1. Which of the following lymphadenopathy localization is the most likely malignant?
    A. Anterior cervical
    B. Posterior cervical
    C. Preauricular
    D. Submandibular
    E. *Supraclavicular
2. Children with Down's syndrome have the greatest risk of developing the following malignancy:
    A. Hodgkin's disease
    B. Non-Hodgkin's lymphoma
    C. *Myeloid leukemia
    D. Neuroblastoma
    E. Ependymoma
3. All the following tests are necessary in the diagnostic of non-Hodgkin's lymphoma EXCEPT:
    A. *Laparotomy with splenectomy
    B. Bone biopsy
    C. Thoracic scanner
    D. Abdominopelvic scanner
    E. CBC
4. All of the following common finding in acute lymphocytic leukemia EXCEPT:
    A. Epistaxis
    B. Fever
    C. Marked elevation in WBCs
    D. *Gum hypertrophy
    E. Lymphadenopathy
5. In acute myelocytic leukemia all of the following correct EXCEPT:
    A. Bone marrow examination is essential diagnosis
    B. *Philadelphia positive chromosome
    C. More common in adult
    D. It is worse prognosis than chronic myeloid leukemia
    E. Persons with Down's syndrome have higher risk of AML development
6. The philadelphia chromosome observed in 90 % of patients with:
    A. *Chronic myeloid leukemia
    B. Acute lymphoid leukemia
    C. Hodgkin's lymphoma
    D. Acute myeloid leukaemia
    E. Chronic lymphoid leukaemia
7. What is name of the first stage of leukaemia treatment?
    A. Maintenance of remission
    B. Consolidation of remission
    C. *Induction of remission
    D. Subclinical CNS leukemia prophylaxis
    E. Prophylaxis of relapse
8. What is name of the second stage of leukaemia treatment?
    A. Maintenance of remission
    B. Subclinical CNS leukemia prophylaxis
    C. Induction of remission
    D. *Consolidation of remission
    E. Prophylaxis of relapse
9. What is name of the third stage of leukaemia treatment?
    A. *Maintenance of remission
    B. Consolidation of remission

C. Induction of remission
D. Subclinical CNS leukemia prophylaxis
E. Prophylaxis of relapse

10. What is normal lymphoblast concentration in bone marrow?
A. Not more than 1 %
B. *Not more than 5 %
C. Not more than 25 %
D. Not more than 35 %
E. Not more than 50 %

11. What number of lymphoblast in bone marrow prove diagnose of leukemia?
A. Any number (they should be absent in healthy)
B. More than 5 %
C. More than 10 %
D. *More than 25 %
E. More than 50 %

12. What test is definitive for leukemia diagnostic?
A. Lymph node biopsy
B. CT-scan
C. Complete blood count
D. *Bone marrow smear
E. Coagulogram

13. All the following are poor prognostic signs in leukemia EXCEPT of:
A. High WBC count
B. Presence of chromosomes translocations
C. Blasts with T-cell phenotype.
D. Age less than 1 year old
E. *Female sex

14. All the following are good prognostic signs in leukemia EXCEPT of:
A. Low WBC count
B. Absence of L3 cells
C. Platelet count greater 100 G/L
D. *Age less than 1 year old
E. Absence of lymphomatous features

15. The atrophyc glossitis is the typical symptom of the:
A. Hemolytic anemia
B. Acute leukemia
C. *B12-deficiency anemia
D. Iron-deficiency anemia
E. ITP

16. The most sensitive and accurate laboratory determination in the diagnosis of iron-deficiency anemia nd in monitoring the treatment of the disease is
A. The serum iron level
B. *The serum ferritin level
C. The hemoglobin level
D. The total iron-binding capacity
E. Hemoglobin electrophoresis

17. The highest hemoglobin level normally is present in:
A. *Newborns
B. Six months old infants
C. Adolescence
D. Young adult male
E. Pregnant woman

18. Which of the following is INCORRECT concerning aplastic anemia?
A. Can be caused by drugs

B. There is decreased platelet counts
C. *Bone marrow may show increased number of megakaryocytes
D. Bone marrow may show decreased red cell formation
E. Can be elevation of serum iron

19. All of the following conditions are characterized by hypochromic, microcytic red cells EXEPT:
A. Iron deficiency anemia
B. alfa thalassemia major
C. beta thalassemia minor
D. *G6PD deficiency
E. anemia of chronic disease
20. Which of the following statements regarding the anemia of chronic disease is true?
A. MCV is elevated
B. Serum iron level is elevated
C. Serum iron-binding capacity is elevated
D. *Marrow iron stores are increased
E. Iron therapy is required to raise hemoglobin level
21. Hemolytic-uremic syndrome is a disorder of which of the following?
A. The red cell membrane
B. *The vascular endothelium
C. Hemoglobin
D. The glycolytic pathway
E. Immune regulation
22. Which of the following hemolytic anemias is NOT associated with an intracorpuscular defect?
A. Hereditary sherocytosis
B. Sickle cell anemia
C. *Autoimmune hemolytic anemia
D. G6PD deficiency
E. Hereditary elliptocytosis
23. Which of the following is NOT a characteristic of Fanconi's anemia?
A. *Hematologic abnormalities in infancy
B. Pancytopenia
C. Skeletal abnormalities
D. Chromosome fragility
E. Renal abnormalities
24. What level of hemoglobin is suggestive of anemia in children between 6 month to 5 years old?
A. *Below 110 g/L
B. Below 120 g/L
C. Below 130 g/L
D. Below 140 g/L
E. Below 150 g/L
25. What level of hemoglobin is suggestive of anemia in children older than 5 years old?
A. *Below 12 g/L
B. Below 13 g/L
C. Below 14 g/L
D. Below 15 g/L
E. Below 16 g/L
26. All of the following conditions are characterized by hypochromic, microcytic red cells EXEPT:
A. Lead poisoning
B. Beta thalassemia major
C. Pyridoxine responsive anemia

D. *Sickle cell disease
E. Dyserythropoietic anemia

27. Choose the condition which is characterized by hypochromic, microcytic anemia:
A. Iron deficiency
B. Beta thalassemia major
C. Pyridoxine responsive anemia
D. Lead poisoning
E. *All is correct

28. Choose the condition which is characterized by normochromic, normocytic anemia:
A. Iron deficiency
B. Beta thalassemia major
C. Pyridoxine responsive anemia
D. Lead poisoning
E. *Fanconi's anemia

29. Which of the following tests is the most helpful in diagnosis of thalassemia :
A. Serum iron and iron binding capacity
B. Bone marrow examination
C. *Hemoglobin electrophoresis
D. Coomb's test
E. Platelets level

30. Anemia characterized by increase RBCs production is:
A. Iron-deficiency anemia
B. *Hereditary Spherocytosis
C. Fanconi's Anemia
D. Anemia of chronic disease
E. Megaloblastic anemia

31. All the following can be associated with sickle cell anemia EXCEPT:
A. Vaso-occlusive crisis
B. Infection
C. *Bleeding disease
D. Splenic sequestration
E. Acute chest syndrome

32. Which of the following haemoglobin (Hb) estimation will be diagnostically helpful in a case of beta thalassemia trait?
A. Hb-S
B. Hb-C
C. *Hb-A2
D. Hb-A
E. Hb-C2

33. All of the following are true of ? thalassemia major, except:
A. Splenomegaly
B. Target cells on peripheral smear
C. Microcytic hypochromic anemia
D. *Increased osmotic fragility
E. Growth failure

34. Choose the essential links of a hemostasis:
A. Vascular integrity
B. Qualitative and quantative characteristics of platelets
C. Presence of coagulation factors in blood
D. All is incorrect
E. *All is correct

35. What is the synonym of the Schonlein-Henoch purpura?
A. Idiopathic thrombocytopenic purpura
B. Von Willebrand disease

C. *Hemorrhagic vasculitis
D. Fanconi pancytopenia
E. Allergic dermatitis

36. What is NOT the synonym of the hemorrhagic vasculitis?
A. *Von Willebrand disease
B. Schonlein-Henoch purpura
C. Allergic angiitis
D. Anaphylactoid purpura
E. Henoch-Schonlein disease

37. All the following disorders are associated with prolonged bleeding time EXEPT:
A. *Hemophilia A
B. von Willebrand's disease
C. Aspirin-induced thrombocytopathia
D. Bernard-Soulier syndrome
E. ITP

38. Patients with DIC present with all of the following hematologic abnormalities EXEPT:
A. Thrombocytopenia
B. Microangiopathic blood smear
C. Hypofibrinogenemia
D. Prolonged PTT
E. *Low levels of fibrin degradation products

39. The most common cause for acute onset of thrombocytopenia in an otherwise well child is:
A. von Willebrand disease
B. Acute leukemia
C. *Idiopathic (immune) thrombocytopenic purpura
D. Aplastic anemia
E. Thrombotic thrombocytopenic purpura

40. Choose the correct statement concerning ITP in children:
A. 60 to 80 % of children who present with acute ITP will have spontaneous resolution of their ITP ithin 6 mo
B. Less than 1 % will develop intracranial hemorrhage
C. About 10 to 20 % of children who present with acute ITP go on to develop chronic ITP
D. The presence of abnormal finding such as hepatosplenomegaly or remarkable lymphadenopathy suggests another diagnosis
E. *All is correct

41. Choose the INCORRECT statement concerning ITP in children:
A. 60 to 80 % of children who present with acute ITP will have spontaneous resolution of their ITP ithin 6 mo
B. *Intracranial hemorrhage is very frequent complication of acute ITP
C. About 60 to 80 % of children who present with acute ITP go on to develop chronic ITP
D. The presence of abnormal finding such as hepatosplenomegaly or remarkable lymphadenopathy suggests another diagnosis
E. All is correct

42. What maximal level of thrombocytes is suggestive for ITP?
A. Less than 250,000/mm3
B. Less than 180,000/mm3
C. *Less than 150,000/mm3
D. Less than 100,000/mm3
E. Less than 50,000/mm3

43. What laboratory findings are typical for acute ITP?
A. Anemia and thrombocytopenia
B. *Isolated thrombocytopenia

C. Thrombocytopenia and leukocytosis
D. Thrombocytopenia and leucopenia
E. Presence of blasts

44. What bone marrow examination results are typical for acute ITP?
A. *Normal granulocytic and erythrocytic series with increased number of megakaryocytes
B. Decreased granulocytic, erythrocytic and megakaryocytic series
C. Increased granulocytic, erythrocytic and megakaryocytic series
D. Decreased granulocytic and erythrocytic series with increased number of megakaryocytes
E. Increased granulocytic and erythrocytic series with decreased number of megakaryocytes

45. If the VII plasma coagulation factor is decreased, it will be abnormal:
A. Platelets count
B. Prothrombin time
C. *Clotting time
D. Amount of fibrinogen
E. Bleeding time

46. If the IX plasma coagulation factor is decreased, it will be abnormal:
A. *Partial thromboplastin time
B. Thrombin time
C. Clotting time
D. Amount of fibrinogen
E. Bleeding time

47. What rush characteristics are typical for ITP?
A. Polymorphous
B. Polychromatic
C. Asymmetric
D. Petechiae and purpura
E. *All is correct

48. Which rush characteristic is NOT typical for ITP?
A. Polymorphous
B. Polychromatic
C. *Symmetric
D. Petechial
E. Purpuric

49. What is normal time of plasma recalcification?
A. 20-40 sec
B. *60-120 sec
C. 160-180 sec
D. 200-250 sec
E. 250-300 sec

50. What is normal partial thromboplastin time?
A. 5-10 sec
B. 15-20 sec
C. *25-35 sec
D. 40-60 sec
E. 80-120 sec

51. What is normal prothrombin time?
A. 2-5 sec
B. *10-12 sec
C. 20-22 sec
D. 40-60 sec
E. 80-120 sec

52. What is normal bleeding time by Duke?
    A. 30-60 sec
    B. 1-2 min
    C. *2-5 min
    D. 5-10 min
    E. 10-15 min
53. What is normal clotting time by Lee-White?
    A. 30-60 sec
    B. 1-2 min
    C. 2-5 min
    D. *5-10 min
    E. 10-15 min
54. Choose the CORRECT statement concerning ITP treatment:
    A. It doesn't require treatment
    B. *Children who have platelet counts > 30,000/mm3 and are asymptomatic or have only minor purpura do not require routine treatment
    C. Children who have platelet counts < 10,000/mm3 and are asymptomatic or have only minor purpura do not require routine treatment
    D. Treatment doesn't depend on the platelets level and is performed only in bleedings
    E. All is incorrect
55. What medicines are the most effective in ITP treatment?
    A. *Intravenous immune globulin (IVIG) and prednisone
    B. Antibiotics and non-steroid anti-inflammatory
    C. Slow acting antirheumatoid drugs (SAARDS) and cytostatics
    D. Whole blood transfusion
    E. Bone marrow transplantation
56. What is usual prednisolone dose for ITP treatment?
    A. 0,1-0,2 mg/ kg/day
    B. *1-2 mg/ kg/day
    C. 3-4 mg/ kg/day
    D. 10 mg/ kg/weekly
    E. 30 mg/ kg/day
57. What does NOT include supportive care in acute ITP?
    A. Restriction of physical activities
    B. Avoidance of aspirin
    C. Avoidance of intramuscular injections
    D. *Daily massages
    E. Hypoallergic diet
58. Choose the optimal age for splenectomy in ITP (in case of need):
    A. Till 1 year
    B. 1-2 years
    C. 3-4 years
    D. 4-5 years
    E. *After 6 years
59. Intracranial hemorrhage in ITP is the most common when platelets count is:
    A. More 50,000/mm3
    B. Below 50,000/mm3
    C. More 20,000/mm3
    D. *Below 20,000/mm3
    E. Below 100,000/mm3
60. The classic triad of the Wiskott-Aldrich syndrome includes:
    A. Thrombocytopenia, mental retardation and immunodeficiency
    B. Thrombocytosis, mental retardation and immunodeficiency

C. *Thrombocytopenia, eczema and immunodeficiency
D. Thrombocytosis, eczema and immunodeficiency
E. Thrombocytopenia, eczema and seizures

61. What is the etiology of the Wiskott-Aldrich syndrome:
A. *X-linked recessive
B. Autosomal recessive
C. Autosomal dominant
D. Infectious
E. Autoimmune

62. Choose the thrombocytopathia with thrombocytopenia:
A. Glanzmann's thromboasthenia
B. Gray platelet syndrome
C. Thrombosis
D. Dence body deficiency
E. *Bernard Soulier syndrome

63. Choose the platelets disorder with normal platelets count:
A. *Glanzmann's thromboasthenia
B. ITP
C. Bernard Soulier syndrome
D. TAR-syndrome
E. Wiskott-Aldrich syndrome

64. An infant or young child with ITP, which was undergone splenectomy, has an increase risk of:
A. Thrombocytosis
B. Polycytemia
C. Leukemia
D. *Severe bacterial infection
E. Hemolytic anemia

65. Choose the correct statement concerning idiopathic thrombocytopenic purpura in children:
A. *Often follows a viral infection
B. Typically has a chronic course, with relapses following each remission
C. Is characteristically associated with splenomegaly
D. Is associated with reduction of megacaryocytes on bone marrow examination
E. Requires splenectomy in more than 20 % cases

66. Platelet transfusion may be indicated in patients with:
A. Haemophylia
B. Henoch- Schoenlein purpura
C. *Aplastic anemia
D. Chronic ITP
E. Lupus erythematosus

67. Choose the INCORRECT statement concerning hemophilia A:
A. All males with defective gene have hemophilia
B. *It's inherited in an autosomal dominant pattern
C. 100% of daughter's of hemophilic man will be carriers
D. It's the most common type of hemophylia
E. There is factor VIII deficiency

68. What is the synonym of idiopathic thrombocytopenic purpura?
A. Von Willebrand's disease
B. *Werlhof's disease
C. Schonlein-Henoch purpura
D. Bernard-Soulier syndrome
E. All is incorrect

69. What symptom is the most indicative for platelets problems?
A. Delayed bleeding from old wounds

B. Hemorrhage into joint space
C. Bleeding from multiple sites
D. *Presence of petechiae on skin and mucosal surfaces
E. Gastrointestinal bleeding

70. What symptom is NOT indicative for platelets problems?
A. *Delayed bleeding from old wounds
B. Epistaxis
C. Hematuria
D. Menorrhagia
E. Gastrointestinal bleeding

71. What symptom is the most indicative for DIC syndrome?
A. Delayed bleeding from old wounds
B. Hemorrhage into joint space
C. *Bleeding from multiple sites
D. Presence of petechiae on skin and mucosal surfaces
E. Gastrointestinal bleeding

72. What is the inheritance pattern of the von Willebrand disease?
A. X-linked
B. Y-linked
C. *Autosomal dominant
D. Autosomal recessive
E. It is aquired problem

73. What is the inheritance pattern of the hemophilia?
A. *X-linked
B. Y-linked
C. Autosomal dominant
D. Autosomal recessive
E. It is aquired problem

74. What is the inheritance pattern of the Shoenlein-Genoch's disease?
A. X-linked
B. Y-linked
C. Autosomal dominant
D. Autosomal recessive
E. *It is an acquired problem

75. What is the inheritance pattern of the hemophilia C?
A. X-linked
B. Y-linked
C. Autosomal dominant
D. *Autosomal recessive
E. It is aquired problem

76. The Christmas disease is the synonym of the:
A. Hemophilia A
B. *Hemophilia B
C. Hemophilia C
D. Hemorrhagic vasculitis
E. Thrombocytopenic purpura

77. The reason of hemophilia A is:
A. Factor VII deficiency
B. *Factor VIII deficiency
C. Factor IX deficiency
D. Factor XI deficiency
E. Vitamin K deficiency

78. The reason of hemophilia B is:
A. Factor VII deficiency

B. Factor VIII deficiency
C. *Factor IX deficiency
D. Factor XI deficiency
E. Vitamin XII deficiency

79. The reason of hemophilia C is:
A. Factor VII deficiency
B. Factor VIII deficiency
C. Factor IX deficiency
D. *Factor XI deficiency
E. Vitamin XII deficiency

80. What index is the specific for the von Willebrand disease diagnostic in difference from other oagulation disorders?
A. Time of bleeding
B. PTT
C. Time of clotting
D. *Ristocetin cofactor activity
E. Platelets level

81. What coagulation factor is NOT vitamin K dependent?
A. Factor II
B. *Factor V
C. Factor VII
D. Factor IX
E. Factor X

82. What coagulation factor measurement is useful to distinguish liver disease from vitamin K deficiency?
A. Factor II
B. *Factor V
C. Factor VII
D. Factor IX
E. Factor X

83. What coagulation factor measurement is useful to distinguish DIC from vitamin K deficiency and liver disease?
A. Factor II
B. Factor V
C. *Factor VIII
D. Factor IX
E. Factor X

84. What is platelet survival time in healthy persons?
A. 1-2 days
B. *7-10 days
C. 20-30 days
D. 50-60 days
E. 120 days

85. What is the indication for bone marrow evaluation in ITP?
A. Nasal bleedings
B. *If steroid therapy is to be used
C. Isolated thrombocytopenia
D. Numerous skin petechia
E. All is correct

86. What is NOT indication for bone marrow evaluation in ITP?
A. *Nasal bleedings
B. If steroid therapy is to be used
C. Other cell lines (besides of platelets) are involved
D. Weight loss

E. Splenomegaly

87. What medicines give the best and the fastest response in the most children with ITP?
    A. Glucocorticoids
    B. *IVIG (Intravenous immune globulin)
    C. Anti-D immunoglobulin
    D. Splenectomy
    E. Cytostatics
88. What should be minimal persistence of acute ITP to define it as a chronic ITP?
    A. More than 1 month
    B. More than 3 - 6 months
    C. *More than 6 - 12 months
    D. More than 18 - 24 months
    E. More than 36 months
89. Initially urticarial lesions which may itch or burn and then develop into pink maculopapules are typical for the:
    A. von Willebrand's disease
    B. Wiskott-Aldrich syndrome
    C. Hemophilia A
    D. *Hemorrhagic vasculitis
    E. ITP
90. Which organ involvement is typical for Schoenlein-Henoch purpura?
    A. Kidneys
    B. GI tract
    C. Musculosceletal system
    D. Scrotum
    E. *All is correct
91. Scrotal involvement with epididimidis, orchitis, testicular torsion and scrotal bleeding are typical for the:
    A. von Willebrand's disease
    B. Wiskott-Aldrich syndrome
    C. Hemophilia A
    D. *Hemorrhagic vasculitis
    E. ITP
92. Renal involvement which ranges in severity from microscopic hematuria to nephritic syndrome is typical for the:
    A. *Schoenlein-Henoch purpura
    B. Wiskott-Aldrich syndrome
    C. Hemophilia A
    D. von Willebrand's disease
    E. Werlhof's disease
93. What are the characteristic laboratory findings in Schoenlein-Henoch purpura?
    A. Prolonged time of bleeding and thrombocytopenia
    B. Prolonged thromboplastin time and PTT
    C. Prolonged clotting time and leukocytosis
    D. *Elevated Ig A and leukocytosis
    E. Elevated Ig A and thrombocytopenia
94. Joint involvement with periarticular swelling of the knees, ankles, wrists and elbows is typical for the:
    A. *Schonlein-Henoch purpura
    B. Wiskott-Aldrich syndrome
    C. Hemophilia A
    D. von Willebrand's disease
    E. Werlhof's disease
95. Treatment for the patient with in the Hashimoto thyroiditis includes:

A. Iodine
B. *Hormonal replacement therapy if she becomes hypothyroid
C. PTU (propylthiouracil)
D. Psychiatry consult
E. Surgical removal of thyroid gland

96. What is the main etiologic medicine in thyroid storm?
A. Insulin
B. Methimazole
C. Propranolol
D. *Propylthiouracil
E. Prednisone

97. What is the alternative (second) etiologic medicine in thyroid storm?
A. Insulin
B. *Methimazole
C. Propranolol
D. Propylthiouracil
E. Prednisone

98. What is the medicine for minimizing of tachycardia and hypertension in thyroid storm?
A. Dopamin
B. Methimazole
C. *Propranolol
D. Propylthiouracil
E. Prednisone

99. What is mechanism of propylthiouracil action in thyroid storm?
A. *Blocks peripheral conversion of T4 to T3
B. Increase TSH secretion with pituitary gland
C. Decrease TSH secretion with pituitary gland
D. Stimulates peripheral conversion of T4 to T3
E. Stumulates TRH secretion with hypothalamus

100. What is daily hydrocortizon dose for continuous infusion in adrenal crisis?
A. 1-2 mg/kg
B. 5-10 mg/kg
C. *10-15 mg/kg
D. 15-20 mg/kg
E. 20-25 mg/kg

101. What symptom is NOT typical for Grave's disease?
A. Nervousness
B. Moist skin
C. *Bradycardia
D. Tremor
E. Exophthalmia

102. What symptom is NOT typical for Grave's disease?
A. *Mental retardation
B. Moist skin
C. Tachycardia
D. Tremor
E. Exophthalmia

103. What symptom is typical for Grave's disease?
A. Jaundice
B. *Moist skin
C. Bradycardia
D. Mental retardation
E. Obesity

104. What symptom is typical for Grave's disease?

A. Obesity
B. Dry skin
C. Bradycardia
D. Mental retardation
E. *Tremor

105. What hormones are secreted by adenohypophysis?
A. Growth hormone, ACTH, aldosterone
B. Growth hormone, ACTH, antidiuretic hormone
C. Parathyroid hormone, TSH, luteinizing hormone
D. *ACTH, TSH, luteinizing hormone
E. Growth hormone, ACTH, glucagons

106. Name the target organ of somatotropic hormone?
A. *Bone
B. Mammary gland
C. Testis
D. Stomach
E. Thyroid gland

107. Witch hypophyseal hormone has antidiuretic action?
A. Somatotropic hormone (STH)
B. Adrenocorticotrophic hormone (ACTH)
C. *Thyroid-stimulating hormone (TSH)
D. Vasopressin
E. Oxytocin

108. Name the target organ of prolactin?
A. Bone
B. *Mammary gland
C. Testis
D. Stomach
E. Thyroid gland

109. Epinephrine is produced by:
A. Cortex of adrenal glands
B. Zona glomerulosa of adrenal glands
C. Zona reticularis of adrenal glands
D. Zona fasciculata and reticularis of adrenal glands
E. *Medulla of adrenal glands

110. Glucocorticoids are produced by:
A. *Cortex of adrenal glands
B. Zona glomerulosa of adrenal glands
C. Zona reticularis of adrenal glands
D. Zona fasciculata and reticularis of adrenal glands
E. Medulla of adrenal glands

111. What glands are the regulators of all endocrine system?
A. *Hypothalamus and hypophysis
B. Hypophysis and epiphysis
C. Hypothalamus and epiphysis
D. Hypothalamus, hypophysis and epiphysis
E. Hypothalamus

112. Sex hormones (androgens, estrogens, progesterone) are produced by:
A. Cortex of adrenal glands
B. Zona glomerulosa of adrenal glands
C. *Zona reticularis of adrenal glands
D. Zona fasciculata and reticularis of adrenal glands
E. Medulla of adrenal glands

113. Mineralocorticoids are produced by:
A. Cortex of adrenal glands

B. *Zona glomerulosa of adrenal glands
C. Zona reticularis of adrenal glands
D. Zona fasciculata and reticularis of adrenal glands
E. Medulla of adrenal glands

114. Acromegaly is the result of:
A. Hypersecretion of growth hormone in the childhood
B. *Hypersecretion of growth hormone in the elder age
C. Hypersecretion of adrenocorticotropic hormone in the elder age
D. Hyposecretion of growth hormone in the childhood
E. Hypersecretion of adrenocorticotropic hormone in the childhood

115. Gigantism is the result of:
A. *Hypersecretion of growth hormone in the childhood
B. Hypersecretion of growth hormone in the elder age
C. Hypersecretion of adrenocorticotropic hormone in the elder age
D. Hyposecretion of growth hormone in the childhood
E. Hypersecretion of adrenocorticotropic hormone in the childhood

116. Growth hormone deficiency is usually associated with:
A. *Hypopituitarism
B. Hypothyroidism
C. Hypogonadism
D. Hypoaldosteronism
E. Hypoinsulinism

117. What hormone is secreted by adenohypophysis?
A. Aldosterone
B. *Growth hormone
C. Parathyroid hormone
D. Vasopressin
E. Glucagon

118. What hormone is secreted by neurohypophysis?
A. Aldosterone
B. Growth hormone
C. Parathyroid hormone
D. *Vasopressin
E. Glucagon

119. In the female the analogue of male's interstitial cell-stimulating hormone (ICSH) is:
A. Prolactin
B. Melanocyte-stimulating hormone
C. *Luteinizing hormone
D. Estradiol
E. Cortisol

120. What process is controlled with parathyroid glands?
A. Protein metabolism
B. Lipid metabolism
C. *Phosphoric-calcium metabolism
D. Vitamin metabolism
E. Carbohydrates metabolism

121. What is hypopinealism?
A. Hypothalamus hypofunction
B. *Epiphysis hypofunction
C. Hypophysis hypofunction
D. Adrenals hypofunction
E. Testis hypofunction

122. Dwarfism can be caused with?
A. Epinephrin deficiency

B. Cortisol deficiency
C. Glucagon deficiency
D. Prolactin deficiency
E. *Somatotropin deficiency

123. What does appear in the case of growth hormone hyposecretion?
A. Addison’s disease
B. Diabetes mellitus
C. *Dwarfism
D. Acromegaly
E. Cushing's disease

124. Simmond’s disease is the result of dysphunction of:
A. Hypothalamus
B. *Pituitary gland
C. Thyroid gland
D. Adrenal gland
E. Gonads

125. What are the clinical features of Addison’s disease?
A. Pale color of skin, fatigue, sexual development retardation, obesity
B. Dry skin, thirst, polyuria, weight loss
C. Moist skin, ophthalmic symptoms, tachycardia
D. Dry skin, edemas, mental development retardation, bradycardia
E. *Dark color of skin, fatigue, weight loss, hypotension

126. What is another name of Addison’s disease?
A. *Chronic adrenal insufficiency
B. Congenital hypothyroidism
C. Congenital adrenal hyperplasia
D. Acquired hyperthyroidism
E. Hyperadrenocorticism

127. What is another name of Conn's syndrome?
A. Chronic adrenal insufficiency
B. *Congenital hyperaldosteronism
C. Congenital adrenal hyperplasia
D. Acquired hyperthyroidism
E. Hyperadrenocorticism

128. What is another name of Cushing syndrome?
A. Chronic adrenal insufficiency
B. Congenital hyperaldosteronism
C. Congenital adrenal hyperplasia
D. Acquired hyperthyroidism
E. *Hyperadrenocorticism

129. What are the clinical features of Cushing syndrome?
A. *Purple striae on skin, fatigue, hirsutism, obesity
B. Dry skin, thirst, polyuria, weight loss
C. Moist skin, ophthalmic symptoms, tachycardia
D. Dry skin, edemas, mental development retardation, bradycardia
E. Dark color of skin, fatigue, weight loss, hypotension

130. What is laboratory method of Cushing syndrome diagnostic?
A. Serum calcium estimation
B. Estimation of 17-ketosteroids level in urine
C. Iodine excretion test
D. Glucose tolerance test (GTT)
E. *24-hour urine test for free cortisol

131. What laboratory method should be used to differentiate Cushing syndrome from Cushing disease?

A. 24-hour urine test for free cortisol
B. Estimation of 17-ketosteroids level in urine
C. The measurement of 17-hydroxyprogesterone in serum
D. Glucose tolerance test (GTT)
E. *Dexamethasone suppression test

132. What is laboratory method of Addison's disease diagnostic?
A. *Estimation of electrolytes and cortisol level in plasma
B. Estimation of 17-ketosteroids level in urine
C. The measurement of 17-hydroxyprogesterone in serum
D. Glucose tolerance test (GTT)
E. Dexamethasone suppression test

133. What are the clinical features of hypothyroidism?
A. Pale color of skin, fatigue, sexual development retardation, obesity
B. Dry skin, thirst, polyuria, weight loss
C. Moist skin, ophthalmic symptoms, tachycardia
D. *Dry skin, edemas, mental development retardation, bradycardia
E. Dark color of skin, fatigue, weight loss, hypotension

134. What is another name of Grave's disease?
A. Chronic adrenal insufficiency
B. Congenital hypothyroidism
C. Congenital adrenal hyperplasia
D. *Acquired hyperthyroidism
E. Hyperadrenocorticism

135. What is another name of mixedema?
A. Chronic adrenal insufficiency
B. *Acquired hypothyroidism
C. Congenital adrenal hyperplasia
D. Congenital hypothyroidism
E. Hyperadrenocorticism

136. What examination is the most helpful to prove the diagnosis of congenital hypothyroidism?
A. Ultrasound of thyroid gland
B. *Serum thyroid-stimulating hormone (TSH)
C. Serum iodine
D. MRI of thyroid gland
E. Excretion of iodine with urine

137. What examination is the most helpful to prove the diagnosis of endemic goiter?
A. Ultrasound of thyroid gland
B. Serum thyroid-stimulating hormone (TSH)
C. *Serum iodine
D. MRI of thyroid gland
E. Excretion of cortisol with urine

138. What are the clinical features of Grave's disease?
A. Pale color of skin, fatigue, sexual development retardation, obesity
B. Dry skin, thirst, polyuria, weight loss
C. *Moist skin, ophthalmic symptoms, tachycardia
D. Dry skin, edemas, mental development retardation, bradycardia
E. Dark color of skin, fatigue, weight loss, hypotension

139. Choose the correct statement about hormones in Grave's disease?
A. Increase T3 and T4, increase TSH
B. *Increase T3 and T4, decrease TSH
C. Increase T3 and T4, normal TSH
D. Decrease T3 and T4, increase TSH
E. Normal T3 and T4, decrease TSH

140. Choose the correct statement about hormones in congenital hypothyroidism?
A. Increase T3 and T4, increase TSH
B. Increase T3 and T4, decrease TSH
C. Increase T3 and T4, normal TSH
D. *Decrease T3 and T4, increase TSH
E. Normal T3 and T4, decrease TSH

141. What is another name of Hashimoto disease?
A. *Autoimmune thyroiditis
B. Acquired hypothyroidism
C. Endemic goiter
D. Congenital hypothyroidism
E. Acquired hyperthyroidism

142. How many hormones types are secreted with thyroid gland?
A. 5
B. 4
C. 3
D. *2
E. 1

143. Choose the most correct definition of I stage goiter:
A. No palpable or visible goiter
B. *Goiter is palpable but not visible when the neck is in the normal position
C. Goiter that is visible and palpable when the neck is in a normal position
D. Goiter that is palpable only when neck is fully extended
E. Goiter that is visible only when neck is fully extended

144. Choose the most correct definition of II stage goiter:
A. No palpable or visible goiter
B. Goiter is palpable but not visible when the neck is in the normal position
C. *Goiter that is visible and palpable when the neck is in a normal position
D. Goiter that is palpable only when neck is fully extended
E. Goiter that is visible only when neck is fully extended

145. How many stages of goiter in endocrinology according WHO classification do you know?
A. 5
B. 4
C. *3
D. 2
E. 1

146. What is another name of cretinism?
A. Chronic adrenal insufficiency
B. Acquired hypothyroidism
C. Congenital adrenal hyperplasia
D. *Congenital hypothyroidism
E. Hyperadrenocorticism

147. What symptom is NOT typical for Cushing syndrome?
A. *Hypoglycaemia
B. Moon-like face
C. Hirsutism
D. Striae on skin
E. Acne vulgaris

148. What symptom is NOT typical for Cushing syndrome?
A. Hyperglycaemia
B. Moon-like face
C. Hirsutism
D. Striae on skin

E. *Hypotonia

149. What is typical symptom of mixedema?
A. Polyuria
B. Hirsutism
C. Tachycardia
D. *Cold skin
E. Loss of weight

150. What symptom is NOT typical for mixedema?
A. Mental retardation
B. *Hirsutism
C. Bradycardia
D. Cold skin
E. Obesity

151. What complication can occur after treatment with glucocorticoids?
A. Diabetes insipidus
B. Conn's syndrome
C. *Cushing syndrome
D. Graves' disease
E. Addison's disease

152. What symptom is NOT typical for Grave's disease?
A. Nervousness
B. Moist skin
C. *Bradycardia
D. Tremor
E. Exophthalmia

153. What is the typical symptom of hypoparathyroidism?
A. Dry skin
B. Mental retardation
C. Obesity
D. *Seizures
E. Exophthalmia

154. What is the typical symptom of hyperparathyroidism?
A. Mental retardation
B. *Osteoporosis
C. Obesity
D. Seizures
E. Exophthalmia

155. What can be the reason of secondary (hypogonadotropic) hypogonadism?
A. *Tumor of hypophysis
B. Turner syndrome
C. Noonan syndrome
D. Orchitis
E. Klinefelter's syndrome

156. What can be the reason of primary (hypergonadotropic) hypogonadism?
A. Tumor of hypophysis
B. *Turner's syndrome
C. Hypopituitarism
D. Laurence-Moon-Biedl syndrome
E. Hypothyroidism

157. The 2-years old boy has positive Trousseau and Hvostek symptoms, sometimes seizures, poor hair and nails growth. What is possible diagnosis?
A. Addison's disease
B. *Hypoparathyroidism
C. Diabetes mellitus

D. Grave’s disease
E. Cushing syndrome

158. What symptom is NOT typical for Addison’s disease?
A. Bradycardia
B. Hyperpigmentation
C. Hypotonia
D. *Mental retardation
E. Vomiting

159. All of the following are features of congenital hypothyroidism, EXCEPT:
A. Lethargy
B. Prolonged jaundice
C. *Persistent diarrhea
D. Hoarse cry
E. Feeding difficulties

160. All of the following are features of Addison's disease, EXCEPT:
A. Weakness
B. Anorexia
C. Hypoglycemia
D. *Hypertension
E. Hyperpigmentation of the skin

161. What types of diabetes mellitus glycemic control do you know?
A. *Ideal, optimal, suboptimal, high risk for the life
B. Normal, subnormal, poor, high risk for the life
C. Excellent, problematic, suboptimal, high risk for the life
D. Very good, good, bad, terrible
E. Satisfactory, unsatisfactory

162. What is NOT included in the clinical diagnose of diabetes mellitus type 1?
A. Severity
B. Glycemic control
C. Type of diabetes mellitus
D. *Stage
E. Complications

163. What is the most frequent endocrine pathology in children?
A. Diabetes mellitus
B. Addison’s disease
C. *Goiter
D. Grave’s disease
E. Dwarfism

164. What is term which describes frequent urinations?
A. *Pollakiuria
B. Nicturia
C. Polyuria
D. Oliguria
E. Hypoisostenuria

165. What is typical for diabetes insipidus?
A. Glucosuria
B. Proteinuria
C. Oliguria
D. *Hypoisostenuria
E. Ketonuria

166. What can be the reason of diabetes mellitus?
A. Excessive intake of sweets
B. Stress
C. Heredity

D. Pancreatitis
E. *All is correct

167. What can be the reason of diabetes insipidus?
A. Excessive intake of sweets
B. *Tumor of hypophysis
C. Tumor of adrenal gland
D. Pancreatitis
E. All is correct

168. What is the most informative laboratory index about diabetes mellitus control?
A. Glucose in blood
B. Glucose in urine
C. Cholesterol in blood
D. *Glucosylated hemoglobin
E. Protein in urine

169. What food should be limited for the first time in patients with diabetes mellitus?
A. Meat
B. Seafood
C. Milk
D. Vegetables
E. *Fruits

170. What is dose of glucose for glucose tolerance test (GTT)?
A. 0,75 grams/kg
B. 1 gram/kg
C. *1,75 grams/kg
D. 2 grams/kg
E. 2,5 grams/kg

171. What minimal 2-hours glucose level in blood indicates diabetes mellitus according glucose tolerance test (GTT)?
A. More than 8,5 mmol/L
B. More than 9,0 mmol/L
C. *More than 11,1 mmol/L
D. More than 14,0 mmol/L
E. More than 16,1 mmol/L

172. What minimal fasting plasma glucose level in blood indicates diabetes mellitus according glucose olerance test (GTT)?
A. More than 5,5 mmol/L
B. *More than 7,0 mmol/L
C. More than 7,7 mmol/L
D. More than 8,0 mmol/L
E. More than 11,0 mmol/L

173. What is not typical for diabetes mellitus?
A. Pollakiuria
B. Nicturia
C. Polyuria
D. *Oliguria
E. Glucosuria

174. What is term which describes increased amount of urine?
A. Pollakiuria
B. Nicturia
C. *Polyuria
D. Oliguria
E. Anuria

175. What symptom is NOT typical for diabetes mellitus type 2?
A. Polyuria

B. Weakness
C. Polydipsia
D. Dry skin
E. *Loss of weight

176. What symptom is not typical for diabetes mellitus type 1?
A. Polyuria
B. *Hirsutism
C. Polydipsia
D. Dry skin
E. Loss of weight

177. What is the best laboratory method to prove diabetes mellitus diagnosis if blood glucose level is controversial?
A. Estimation of insulin level in plasma
B. Estimation of glucose level in urine
C. Insulin tolerance test
D. *Glucose tolerance test (GTT)
E. Estimation of glucose level in blood several times

178. What is screening laboratory method of diabetes mellitus diagnostic?
A. Estimation of insulin level in plasma
B. Estimation of glucose level in urine
C. Insulin tolerance test
D. Glucose tolerance test (GTT)
E. *Estimation of glucose level in blood

179. What are the laboratory signs of diabetic ketoacidosis?
A. Hyperglycaemia, glucosuria, hyperbilirubinemia
B. Hyperglycaemia, glucosuria, proteinuria
C. *Hypoglycaemia, glucosuria, ketonuria
D. Acidosis, normoglycaemia, ketonuria
E. Hyperglycaemia, glucosuria, ketonuria

180. The antagonist of insulin is:
A. Thyroxin
B. Cortisol
C. *Glucagon
D. Prolactin
E. Growth hormone

181. What is the place of insulin synthesis in pancreas?
A. Follicular cells
B. Lutein cells
C. Interstitial cells of Leydig
D. *The islets of Langerhans
E. Medullar substance

182. What should be an initial intravenous bolus dose of regular insulin in diabetic coma?
A. 0.01 U/kg body weight
B. *0.1 U/kg body weight
C. 1 U/kg body weight
D. 1, 5 U/kg body weight
E. Insulin should not be injected intravenously

183. What should be dose of regular insulin for continuous intravenous infusion in diabetic coma?
A. 0.01-0,02 U/kg/hour
B. *0.1-0,2 U/kg/hour
C. 0.1-0,2 U/kg/day
D. 1-2 U/kg/hour
E. 1-2 U/kg/day

184. What is the criterion of blood glucose level in diabetic coma to start subcutaneous injections?
A. Less than 7 mmol/L
B. Less than 10 mmol/L
C. *Less than 14 mmol/L
D. Less than 18 mmol/L
E. Less than 20 mmol/L

185. What should NOT be included in the clinical diagnose of DM in children?
A. Severity
B. Type
C. Level of glycemic control
D. *Symptoms
E. Complications

186. What should be included in the clinical diagnose of DM in children?
A. Stage of disease
B. Etiologic factor
C. *Severity
D. Symptoms
E. Insulin dose

187. To estimate severity of the DM doctor should be informed about:
A. Presence of comas on anamnesis
B. Presence of acute complications
C. Current patient's treatment
D. Presence of chronic complications
E. *All is correct

188. To estimate the severity of the DM doctor doesn't need to be informed about:
A. Presence of chronic complications
B. Presence of acute complications
C. *Age of patient
D. Presence of ketoacidosis and comas in anamnesis
E. Current patient's treatment

189. What maximal fasting glycemia in diabetic patient is appropriate for the ideal glycemic control?
A. 2,2 – 5,5 mmol/L
B. *3,6 – 6,1 mmol/L
C. 4,0 - 7,0 mmol/L
D. 8,0 – 9,0 mmol/L
E. More than 9,0 mmol/L

190. What maximal fasting glycemia in diabetic patient is appropriate for the optimal glycemic control?
A. 2,2 – 5,5 mmol/L
B. 3,6 – 6,1 mmol/L
C. *4,0 - 7,0 mmol/L
D. 8,0 – 9,0 mmol/L
E. More than 9,0 mmol/L

191. What maximal fasting glycemia in diabetic patient is appropriate for the suboptimal glycemic control?
A. 2,2 – 5,5 mmol/L
B. 3,6 – 6,1 mmol/L
C. 4,0 - 7,0 mmol/L
D. *8,0 – 9,0 mmol/L
E. More than 9,0 mmol/L

192. What fasting glycemia in diabetic patient is appropriate for the high risk for the life glycemic control?

A. 2,2 – 5,5 mmol/L
B. 3,6 – 6,1 mmol/L
C. 4,0 - 7,0 mmol/L
D. 8,0 – 9,0 mmol/L
E. *More than 9,0 mmol/L

193. What maximal after food glycemia in diabetic patient is appropriate for the ideal glycemic control?
A. 3,6 – 6,1 mmol/L
B. *4,4 – 7,0 mmol/L
C. 5,0 - 11,0 mmol/L
D. 11,0 – 14,0 mmol/L
E. More than 14,0 mmol/L

194. What maximal after food glycemia in diabetic patient is appropriate for the optimal glycemic control?
A. 3,6 – 6,1 mmol/L
B. 4,4 – 7,0 mmol/L
C. *5,0 - 11,0 mmol/L
D. 11,0 – 14,0 mmol/L
E. More than 14,0 mmol/L

195. What maximal after food glycemia in diabetic patient is appropriate for the suboptimal glycemic ontrol?
A. 3,6 – 6,1 mmol/L
B. 4,4 – 7,0 mmol/L
C. 5,0 - 11,0 mmol/L
D. *11,0 – 14,0 mmol/L
E. More than 14,0 mmol/L

196. What after food glycemia in diabetic patient is appropriate for the high risk for the life glycemic ontrol?
A. 3,6 – 6,1 mmol/L
B. 4,4 – 7,0 mmol/L
C. 5,0 - 11,0 mmol/L
D. 11,0 – 14,0 mmol/L
E. *More than 14,0 mmol/L

197. What maximal glycated hemoglobin (Hb Alc) level is appropriate for the ideal glycemic control in diabetic patient?
A. Less then 4, 0 %
B. Less than 5,0 %
C. *Less than 6,0 %
D. Less than 7,6 %
E. Less than 9,0 %

198. What maximal glycated hemoglobin (Hb Alc) level is appropriate for the optimal glycemic control in diabetic patient?
A. Less then 4, 0 %
B. Less than 5,0 %
C. Less than 6,0 %
D. *Less than 7,6 %
E. Less than 9,0 %

199. What maximal glycated hemoglobin (Hb Alc) level is appropriate for the suboptimal glycemic control in diabetic patient?
A. Less then 4, 0 %
B. Less than 5,0 %
C. Less than 6,0 %
D. Less than 7,6 %
E. *Less than 9,0 %

200. What symptom is NOT typical for the Nobekur's syndrome?
A. Growth retardation
B. *Obesity
C. Diabetic hepatosis
D. Sexual development retardation
E. All symptoms are typical for this syndrome

201. Which lymph nodes enlargement is usually NOT caused by hematological disease?
A. Anterior cervical
B. Posterior cervical
C. * Preauricular
D. Submandibular
E. Supraclavicular

202. What concomintant problem is NOT typical for children with Down's syndrome ?
A. Hodgkin's disease
B. Non-Hodgkin's lymphoma
C. Myeloid leukemia
D. Neuroblastoma
E. * Ependymoma

203. In plan of examination of patient with non-Hodgkin's lymphoma should be included all EXCEPT:
A. * Bronchoscopy
B. Bone biopsy
C. MRI
D. CT-scan
E. CBC

204. For acute lymphocytic leukemia is NOT typical:
A. Skin haemorrhages
B. Fever
C. Marked elevation in WBCs
D. * Pain in epigastric region
E. Long bones pain

205. Choose the wrong statement about acute myelocytic leukemia:
A. Bone marrow examination is essential diagnosis
B. More common in adult
C. It is worse prognosis than chronic myeloid leukemia
D. Persons with Down's syndrome have higher risk of AML development
E. *All is correct

206. Philadelphia chromosome is observed in more than 70 % patiens with:
A. * Chronic myeloid leukemia
B. Acute lymphoid leukemia
C. Hodgkin's lymphoma
D. Acute myeloid leukaemia
E. Chronic lymphoid leukaemia

207. Philadelphia chromosome is usually NOT observed in patients with:
A. Chronic myeloid leukemia
B. Acute lymphoid leukemia
C. * Hodgkin's lymphoma
D. Acute myeloid leukaemia
E. Chronic lymphoid leukaemia

208. The treatment of leukaemia should be started with:
A. Maintenance of remission
B. Consolidation of remission
C. * Induction of remission

D. Subclinical CNS leukemia prophylaxis
E. Prophylaxis of relapse

209. On the second year of leukaemia treatment should be started stage of:
A. Maintenance of remission
B. Subclinical CNS leukemia prophylaxis
C. Induction of remission
D. * Consolidation of remission
E. Prophylaxis of relapse

210. On the third year of leukaemia treatment should be started stage of:
A. * Maintenance of remission
B. Consolidation of remission
C. Induction of remission
D. Subclinical CNS leukemia prophylaxis
E. Prophylaxis of relapse

211. Choose normal count of reticulocytes in peripheral blood in adults:
A. * Not more than 1 %
B. Not more than 5 %
C. Not more than 25 %
D. Not more than 35 %
E. Not more than 50 %

212. We diagnose increased level of lymphoblasts in bone marrow if their content is:
A. more than 2 %
B. more than 3 %
C. * more than 5 %
D. more than 20 %
E. more than 50 %

213. Diagnostic criterion of leukemia in bone marrow is:
A. Any number of lymphoblasts (they should be absent in healthy)
B. More than 5 % of lymphoblasts
C. More than 10 % of lymphoblasts
D. * More than 25 % of lymphoblasts
E. More than 50 % of lymphoblasts

214. Choose the examination which can finally prove leukemia:
A. Lymph node biopsy
B. CT-scan
C. Complete blood count
D. * Bone marrow puncture
E. Lumbar puncture

215. All the following are poor prognostic signs in leukemia EXCEPT of:
A. High WBC count
B. Presence of chromosomes translocations
C. Blasts with T-cell phenotype.
D. Age less than 1 year old
E. * All of above means poor prognosis

216. All the following are good prognostic signs in leukemia EXCEPT of:
A. Low WBC count
B. Absence of L3 cells
C. Platelet count greater 100 G/L
D. * Presence of chromosomes translocations
E. All of above means good prognosis

217. What pathology is usually characterized by atrophyc glossitis:
A. Hodgkin’s lymphoma
B. Chronic leukemia leukemia
C. * B12-deficiency anemia

D. Iron-deficiency anemia
E. Allergic vasculitis

218. What index does demonstrate the effectiveness of the iron-deficiency anaemia treatment?
A. The serum iron level
B. * The serum ferritin level
C. The hemoglobin level
D. The total iron-binding capacity
E. Hemoglobin electrophoresis

219. The haemoglobin level 160 g/L is typical for:
A. * Neonates
B. Three months old infants
C. Teenagers
D. Young adult male
E. Pregnant woman

220. What is NOT typical for aplastic anemia?
A. Can be caused by drugs
B. There is decreased platelet counts
C. * Bone marrow may show increased number of megakaryocytes
D. Bone marrow may show decreased red cell formation
E. Can be elevation of serum iron

221. Small size of erythrocytes is NOT typical for:
A. Iron deficiency anemia
B. alfa thalassemia major
C. beta thalassemia minor
D. * G6PD deficiency
E. anemia of chronic disease

222. Decreased color index is NOT typical for:
A. Iron deficiency anemia
B. alfa thalassemia major
C. beta thalassemia minor
D. * G6PD deficiency
E. anemia of chronic disease

223. What is correct about the anemia of chronic disease:
A. Blasts are elevated in bone marrow
B. Serum iron level is decreased
C. Serum iron-binding capacity is elevated
D. * Marrow iron stores are increased
E. Iron therapy is required to raise hemoglobin level

224. One of etiological factors of hemolytic-uremic syndrome is:
A. Staphylococcus aureus
B. * E. coli
C. Streptococcus viridans
D. Candida
E. Proteus

225. What problem is NOT associated with an intracorpuscular defect of erythrocytes:
A. Hereditary sherocytosis
B. Sickle cell anemia
C. * Autoimmune hemolytic anemia
D. G6PD deficiency
E. Hereditary elliptocytosis

226. What is NOT typical for the Fanconi's anemia?
A. * Hematologic abnormalities in infancy
B. Pancytopenia

C. Skeletal abnormalities
D. Chromosome fragility
E. Renal abnormalities

227. We can diagnose anemia in children between 6 month to 5 years old in case if:
A. * Haemoglobin below 11 g/L
B. Haemoglobin below 12 g/L
C. Haemoglobin below 13 g/L
D. Haemoglobin below 14 g/L
E. Haemoglobin below 15 g/L

228. We can diagnose anemia in children older 5 years old in case if:
A. * Haemoglobin below 12 g/L
B. Haemoglobin below 13 g/L
C. Haemoglobin below 14 g/L
D. Haemoglobin below 15 g/L
E. Haemoglobin below 16 g/L

229. What disease is NOT characterized by hypochromia and microcytosis?
A. Pyridoxine responsive anemia
B. * Sickle cell disease
C. Dyserythropoietic anemia
D. Lead poisoning
E. Beta thalassemia major

230. What disease is characterized by hypochromia and microcytosis?
A. Iron deficiency
B. Beta thalassemia major
C. Pyridoxine responsive anemia
D. Lead poisoning
E. * All is correct

231. What disease is characterized by normochromic, normocytic anemia:
A. Iron deficiency
B. Beta thalassemia major
C. Hemolytic disesase of newborns
D. Lead poisoning
E. * Fanconi's anemia

232. What is the best method to prove thalassemia diagnosis?
A. Serum iron and iron binding capacity
B. Liver biopsy
C. * Hemoglobin electrophoresis
D. Coomb's test
E. Coagulogram

233. Presence of the increased RBCs production before treatment is typical for:
A. B12 deficient anemia
B. * Hereditary Spherocytosis
C. Aplastic anemia
D. Anemia of chronic disease
E. Megaloblastic anemia

234. Sickle cell anemia is not characterized by:
A. Reticulocytosis
B. Jaundice
C. * Hypochromia of erythrocytes
D. Splenic sequestration
E. Acute chest syndrome

235. What hemoglobin type do we need to find in blood diagnose beta thalassemia trait?
A. Hb-S
B. Hb-C

C. * Hb-A2
D. Hb-A
E. Hb-C2

236. What is NOT typical for thalassemia major?
A. Jaundice
B. Target cells on peripheral smear
C. Microcytic hypochromic anemia
D. * Hemorrhagic syndrome
E. Growth failure

237. Choose the important link of hemostasis:
A. Vascular integrity
B. Qualitative and quantative characteristics of platelets
C. Presence of coagulation factors in blood
D. All is incorrect
E. * All is correct

238. What is Schonlein-Henoch purpura?
A. Hemolytic-uremic syndrome
B. Von Willebrand disease
C. * Anaphylactoid purpura
D. Fanconi pancytopenia
E. Allergic dermatitis

239. What is NOT another name of hemorrhagic vasculitis?
A. * Hemolytic-uremic syndrome
B. Schonlein-Henoch purpura
C. Allergic angiitis
D. Anaphylactoid purpura
E. Henoch-Schonlein disease

240. The prolonged bleeding time is NOT typical for the:
A. * Hemophilia B
B. von Willebrand's disease
C. Aspirin-induced thrombocytopathia
D. Bernard-Soulier syndrome
E. ITP

241. What of the following is NOT typical for DIC?
A. Thrombocytopenia
B. Microangiopathic blood smear
C. Hypofibrinogenemia
D. Hemorrhagic syndrome
E. * All of above typical for this disease

242. In case of acute onset of thrombocytopenia in children we have to think first of all about:
A. von Willebrand disease
B. Acute leukemia
C. * Idiopathic (immune) thrombocytopenic purpura
D. Aplastic anemia
E. Thrombotic thrombocytopenic purpura

243. Find the INCORRECT statement concerning ITP in children:
A. 60 to 80 % of children who present with acute ITP will have spontaneous resolution of their ITP ithin 6 mo
B. Less than 1 % will develop intracranial hemorrhage
C. About 10 to 20 % of children who present with acute ITP go on to develop chronic ITP
D. The presence of abnormal finding such as hepatosplenomegaly or remarkable lymphadenopathy uggests another diagnosis

E. * Level of platelets in the blood can be normal

244. Find the INCORRECT statement concerning ITP in children:
A. 60 to 80 % of children who present with acute ITP will have spontaneous resolution of their ITP ithin 6 mo
B. Intracranial hemorrhage is very rare complication of acute ITP
C. About 60 to 80 % of children who present with acute ITP go on to develop chronic ITP
D. All statements are wrong
E. * All statements are correct

245. The criterion of trombocytopenia in blood according to the level of platelets is:
A. Less than 250,000/mm3
B. Less than 180,000/mm3
C. * Less than 150,000/mm3
D. Less than 100,000/mm3
E. Less than 50,000/mm3

246. What is typical for the acute ITP?
A. Anemia and thrombocytopenia
B. * Isolated thrombocytopenia
C. Thrombocytopenia and leukocytosis
D. Positive Coomb's test
E. Presence of blasts in peripheral blood

247. What is typical for acute ITP in bone marrow:
A. * Normal granulocytic and erythrocytic series with increased number of megakaryocytes
B. Decreased granulocytic, erythrocytic and megakaryocytic series
C. Increased granulocytic, erythrocytic and megakaryocytic series
D. Decreased granulocytic and erythrocytic series with increased number of megakaryocytes
E. Increased granulocytic and erythrocytic series with decreased number of megakaryocytes

248. What will be abnormal in plasma if patient has decreased VII plasma coagulation factor?
A. Platelets count
B. Prothrombin time
C. * Clotting time
D. Amount of fibrinogen
E. Bleeding time

249. What will be abnormal in plasma if patient has decreased IX plasma coagulation factor ?
A. * Partial thromboplastin time
B. Thrombin time
C. Clotting time
D. Amount of fibrinogen
E. Bleeding time

250. What kind of rush is typical for ITP?
A. Polymorphous
B. Polychromatic
C. Asymmetric
D. Petechiae and purpura
E. * All is correct

251. What kind of rush is NOT typical for ITP?
A. Polymorphous
B. Polychromatic
C. * Symmetric

D. Petechial
E. Purpuric

252. What statement is NOT correct about treatment of ITP in children?
A. It doesn't require treatment
B. * Children who have platelet counts > 30,000/mm3 and are asymptomatic or have only minor purpura do not require routine treatment
C. Children who have platelet counts < 10,000/mm3 and are asymptomatic or have only minor purpura do not require routine treatment
D. Treatment doesn't depend on the platelets level and is performed only in bleedings
E. Clotting time is increased in 30 % of patients

253. Choose the best combination of medicnes for ITP treatment:
A. * Intravenous immune globulin (IVIG) and prednisone
B. Antibiotics and non-steroid anti-inflammatory
C. Slow acting antirheumatoid drugs (SAARDS) and cytostatics
D. Antibiotics and cytostatics
E. Non-steroid anti-inflammatory drugs and antibiotics

254. What is usual dose of prednisolon for children?
A. 0,5-1 mg/ kg/day
B. * 1-2 mg/ kg/day
C. 5-10 mg/ kg/day
D. 10-15 mg/ kg/weekly
E. more than 20 mg/ kg/day

255. What is NOT part of recommendations for children with acute ITP?
A. Restriction of physical activities
B. Avoidance of aspirin
C. Avoidance of intramuscular injections
D. * Daily massages
E. Hypoallergic diet

256. When is recommended to perform splenectomy in the forth stage of ITP?
A. Newborns
B. Infants
C. 1-2 years
D. 3-4 years
E. * After 6 years

257. What platelets level in ITP is dangerous for development of intracranial hemorrhages?
A. More 50,000/mm3
B. Below 50,000/mm3
C. More 20,000/mm3
D. * Below 20,000/mm3
E. Below 100,000/mm3

258. Typical triade of Wiskott-Aldrich syndrome is:
A. Thrombocytopenia, mental retardation and immunodeficiency
B. Thrombocytosis, mental retardation and immunodeficiency
C. * Thrombocytopenia, eczema and immunodeficiency
D. Thrombocytosis, eczema and immunodeficiency
E. Thrombocytopenia, eczema and seizures

259. Thrombocytopathia and thrombocytopenia are typical for:
A. Hemorrhagic vasculitis
B. Hemophilia
C. Idiopathic thrombocytopenic purpera
D. Aplastic anemia
E. * Bernard Soulier syndrome