (second point) is:
    A. The apex.
    B. Point of attachment III–IV on the left edge to the edge of the sternum.
    C. Second intercostal space to the right of the sternum.
    D. Second intercostal space to the left of the sternum.
    E. Place of attachment of the xiphoid process to the sternum, slightly to the right.
15. The murmurs in the heart can be:
   A. Organic.  C. Functional.  E. All answers are correct.

16. The pulse rate in a child older than 5–6 years is:
   A. 140 beats per minute.  D. 70–80 beats per minute.
   B. 100 beats per minute.  E. Less than 70 beats per minute.
   C. 80–90 beats per minute.

17. The localization of point of auscultation the pulmonary artery valve (third point) is:
   A. The apex.
   B. Point of attachment III–IV on the left edge to the edge of the sternum.
   C. Second intercostal space to the right of the sternum.
   D. Second intercostal space to the left of the sternum.
   E. Place of attachment of the xiphoid process to the sternum, slightly to the right.


Topic 13. Paraclinical methods of investigation and semeiology of the cardiovascular system diseases in children

1. What methods of paraclinical examinations of the cardiovascular system are exist?
   B. Phonocardiography.  E. All answers are correct.
   C. Ultrasound.

2. What are the general complains in case of cardiovascular system diseases, except:
   A. Temperature increase.  D. Memory impairment.
   B. Dyspepsia.  E. Fatigue and weakness.
   C. Weight loss.

3. What symptoms are exist in infants in case of cardiovascular system diseases, except:
   A. A sudden cry.  D. Violation of the act of sucking.
   B. Restless.  E. Attacks of dyspnoe and cyanosis.
   C. Weight gain.

4. What is not typical for edema cardiac origin?
   A. Extend from the top down.  D. Dense.
   B. Apply at the bottom up.  E. Occurs or are worse after physical exertion.
   C. Combined with cyanosis of the skin.

5. What are the specific complains of patients with cardiovascular system diseases?
   A. Pain in the heart, cardiac dyspnea.
   B. Palpable heartbeat, swelling of lower limbs and other body parts.
   C. Pallor, cyanosis of the skin.
   D. Pain in the large and small joints.
   E. All answers are correct.
6. What is the name of condition when pulse rate increases on inhale and reduces on exhale?
   B. Excess of the pulse.       E. Alternating pulse.
   C. Respiratory arrhythmia.

7. What is not typical for cardiovascular system diseases in children?
   B. Abnormalities of blood vessels.  E. Septic endocarditis.
   C. Inflammatory diseases.

8. Tachycardia can be in all following conditions, except:
   A. Intoxication.                D. Hypertyreosis.
   B. Hyperthermia.               E. Hypothyroidism.
   C. Diseases of the cardiovascular system.

9. Unequal or late pulse on the left and right hands by time is named:
   B. Excess of the pulse.       E. Alternating pulse.
   C. Respiratory arrhythmia.

10. What age is characterized by vegetative-vascular dysfunction?

11. The reasons for relative dullness heart borders extending are:
    A. Congenital and acquired heart defects.   D. All the answers wrong.
    B. Myocarditis, fibroelastosis.       E. All answers are correct.
    C. Ascites, atony of the diaphragm

12. The reasons for heart borders relative dullness restriction are, **except**:
    A. Asthenic body constitution.        D. Left-sided pneumothorax.
    B. Right-sided pneumothorax.         E. Left-sided hemothorax.
    C. Pulmonary emphysema.

13. What is the cause of "Dances of carotid" manifestation?
    A. Aortic aneurysm, aortic valve insufficiency.
    B. Mitral valve insufficiency.
    C. Tricuspid valve.
    D. Mitral valve stenosis.
    E. Valve stenosis the pulmonary artery.

14. Congenital heart diseases with an enrichment of the pulmonary circulation are included, **except**:
    A. Atrial septal defect.            D. Atrioventricular communication.
    B. Ventricular septal defect.       E. Fallot's disease.
    C. Patent ductus arteriosus.

15. Diagnostic program for congenital heart disease includes, **except**:
    A. Collection and analysis of family tree baby.  D. Pcg, ecg.
    B. Assessment of anthropometric data.          E. Sternal puncture.
    C. Determination of blood pressure.
16. Which signs are not typical for chronic heard disease?
A. Dyspnea with inspiratory nature from birth.
B. Normal weight at birth.
C. Low weight gain in the child's first year of life.
D. Stable systolic heart murmur.
E. Tendency to respiratory infections.

17. Rheumatic disease – a systemic disease of connective tissue with a predominant localization process in the cardiovascular system, which develops due to an acute infection caused by:
A. Pneumococcus.
B. Mycoplasma.
C. Cytomegalovirus.
D. β-hemolytic streptococcus.
E. Escherichia.

18. The reasons of systolic murmur are, except:
A. Narrowing of the aortic.
B. Mitral valve insufficiency.
C. Stenosis of the mitral and tricuspid valves.
D. Aortic stenosis.
E. Tricuspid valve stenosis.


**Topic 14. Anatomo-physiological peculiarities, methods of evaluation, **
**Paraclinical methods of investigation and semeiology**
**of the digestive system diseases n children**

1. Formation of the digestive system of the fetus begins:
A. At 7–8 day of gestation. D. At 2 month of gestation.
B. At 14 days of gestation. E. At 5 month of gestation.
C. At 1 month of gestation.

2. What are the features of intestines microflora at newborn period?
A. Intestinal stick dominates.
B. Coccal flora dominates.
C. Dominates a lactobacilli.
D. Fungoid flora dominates.
E. Dominates a bifidumflora.

3. Which nutrients are partially digested in mouth cavity?
A. Protein.
B. Fats.
C. Carbohydrates.
D. Proteins, fats, carbohydrates.
E. In oral cavity digestion in not exist.

4. Mezogastrium is a:
A. Top part of a forward belly.
B. Lower part of a forward belly.
C. Average part of a forward belly wall.
D. Back part of a forward belly.
E. Is in lumbar area.

5. What is the volume of stomach of 12-month-old child?
A. 80–100 ml. C. 500 ml.
B. 300 ml. D. 800 ml.
E. 700 ml.
6. The peculiarity of oral cavity of a child is:
   A. Relatively small.       D. All above is correct.
   B. Mucus is well vascularized.   E. All above is wrong.
   C. Buccal fat is good developed.

7. The ratio of indirect and direct bilirubin is:

8. Meconium is allocated:
   A. In 1 month.       C. At newborns in 1–2 days.       E. In 1 year.
   B. In 2 months.       D. In 6 months.

9. What is the Ker's point?
   A. Point of a gall bladder.       D. Point of an output channel of a pancreas.
   B. Point of a body of a pancreas.   E. Painful point of an appendix.
   C. Point of a tail of a pancreas.

10. What of the following is NOT a function of the liver?
    A. Storing food.       D. Healing itself when it is damaged.
    B. Manufacturing insulin.       E. All answers correct.
    C. Producing digestive juices.

11. Standards of elastaz-y-1 in stool are:
    A. More than 10 mkg/l.       C. More than 200 mkg/l.       E. Less than 100 mkg/l.
    B. Less than 10 mkg/l.       D. 100–200 mkg/l.

12. In case of gastritis the pain is located:
    A. In the right hypochondrium.       D. In the left iliac region.
    B. In the left hypochondrium.       E. In the umbilical region.
    C. In the epigastric region.

13. What test is the best method for gastritis diagnostic?
    A. General blood test.       D. Fibrogastroscopy.
    B. General urine analysis.       E. Bilirubin in blood sera.
    C. Immune-enzyme analysis on helicobacter pylori.

14. What symptoms can be found at superficial palpation of a stomach?
    A. Muscles hypertension.       D. All answers are correct.
    B. Morbidity.       E. All answers are incorrect.
    C. Relaxation of a belly wall.

15. Where the pain of cholecystitis is localized?
    A. In the right hypochondrium.       D. In the left iliac region.
    B. In the left hypochondrium.       E. In the umbilical region.
    C. In the epigastric region.

16. What test is necessary for gastritis diagnostic?
    A. Common blood test.
    B. Common urine analysis.
    C. Immune-enzyme analysis for helicobacter pylori.
    D. Gastroscopy.
    E. Level of bilirubin in serum blood.
17. What symptom is not typical for biliary tract dysfunction during palpation of abdomen?
   A. Murphy's symptom.  
   B. Ortner's symptom.  
   C. Shchetkina-Blyumberg's symptom.  
   D. Symptom Lepine.  
   E. Ker's symptom.

18. Standard method for examination of the upper digestive tract mucus is:
   A. Endoscopy.  
   B. Colonoscopy.  
   C. USD.  
   D. X-ray.  
   E. Manometry.

19. The main clinical sign of malabsorption syndrome is:
   A. Chronic diarrhea.  
   B. Enlargement of abdomen.  
   C. Bloating.  
   D. All answers are correct.  
   E. All answers are incorrect.

20. Tympanic sound over all surface of abdomen is revealed during inspection of digestive system at the 2-year-old boy. What is possible reason for tympanic sound?
   A. Peritonitis.  
   B. Colitis.  
   C. Enteritis.  
   D. Ascites.  
   E. Bloating.


Topic 15. Anatomo-physiological peculiarities, methods of evaluation, Paraclinical methods of investigation and semeiology of the urinary system diseases in children

1. The functional unit of the kidney is:
   A. Henle loop.  
   B. Tubular system.  
   C. Nephron.  
   D. Renal corpuscle.  
   E. Calyx.

2. When kidneys start to function?
   A. 9 week of gestation.  
   B. 22 week of gestation.  
   C. 32 week of gestation.  
   D. 2–3 day after birth.  
   E. After the birth.

3. What does not anatomical and physiological peculiarities of newborn’s kidney?
   A. Thin capsule.  
   B. Lobular structure.  
   C. Insufficient of ligaments development.  
   D. Disposition at the 1 cm over the iliac born crest.  
   E. Right kidney is on 0,5–1 cm lower then left one.

4. How many physiological narrowing of ureter there are exits?
   A. 1.  
   B. 2.  
   C. 3.  
   D. 4.  
   E. Narrow is absent.

5. What can cause the cystic-ureteral reflux in infancy?
   A. Insufficient of ligaments development.  
   B. Short intracystic segment of uteter.  
   C. Intensive growth of urinary bladder volume.  
   D. Weaving form of ureter.  
   E. Physiological narrowing of ureter.
6. Which substance is not secreted by the kidneys?
   B. Vitamin D active form.   D. Ammonia.

7. Why an infection can move from the intestine to the kidney’s tube easily?
   A. Because of arterial anastomosis.
   B. Because of venous anastomosis.
   C. Because of lymphatic vessels connecting.
   D. Because of general embryonic germ.
   E. All mentioned above.

8. What is the effect of reabsorption function of the tubular apparatus?
   A. Urine amount.          C. Urine osmolaris.          E. Vitamin D.
   B. Urine solidity.        D. Urine chemical structure.

9. Reabsorption and filtration process is going on the:
   A. Renal corpuscle.       D. Distal part of the nephron.
   B. Proximal part of the nephron.       E. Small calyx.
   C. Henle loop.

10. Where is the final urine formed?
    A. In the renal corpuscle.       D. In the small calyx.
    B. In the tube system.           E. In the large calyx.
    C. In the collecting renal tubes.

11. Oliguria is:
    A. Normal daily amount of urine.
    B. Painful urination.
    C. Daily amount of urine ¼ of normal and less.
    D. Daily amount of urine in 1,5–2 times more than in normal.
    E. Prevalence night diuresis at days one.

12. Pollaciuria is:
    A. Painful urination.
    B. Increasing of urination frequency.
    C. Decreasing of urination frequency.
    D. Involuntary urination.
    E. Reduction of distinguished urine amount up to 5 %.

13. What is the reason for «meat slops» urine color?
    A. A lot of karotin in food.   D. Pyelonephritis.
    B. Presence of phosphates in the urine.       E. Blood in the urine.
    C. Presence of urates in the urine.

14. Normal day and night diuresis proportion is:

15. What is the daily diuresis of a 3-years-old child?
16. Which sign of acute renal insufficiency are exist?
   A. Oliguria, unuria          C. Uremia.          E. Hypernatremia.
   B. Hyperpotassemia.          D. Vomiting, nausea.

17. Which sign is pathological in urine test of a 3-years-old child?
   A. Protein 0.66 g/l.         D. Specific gravity 1022.
   B. Erythrocytes 2–3 in field view.  E. Singular epithelial cylinders.
   C. Leucocytes 8–10 in field view.

18. What is the name of urine solidity which is the same to the blood plasma?
   B. Hypersthenuria.           D. Clearance.

19. Which urine test defines amount of formed elements excretes per 1 min?
   A. Nechiporenko test.        C. Amburge test.     E. General clinical

20. What is the reason for quick acidosis development in infancy with different
diseases?
   A. Low urine osmolar concentration.
   B. Low glomerular filtration.
   C. Slow secretion process.
   D. Low glucose reabsorption.
   E. Immature mechanisms of renal regulation of acid-base balance.


Topic 16. Anatomo-physiological peculiarities, methods of evaluation,
paraclinical methods of investigation and semeiology of the blood
and immune systems diseases in children

1. What is the specific immunological symptom of AIDS in children, except?
   A. Lymphopenia.
   B. Decreasing CD4/CD8.
   C. Lack of T-helpers.
   D. Increasing level of IgE.
   E. Increasing levels of IgA, IgG, IgM to autoantigens.

2. What is the main function of IgA?
   A. Protect mucous membranes against viruses and bakeries.
   B. It is the main source of synthesis of serum IgA.
   C. Takes part in allergy immediate type reactions.
   D. Takes part in differentiation of lymphocytes.
   E. All mentioned above.

3. What is the main feature of IgM?
   A. Acts on the endotoxins.
   B. It is long-lived immunoglobulin.
C. Number of blood – less than 5%.
D. Maternal IgM crosses the placenta during gynecological diseases.
E. All mentioned above.

4. A child has increased levels of IgM and IgG in blood to Chlamydia pneumoniae. Evaluate the results of analysis.
   A. A child had infection and he is sick.  D. A child is healthy.
   B. A child has acute infection.  E. All answers are wrong.
   C. A child had infection and now he is healthy.

5. A child has anaphylactic reaction to a bee sting. Which of the immunoglobulin is upgraded?
   A. IgD.  B. IgG.  C. IgM.  D. IgE.  E. IgA.

6. What is the main function of IgD?
   A. Differentiations of lymphocytes and takes part in local immunity.
   B. Acts on the endotoxins.
   C. Acts on the bacteria.
   D. Enhances phagocytosis.
   E. Mane immunoglobulin in chronic reactions.

7. What is the total concentration of immunoglobulines in serum?
   A. 0,5–1 g/l.  B. 1–10 g/l.  C. 10–20 g/l.  D. 20–30 g/l.  E. 30–40 g/l.

8. B-cells amount of total lymphocytes is:
   A. 5%.  B. 10%.  C. 15%.  D. 20%.  E. 25%.

9. What are the main clinical features of immunodeficiency in children?
   B. Chronic diarrhea.  E. All mentioned above.
   C. Hypotrophy.

10. When does Bruton disease the most often appeared?
    A. After birth.  B. 1th month.  C. 5th month.  D. 1 year.  E. 17 years.

11. What is the specific immunological disorder of AIDS?
    A. Increasing levels of IgA, IgG, IgM to autoantigens.
    B. Increasing T-killers/T-suppressors.
    C. Decreasing level of IgE.
    D. Lymphopenia.
    E. Lack of T helpers.

12. What is the main feature of IgM?
    A. Low avidity in newborns.  D. Active in acute infections.
    B. Acts on the exotoxins.  E. All mentioned above.
    C. Number of blood – less than 1%.

13. What is the source for IgA synthesis?
    A. IgD.  B. IgG.  C. IgM.  D. IgE.  E. IgA.
14. A child has increase level of IgM and normal level of IgG in blood to Micoplasma pneumoniae. Evaluate the results of analysis.
   A. A child is healthy.
   B. A child had infection and still be ill.
   C. A child had infection and now he is healthy.
   D. A child has acute infection.
   E. All answers are wrong;
15. A child has opisthorchiasis. Which of the immunoglobulin is upgraded?
   A. IgD.       B. IgG.       C. IgM.        D. IgE.        E. IgA.
16. What is the main function of IgD?
   A. Acts on the endotoxins.
   B. Acts on the bacteria.
   C. Acts on the viruses.
   D. It is the main immunoglobulin in chronic reactions.
   E. It is the main immunoglobulin in acute reactions.
17. What is the function of T-killers? (Choose the most right answer)
   A. Destroying of viruses.
   B. Destroying of viruses and bacteria.
   C. Destroying of tumor cells.
   D. Destroying of bacteria, tumor cells and viruses.
   E. Destroying of bacteria and tumor cells.
18. What avidity is?
   A. Ability to penetrate through the placenta.
   B. Ability to self-synthesis in the body of a child.
   C. It is bonding force an antibody to an antigen.
   D. All mentioned above.
   E. All answers are wrong.
19. What are the clinical features of immunodeficiency in children?
   A. Enlarged lymph nodes.         D. All mentioned above.
   B. Reduced lymph nodes.          E. All answers are wrong.
   C. Absence of lymph nodes.
20. What is the type of inheritance of the Bruton’s disease?
   A. Autosomal recessive            D. Coupled with Y-chromosom.
   B. Autosomal dominant.                E. Bruton's disease is not inherited.
   C. Coupled with X-chromosom.
21. What is the normal quantity of erythrocytes in newborn?
   A. 4.5–5.0 ×10^{12}/l.             C. 6.5–7.0 ×10^{12}/l.          E. 7.5–8.0 ×10^{12}/l.
   B. 5.0–6.5 ×10^{12}/l.             D. 7.0–7.5 ×10^{12}/l.
22. What is the normal level of Hb in newborn?
   A. 150–160 g/l.                     C. 170–220 g/l.                   E. 240–260 g/l.
   B. 160–180 g/l.                     D. 220–240 g/l.
23. What is the normal quantity of reticulocytes in a newborn per 1000 mature erythrocytes?
24. What is the normal ESR in newborn?
   A. 2–3 mm/hour.     C. 7–10 mm/hour.     E. 12–14 mm/hour.
   B. 5–10 mm/hour.     D. 10–12 mm/hour.
25. When does the first intersection of neutrophiles and lymphocytes take place in children?
   A. 2–3 days after birth.     C. 7–10 days after birth.     E. 1-year-old.
   B. 4–6 days after birth.     D. 1-month-old.
26. When does the second intersection of neutrophiles and lymphocytes take place?
27. Anemia must be diagnosed in a 1-year-old child if the level of Hb is below:
   A. 100 g/l.     B. 110 g/l.     C. 120 g/l.     D. 130 g/l.     E. 140 g/l.
28. Leucocytosis with the shift of formula to the left is possible to notice in case of:
   A. Diseases of infection origin.     D. In case of whooping cough.
   B. In case of anemia.     E. All mention above.
   C. In period of recovery from the diseases.
29. The intravascular disseminated coagulation may take places in all diseases excluding:
   A. Pneumonia.     C. Meningoencephalitis.     E. Hemolytic anemia.
   B. Sepsis.     D. Asphyxia.
30. The administration of parental vitamin K is indicated for:
   A. All newborn infants.     D. Jaundiced infants.
   B. Infants below 2,500 g.     E. Infants born outside of hospital.
   C. Infants of less than 36 weeks gestation.
31. Vitamin B12 deficiency is most likely to occur in children with:
   A. Resection of the jejunum.     D. A colostomy.
   B. Resection of the ileum.     E. A gastrojejunostomy.
   C. Resection of the colon.
32. A 2-year-old child presents with anemia and painful swelling of the hands and feet. The most likely diagnosis is:
   B. Congenital syphilis.     D. Sickle cell disease.
33. Which one of the following is most important factor in the etiology of iron deficiency anemia in a 2-year-old child?
   A. Use of artificial sweeteners.
   B. Lack of fresh fruit in the diet.
   C. Intake of large amounts of fruit juice.
   D. Intake of excessive amounts of vitamin C.
   E. Intake of large amounts of unmodified cow's milk.
34. Which one of the following infants is at greatest risk of developing an early iron deficiency anemia?
   A. A premature infant.
   B. An infant with ABO incompatibility.
   C. An infant with physiologic hyperbilirubinemia.
   D. A postmature infant.
   E. An infant with polycythemia.

35. What function of the blood are exist?
   A. Respiratory.
   D. Nutrition and hormonal.
   B. Protective and excretion.
   E. All mentioned above.
   C. Homeostatic.

36. What non erythrocytal hemolytic factors are exist, except:
   A. Hemolytic poisons and toxins.
   B. Congenital diseases.
   C. Transfusion of group incompatible and Rh-factor-incompatible blood.
   D. Medical mistakes.
   E. Significant burns.

37. Causes of the anemia are:
   A. Posthemorragic and hemopoietic disorders.
   B. Hemolytic poisons and toxins.
   C. Medical mistakes.
   D. The presence of antibodies to erythrocytes.
   E. All mentioned above.

38. Classification of the anemia is:
   A. I – 110–90 g/l; II – 90–70 g/l; III – less than 70 g/l.
   B. I – 130–110 g/l; II – 100–90 g/l; III – less than 70 g/l.
   C. I – 120–100 g/l; II – 100–90 g/l; III – less than 80 g/l.
   D. I – 150–120 g/l; II – 120–100 g/l; III – less than 95 g/l.
   E. I – 150–120 g/l; II – 120–110 g/l; III – less than 100 g/l.

39. What is the hemorrhagic syndrome?
   A. Inherent disease, with prolonged bleeding, caused by the disorder of blood clotting system.
   B. Clinical manifestation of the tendency of an organism to repeated bleedings and hemorrhages under the influence of insignificant trauma and so spontaneously.
   C. Disseminated intravascular coagulation of blood.
   D. The process of destruction of erythrocytes after which hemoglobin releases from them into plasma.
   E. Condition for with the reduction of erythrocytes quantity and hemoglobin content in the unit of blood volume is characteristic.

1. What is the basic function of endocrine glands?
   A. Participation in metabolism.
   B. Influence on water and electrolytic metabolism.
   C. Growth and development of the child.
   D. Regulation the differentiation of tissues.
   E. All mentioned above.

2. The endocrine gland is not:
   A. Hypothalamus.
   B. Hypophysis.
   C. Parathyroid glands.
   D. Mammary glands.
   E. Pancreatic islet of Langerhans.

3. Which hormone doesn’t secret by anterior lobe of the hypophysis?
   A. ACTH (adrenocortocotropic hormone).
   B. Somatotropic hormone.
   C. Vasopressin.
   D. Thyroid stimulating hormone.
   E. Prolactin.

4. Insufficiency of somatotropic hormone of the hypophysis is the reason of:
   A. Gigantism.
   C. Diabetes insipidus.
   D. Cushing’s syndrome.
   B. Nanism.
   E. Thyrotoxicosis.

5. What is not the symptom of Cushing’s syndrome?
   A. Obesity.
   B. Striae.
   C. Hyperglycemia.
   D. Sexual undevelopment.
   E. Hypoglycemia.

6. The main function of the epiphysis is:
   A. Synthesis of melatonin.
   B. Stimulating hemopoiesis.
   C. Stimulating lactation.
   D. Secretion of corticosteroids.
   E. Synthesis of progesterone.

7. Which cells are in the structure of the thyroid glands?

8. Which cells of the thyroid glands are not capable to absorb iodine?
   A. A. B. B. C. C. D. D. E. A and B.

9. What disease characterised by iodine insufficiency without disorders of thyroid gland function?
   A. Endemic goiter.
   B. Toxic goiter.
   C. Hypothyroidism.
   D. Basedow’s disease.
   E. Thyrotoxicosis.

10. The basic function of the parathyroid glands is:
    A. The secretion of thyroxin (T4).
    B. The secretion of triiodothyronine (T3).
    C. The secretion of calcitonin.
    D. The secretion of parathormone.
    E. The secretion of vitamin D.
11. Mark the sign of the hypoparathyroidism:
   A. Hypercalcemia and hypophosphatemia.
   B. Hypocalcemia and hyperphosphatemia.
   C. Hypercalcemia and normophosphatemia.
   D. Hypocalcemia and hypophosphatemia.
   E. Hypercalcemia and hyperphosphatemia.

12. The cortical layer of the adrenal glands doesn’t secrete:
   A. Corticosterone.  C. Aldosterone.  E. Androgens.
   B. Cortisone.  D. Dopamine.

13. Mark the external symptom of Addison’s disease.
   A. Striae on the abdomen and back.  D. Swallowing of the extremities.
   B. Golden-brown pigmentation of the skin.  E. Hyperemia of the face.
   C. Exophthalmos.

14. Mark the mineralocorticoid.
   B. Estrogens.  D. Dopamine.

15. Which hormone does inhibit the release of insulin, glucagon, gastrin and the secretion of hydrochloric acid by stomach?
   B. Estradiol.  D. Corticosterone.

16. Prepubescent period of sexual development of girls begins:
   B. 6th to 9–10th years.  E. From 14th–15th to 16th–18th years.
   C. 9th–10th to 12th–13th years.

17. Pubescent period of sexual development of boys begins:
   A. From 2nd to 6th–7th years.  D. From 12th till 14th–15th years.
   B. From 6th till 10th–11th years.  E. From 15th till 16th–17th years.
   C. From 10th till 12th–13th years.

18. Which hormone acts is opposite to the action of glucagon?
   A. Insulin.  C. Cholecystokinin.  E. Aldosterone.
   B. Somatostatin.  D. Cortisone.

19. Secretion of which hormones increases during night sleep?
   A. Somatotropin, prolactine.  D. Prolactine, cortisole.
   B. Adrenalin, vasopressin.  E. Somatostatin, prolactine.
   C. Cortisole, vasopressin.

20. The symptoms of hypothyroidism in newborns are:
   A. Overweight after birth.
   B. Long-lastjaundice.
   C. The late separation deflection of the umbilical cord remainder.
   D. Low weight and absence of jaundice.
   E. A, B, C are correct.

1. A 4-month-old boy admitted to a hospital with complaints of vomiting, often watery stool. The boy is sick during 3 days. At admission, general condition is severe. Loose of weight is 12%. Results of biochemical investigation of blood: hematocrite 63%, protein 65 g/l. The prior diagnosis is:
   A. Gastroenteritis, hypotrophy.
   B. Gastroenteritis, dehydratation syndrome.
   C. Gastroenteritis, polycitemia.
   D. Galactozemia.
   E. Hypotrophy, hypoproteinemia.

2. A 7-year-old girl admitted to a hospital with complaints of thirst, vomiting, abdominal pain, restless. Loss of weight is 8 kg. The skin is pale. Decrease of turgor and elasticity is marked. The glucose of the blood is 12 mmol/l, the glucose of urine is 2%. The prior diagnose is:
   A. Acute gastritis, hyperglycemia.
   B. Acute gastroenteritis, hyperglycemia.
   C. Diabetus mellitus, hypaglycemic coma.
   D. Gastritis, syndrome of acetonic vomiting.
   E. Myocarditis, hyperglycemia.

3. A 14-year-old boy is safer from diabetus mellitus during 3 years. After 15 units insulin injection the child did not take any food. 10 min after the child stats to be very pale, convulsions are noticed. At admission to the hospital the child was unconscious, skin is paleness, muscle tone decreased, convulsions are marked. Glucose of the blood is 1,2 mmol/l. The prior diagnose is:
   A. Diabetes mellitus, hyperglycemic coma.
   B. Diabetes mellitus, hypoglycemic coma.
   C. Epilepsy, hyperglycemia.
   D. Vegetative dysfunction, hyperglycemia.
   E. Meningoencephalitis, hypoglycemia.

4. A 3-month-old infant has natural feeding. The child cannot keep up the head, does not smile. Periodical convulsions have appeared 2 weeks ago. High level of phenylalanine was found in the blood. The prior diagnose is:
   A. Meningitis, hyperphenylalaninemia.
   B. Meningitis, hypophenylalaninemia.
   C. Phenylacetonurias.
   D. Retardation of psychomotor development, hypophenylalaninemia.
   E. Epilepsy, hypophenylalaninemia.

5. A 7-day-old newborn has vomiting, jaundice, distention of the abdomen, enlargement of livery (border of liver palpated on 5 cm below arch of ribs), and watery stool 12 times a day after taking breast milk. The farther does not use milk due to dysfunction of stool after taking milk. The prior diagnose is:
   A. Gastroenteritis, conjugation jaundice.
   B. Gastroenteritis, dehydratation syndrome.
   C. Galactosemia.
   D. Hepatitis.
   E. Hypotrophy, dehydratation syndrome.
6. A 4-month-old infant has artificial feeding by diluted cow’s milk in proportion 1:1. Deficit of the body weight is 25 %. At admission to the hospital the protein of the blood is 48 g/l. The prior diagnose is:
   A. Hypotrophy II degree, hyperproteinemia.
   B. Hypotrophy II degree, hypoproteinemia.
   C. Hypotrophy I degree, hyperproteinemia.
   D. Hypotrophy III degree, hypoproteinemia.
   E. Hypotrophy III degree, hyperproteinemia.

7. A 7-month-old infant starts to have the dysfunction of the intestines, distention of the abdomen, watery stool after introduction of the semolina and bread. The infant lost 800 g of weight. At admission to the hospital the infant was examined, HT was 62 %, protein – 42 g/l. The prior diagnose is:
   A. Hypotrophy II degree, gastroenteritis.
   B. Hypotrophy II degree, dehydratation syndrome.
   C. Celiac disease.
   D. Gastroenteritis, hypovolemia.
   E. Hypotrophy II degree, hypoproteinemia.

Appendix 1

Graphical structure of the topic “Final class with grading test”

1. Estimation of the theoretical tasks
2. Estimation of the practical tasks
3. Estimation of the self-practice
4. Taking mark for the subject
   (Students are estimated by traditional grades and ESCTS scale for the grading test)
Навчальне видання

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FINAL CLASS
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