



**5) Thrombopoietin has the same action of**

- A) Erythropoietin**
- B) interleukin 11**
- C) Filgrastim**

**6) Streptokinase has the following mechanism of action**

- A) inhibiting clotting factors**
- B) activate plasminogen**
- C) inhibit platelet receptors**

**7) when we use oral anticoagulant drugs, we wait 2-3 days for its action to start, the cause is**

- A) It has very low efficacy**
- B) it is not well absorbed**
- C) to deplete the stores of active coagulation factors**

**8) Heparin and LWMH has which of the following in common**

- A) both need monitoring by Protamine**
- B) both need monitoring by PTT**
- C) both work on coagulation factors (X , IX, II)**
- D) both are excreted by renal**
- E) can be given orally**

**9) Heparin and warfarin has which of the following in common**

- A) both need separation by 2-3 days**
- B) both need separation by 2-3 weeks**
- C) both are given in combination**
- D) both are given immediately, heparin is discontinued while warfarin is continued**

**E) none of the above**

**10) Folic acid analog, used in cancerous and non-cancerous problems therapies**

**A) Methotrexate**

**B) busulfan**

**C) pentamidine**

**D) Rituximab**

**11) Which of the following inhibits factor Xa, Given orally at fixed doses and do not require monitoring. Used to prevent stroke in atrial fibrillation**

**A) Argatroban**

**B) Hirudine**

**C) foundaparinox**

**D) Riveroxaban**

**12) what is the mechanism of the action for Argotroban**

**A) Binds to ADP receptors on platelet**

**B) Binds to PAR1 receptors**

**C) binds to thrombin active site**

**13) Wrong statement about Chloroquine**

**A) First drug of choice for all malarial types in blood**

**B) Resistance is increasing cause mutation in P170**

**C) It causes Unmasking of LE, psoriasis and porphyria. Corneal deposits, blindness, blurring of vision**

**D) Drug of choice for all malarial tissue types**

**14) Drug treat non-hodgkin lymphoma & it's CD20 positive ?**

- A) Huridine**
- B) Imatinib**
- C) Rivoxiban**
- D) Ifliximab**
- E) Rituximab**

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| A | ⊗ | E | C | B | B | C | D | D | A  | D  | C  | D  | E  |

**Q1 :-** not sure about the answer

**Q2 :-** DELETED question

**Q3:-** SORBITOL wasn't mentioned that it is IV IRON, so the question DELETED

**Q9 :-** deleted by DIFFICULTY INDEX

### **MICRO (Dr Nader)**

**1)The highest rate of relapsing in plasmodium species**

- A) P. ovale**
- B) P. vivax**
- C) P. falciparumm**
- D) P. knowlesi**

**2) The infective stage of Leishmania**

- A) metacyclic trypomastigotes**
- B) Amastegotes**
- C) promastegotes**
- D) trypomastegotes**

**3) The most accurate statement about Parvovirus**

- A) causes severe anemia by attacking precursor erythrocytes**

**B) can be detected in laboratory by cold agglutinin test**

**C) double stranded DNA with envelope**

**4) B19 causes all of the following EXCEPT**

**A) Erythema infectiosum**

**B) Infectious mononucleosis**

**C) Hydrops fetalis**

**D) pure red cell aplasia**

**E) Transient aplastic crises**

**5) Wrong statement about malignant tertian fever**

**A) shows 2 chromatin dots with crescent gametocytes**

**B) Affects RBCs of all ages and shows all sizes**

**C) irregular fever with usually episodes every (36-48)hours**

**D) shows Schuffner's dots**

**6) Babesia Microti is transmitted by which of the following vectors**

**A) Ixodes scapularis**

**B) Ixodes pacificus**

**C) Ixodes dentatus**

**D) Tsetse fly**

**7) The most accurate statement about trypanosome Cruzi**

**A) humans are the main reservoir**

**B) vector is redivud (nose cone)**

**C) its main effect happens by attacking skeletal muscles**

**D) can be detected in muscle biopsy**

**8) The most accurate statement about EBV**

- A) EBV infectious mononucleosis cytoplasmic wrapping around blood cells caused by EBV infected T helper cells**
- B) it affects CD4 T cells**
- C) Agglutinate with sheep cells**

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| B | C | A | B | D | A | B | C |

**PHYSIO (Dr Saleem 3 lectures)**

**1) wrong about lymph**

- A) contain plasma proteins**
- B) doesn't contain cells**
- C) lymph flow by increases by muscle contractions**
- D) increases with muscular activity**

**2) Wrong about ABO blood groups**

- A) ABO antigens are present only on RBCs membrane**
- B) Blood transfusion deaths are mainly cause ABO incompatibility**
- C) O type are the most type to be at risk of death in blood transfusion**
- D) cross matching is done to test compatibility in minor antigens**

**3) Wrong about the osmolarity of the plasma**

- A) 0.9% of NaCl**
- B) Glucose 5% is an isotonic solution**
- C) Na<sup>+</sup> AND Cl<sup>-</sup> are the major contributors to the osmolarity of the plasma**
- D) this pressure opposes ultrafiltration of fluid in capillaries**

**4) about ADULT males and females fluid distribution**

- A) both has the same fluid and fat distribution**
- B) Males have more fluid and fat distribution**
- C) Females have more water and fat distribution**
- D) females have more fat and less water distribution**

**5) Rh<sup>+</sup> father and rh<sup>-</sup> mother, choose the right statement**

- A) the first Rh<sup>+</sup> child is at risk of agglutination**
- B) the second Rh<sup>+</sup> child is at risk of agglutination**
- C) mild hemolysis in fetus is corrected by giving him –rh from his mother**

**6) we regulate extra cellular fluid because?**

- A) to maintain blood pressure**
- B) to increase the release of ADH**
- C) to prevent cells from shrinkage and swelling**

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> |
| <b>B</b> | <b>A</b> | <b>D</b> | <b>D</b> | <b>B</b> | <b>C</b> |

Q3 :- Difficulty Index, many chose B

## **PATHO (Dr Ahamd Mansour)**

**1) long question but easy ,Cd19+ with CD5 - , what is the tumor**

- A) Hodgkin lymphoma**
- B) Hairy cell leukemia**
- C) plasma cell myeloma**

**2) Very easy description of iron deficiency anemia, what is your next step**

- A) Iron studies**
- B) hepcidin level**
- C) Electrophoresis**
- D) bone marrow biopsy**

**3) 10 years old child with petechial hemorrhage, what is the disease**

- A) Von-willebrand disease**
- B) Accidental Aspirin**
- C) Disseminated intravascular coagulation**
- D) Hemophilia**

**4) a 55 year old patient with high WBC count and most of them are lymphocytes, he has monoclonal cells and CD5+, after weeks he comes back with anemia, what is your next step**

- A) Bone marrow biopsy**
- B) Coombs test**
- C) he has Myelophthisic anemia**
- D) Osmotic Fragility test**
- E) hemoglobin Electrophoresis**

**5) Christmas disease is deficiency of ?**

- A) Factor II**
- B) Factor IX**

**C) Facot X**

**D) Factor VIII**

**6) Patient with Hemoglobin 19g/dl (very high) and she has Jak2 mutated gene and Low erythropoietin, on bone marrow biopsy we found that Blast count almost 40% of the cells, your diagnose ?**

**A) she has Bcl2 translocation**

**B) she has a rare complication of Myeloproliferative syndrome**

**C) Bone marrow would show fibrosis**

**D) Phlebotomy would alleviate the disease**

**7)neutrophil would have the same normal appearance in which of the following diseases**

**A) bacterial infection**

**B) Chediak-Higashi**

**C) Leukocyte adhesion molecules deficiency**

**D) leukemoid reaction**

**8) a 5 years old child presents with cervical lymph node enlargement, histology shows expansion of the paracortical areas with resulting atrophy of the follicles and The paracortical areas show the presence of immunoblasts with fine chromatin and prominent nucleoli, your diagnose?**

**A) bacterial infection**

**B) burkitt lymphoma**

**C) Vaccine**

**D) follicular lymphoma**

**E) Allergy reaction**

**9) reticulocyte count is used to differentiate between?**

- A) Microcytic and macrocytic**
- B) Hemolysis anemia and normocytic anemia**
- C) Anemia of hemorrhage and anemia of bone marrow failure**
- D) Iron deficiency anemia and thalassemia**

**10) chronic disease anemia caused by high**

- A) Heparidin**
- B) Iron**
- C) وين نازل**

**11) a 9 years old child with shortness of breath and muscle weakness, his father told you that he had infection last week, his mother told you that his brothers had the same symptoms and his sisters were normal, choose the right diagnose or statement**

- A) he has gall bladder stones**
- B) he has erythroid hyperplasia in bone marrow**
- C) low reticulocyte count**
- D) coombs test is required**

**12) a 22-year-old male with back pain and superior mesenteric artery thrombus, on the blood film, he has normal platelet count and function, also coagulation factors test shows normal function, what is your diagnose?**

- A) hemophilia A**
- B) Acute promyelocytic leukemia**
- C) Thrombocytopenia**
- D) Paroxysmal nocturnal hemoglobinuria**

**13) which of the following causes pancytopenia**

- A) Immune hemolytic anemia**
- B) Thalassemia**
- C) Iron deficiency anemia**
- D) Hereditary spherocytosis**
- E) B12 deficiency**

**14) 51 years old Female with breast cancer, she had radiotherapy and after weeks she comes with anemia and pancytopenia, her blood film show needle like structures inside the WBCs, choose the right statement**

- A) The leukemic cells are lymphoid in origin**
- B) she had good prognosis**
- C) Ring structure in RBCs is common characteristic in her case**
- D) she has increased risk of infection**
- E) Folate levels are low**

**15) what is the genetic translocation in promyelocytic leukemia**

- A) T(8:21) RUNX**
- B) T(15:17) PML-RARA**
- C) T(9:22)**

**16) easy description of HEREDITARY SPHEROCYTOSIS, choose the main characteristic of this disease**

- A) Auto splenectomy**
- B) X linked disease**
- C) low haptoglobin**

**17) Description of Hodgkin**

Reactive cells are more than monoclonal cells

18) 82 year old with pancytopenia, blasts are less than 1% , neutrophils are hyposegmented and megakaryocyte are small, choose the right statement

- A) patient must have chemotherapy      B) the disease causes bone lytic lesions  
C) T(12:21) is common here              D) increased risk of transformation to AML

19) True about Bence Jones proteins

- A) Heavy chains found in blood                      B) free light chains found in blood  
C) free light chains found in urine                  D) heavy chains found in urine

20) easy question about BURKIT and starry sky appearance

|   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| B | A | A | B | B | B | C | C | C | A  |

|                     |    |    |    |    |    |    |    |    |    |
|---------------------|----|----|----|----|----|----|----|----|----|
| 11                  | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| B <sub>(G6PD)</sub> | D  | E  | D  | B  | C  | ☹  | D  | C  | ☹  |

### PBL (Very easy)

1) A 7-year-old boy presents with swollen knee of few days duration. This is not the first time it happens. Both knees and ankles are affected but his right knee is affected most. Symptoms start by feeling of hotness in the joint followed by swelling, pain, reduced ability to move and hot skin. His

**mother reports he bled abnormally after circumcision. He has not had any surgical procedures done. His mother thinks that some of her family members had similar symptoms.**

The answer was HEMOPHILIA

other 2 easy straight forward questions 😊

### **LAB (HISTO+PATHO+PHYSIO)**

**1) A blood tube with 3.1 blood and total 6 , what is PCV**

**A) 51.7%**

**B) 57%**

**2) The same previous patient, what is your diagnose**

**A) hemoglobin (19g/dl), blood cells (8million/microL), ESR=30mm/hour**

**B) hemoglobin (19g/dl), blood cells (8million/microL), ESR=5mm/hour**

**C) Need more information to be diagnosed**

**3) Choose the wrong combination**

**A) Sahli test with PCV**

**B) Blue tip capillary tube with ESR**

**C) PCV with anemia types**

**4) BLEDDING TIME is prolonger in all of the following except**

**A) Thrombocytopenia**

**B) Vit K deficiency**

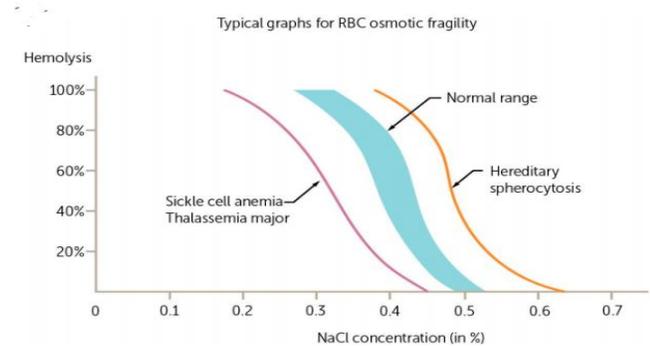
**C) Abnormal platelet function**

**D) use of Aspirin**

**E) A+D**

5) According to the figure, a patient with thalassemia would have which of the following in osmotic fragility test

- A) Shifted to the right with less fragility cells
- B) shifted to the left with more fragility cells
- C) shifted to the left with less fragility cells
- D) shifted to the right with more fragility cells



6) informations about 4 squars with their RBCs counting numbers in hemocytometer, and picture of the fifth squar , you have to count the RBCs and then what is the overall RBCs number

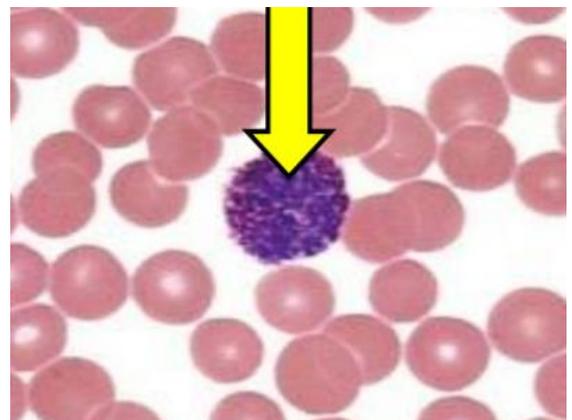
- A) no enough information
- B) easy counted number

7) given easy numbers, calculate the differential leukocyte count and absolute count

Choices include the same numbers with two different UNITS

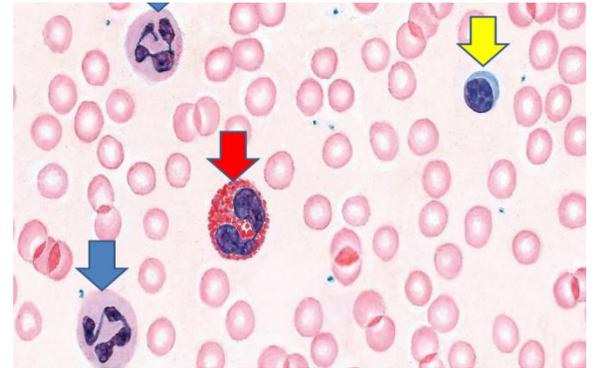
8) Identify

- A) basophil
- B) Eosinophil
- C) neutrophil
- D) macrophage



9) which type of cells is not presented in the picture

- A) neutrophil
- B) eosinophil
- C) Monocyte
- D) Lymphocyte

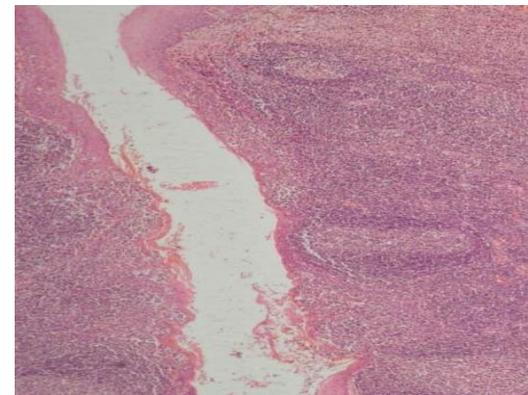


10) True about monocytes

- A) multinucleated cell
- B) frosted glass appearance
- C) Nucleus is masked by granules

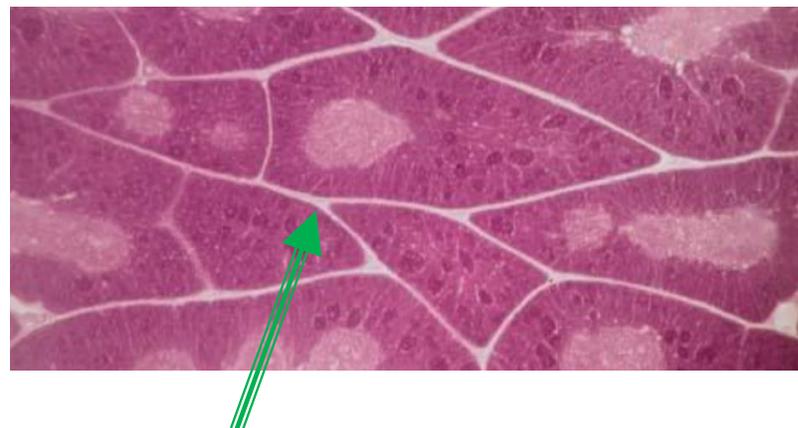
11) Wrong about this picture

- A) represents palatine tonsil
- B) covered by stratified squamous non keratinized epithelium
- C) taken from nasopharynx



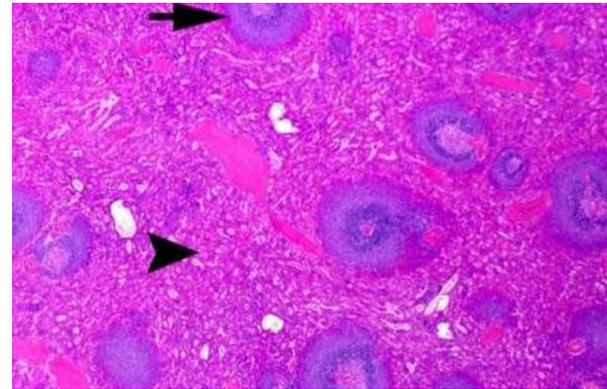
12) the arrows represents

- A) Outer cortex of lymphnode
- B) Paracortex
- C) outer cortex of thymic lobule



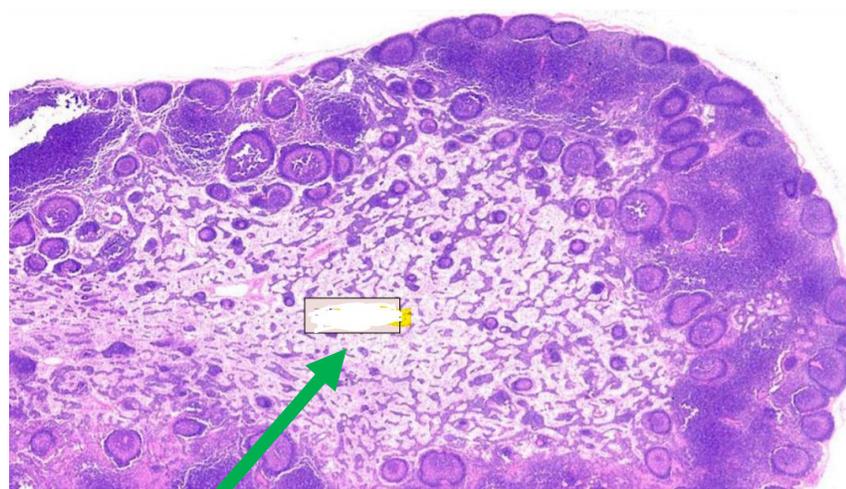
13) Which of the following isn't seen in this section

- A) thymis dependent zone
- B) central arteriole
- C) high endothelial venules



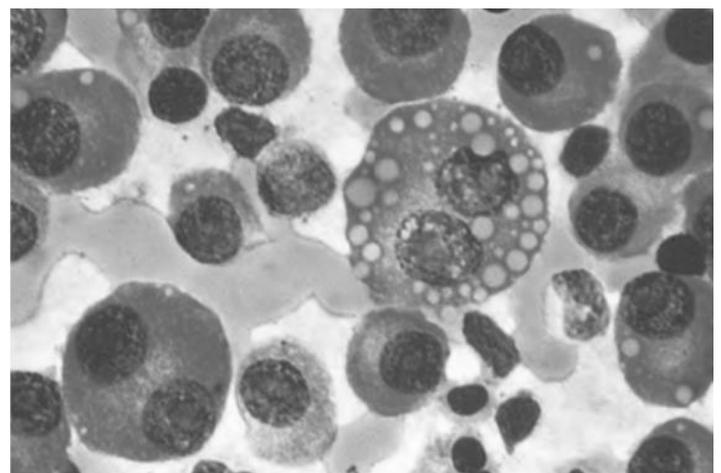
14) In this section, the arrow contains?

- A) Plasma cells
- B) follicles
- C) sinuses
- D) B lymphocytes
- E) A+C



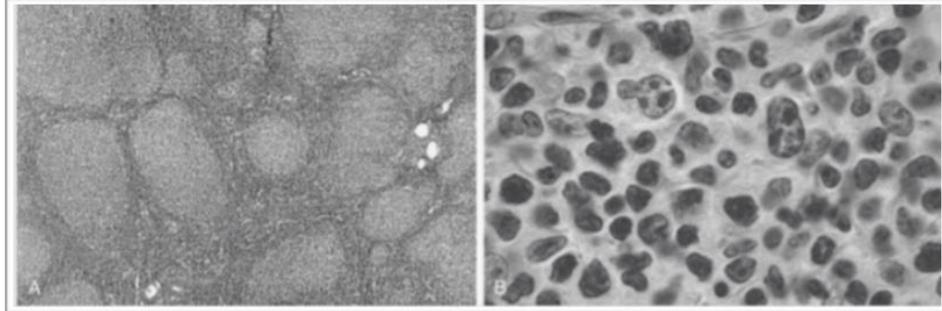
15) The following section represents?

- A) Hodgkin lymphoma
- B) Follicular lymphoma
- C) Hairy cell leukemia
- D) Plasma cell myeloma



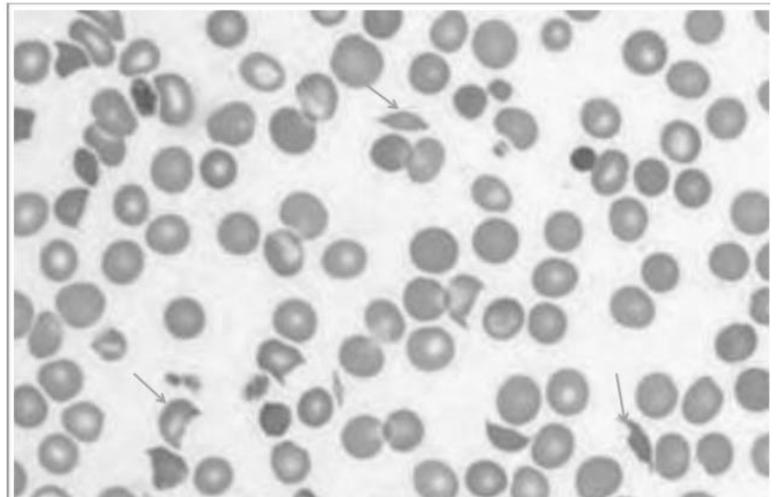
16) These two sections represents?

- A) ALL
- B) Follicular hyperplasia
- C) Follicular lymphoma
- D) Hodgkin lymphoma



17) This section represents ?

- A) Iron deficiency anemia
- B) Megaloblastic anemia
- C) Schistocytes
- D) Spherocytosis



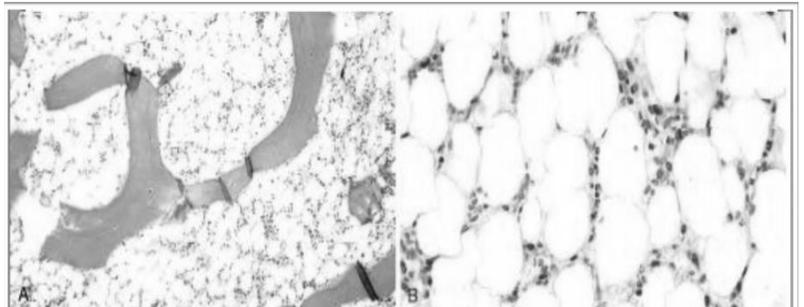
18) this test is used for?

- A) Hereditary spherocytosis
- B) Iron deficiency anemia
- C) Leukemias



19) the second picture represents

- A) Myelophthistic anemia
- B) Anemia in liver disease
- C) Aplastic anemia
- D) Anemia of renal disease



|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| A | B | B | B | C | ☹ | ☹ | A | C | B  | C  | C  | C  | E  | D  | C  | C  | A  | C  |

**Q6** :- Lab DOCTOR said it's wrong and should be deleted but for unknown reasons they considered A because no information about the dilution factor

1 missed questions ☹

No matter how hard you try, the best result you could achieve  
is still believing you can reach your goals