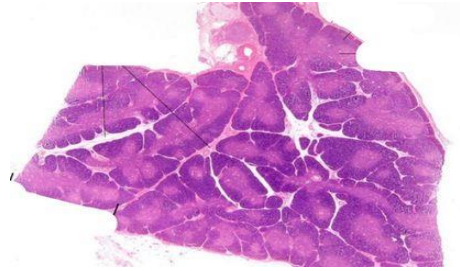


## Practical Part.

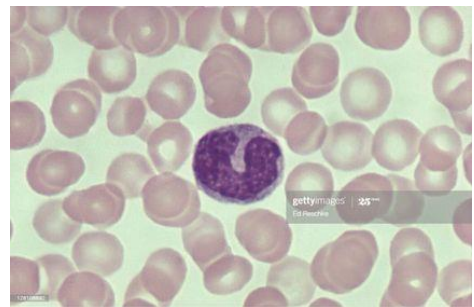
1- This section is most probably taken from.

- a. Tonsil
- b. Thymus
- c. Spleen
- d. Ileum
- e. Lymph node



2-Which of the following statements applies to the WBC presented in the picture?

- a. It increases markedly in allergic conditions
- b. It represents 40-80 % of all WBCS
- c. It is one of the granulocytes
- d. It increases markedly in chronic inflammatory conditions
- e. It represents 1-2 % of all WBCS



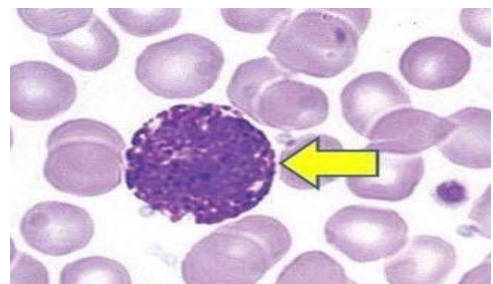
3-This section is most probably taken from.

- a. Ileum
- b. Lymph node
- c. Thymus
- d. Spleen
- e. Palatine tonsil



4-The labeled cell is characterized under the light microscope by a/an.

- a. Crystalloid granules
- b. Frosted-glass cytoplasm
- c. Acidophilia
- d. Hyalomere
- e. Nucleus masked by granules

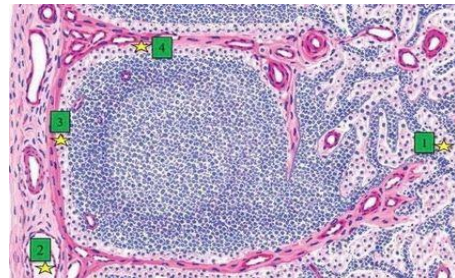


5-Regarding the osmotic fragility test what is the CORRECT order for the steps of the test.

1. Transfer supernatant fluid from each tube into spectrophotometer cuvettes
  2. Prepare NaCl solutions of different concentrations
  3. Centrifuge the tubes for 10 minutes at maximum speed
  4. Add one drop of blood to each tube
  5. Add 10 ml of each NaCl solution to a different tube
- a. 2, 5, 4, 3, 1
  - b. 1, 2, 3, 4, 5
  - c. 5, 4, 3, 2, 1
  - d. 2, 5, 4, 1, 3
  - e. 5, 2, 4, 3, 1

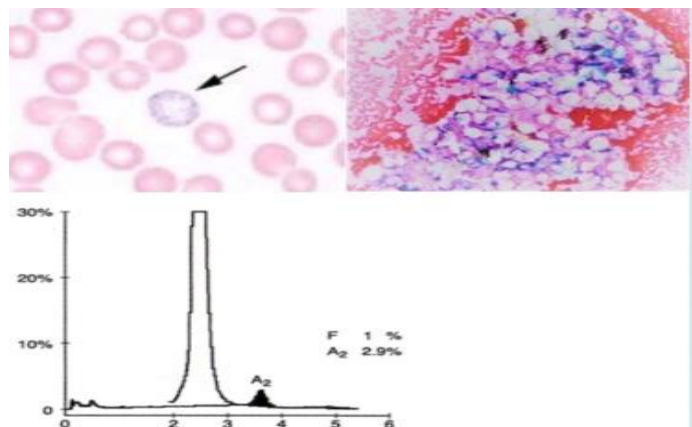
6-Arrange the flow of afferent lymph in the CORRECT order.

- a. None of the mentioned is a correct order
- b. 2, 3, 4, 1
- c. 1, 4, 3, 2
- d. 1, 2, 3, 4
- e. 1, 3, 4, 2



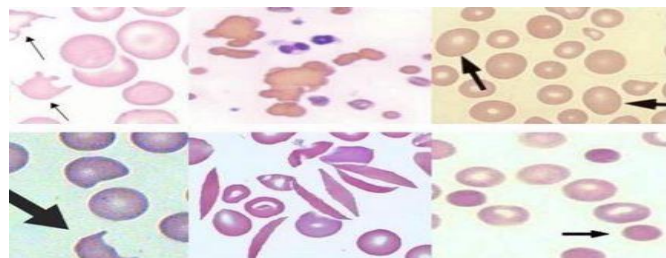
7-During pre-marital test, a man was found to have a mean cell volume of 75 (normal 80-100 f/L). The man is healthy and his medical history is negative for diseases. Physical examination was unremarkable. The image shows his blood film, Perl's stain on bone marrow particle and hemoglobin electrophoresis study. The best diagnosis is.

- a. Beta thalassemia carrier
- b. Anemia of chronic disease
- c. Sickle cell trait
- d. Iron deficiency anemia
- e. Alpha thalassemia carrier



8-Which of the following answers does NOT have a blood film image?

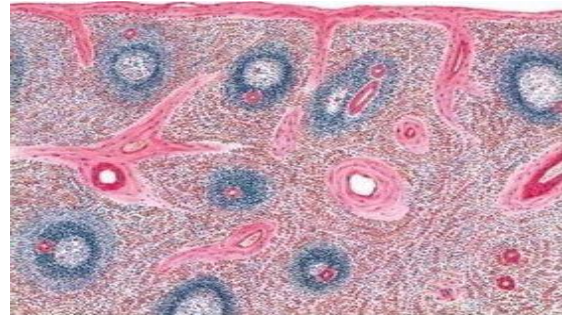
- a. Rouleaux formation
- b. Acanthocyte
- c. Macrocyte
- d. Schistocyte



- e. Sickle cell

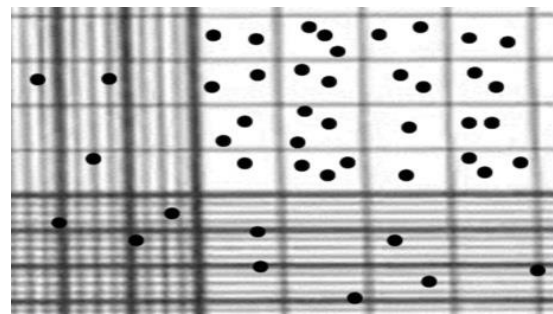
9-This section is most probably taken from.

- a. Thymus
- b. Lymph node
- c. Pharyngeal tonsil
- d. Bone marrow
- e. Spleen



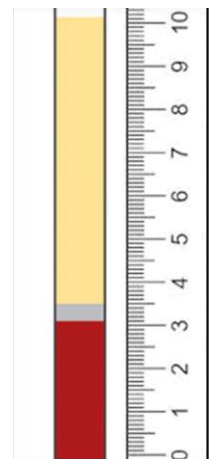
10-You performed a white blood cell count using a hemocytometer. The count you obtained in three squares was 30, 34, 29. If you know that the sample was prepared by adding one unit of blood to 49 units of solution. Count the number of white blood cells in the fourth square shown in the picture (upper right) and calculate the WBC count.

- a. 15,750 cells/mm<sup>3</sup>
- b. 6,900 cells/mm<sup>3</sup>
- c. 6,300 cells/mm<sup>3</sup>
- d. 16,500 cells/mm<sup>3</sup>
- e. 17,250 cells/mm<sup>3</sup>



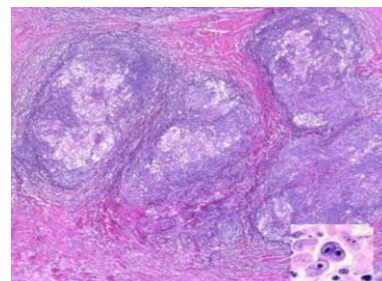
11-A blood sample was taken from an adult male patient to perform some tests. From the provided picture calculate the Packed cell volume (PCV) for this patient.

- a. 35%
- b. None of the mentioned
- c. 30%
- d. 35 g/ 100 ml
- e. 30 g/ 100 ml



12-The following image represents.

- a. Nodular sclerosis Hodgkin lymphoma
- b. Mixed cellularity Hodgkin lymphoma
- c. Follicular lymphoma
- d. Nodular lymphocyte



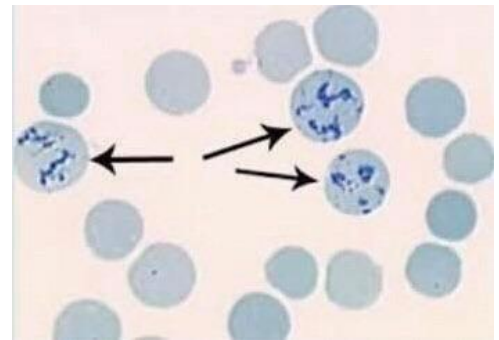
13-Regarding the RBCS & WBCS count using a hemocytometer, all of the following are differences between RBCS and WBCS count EXCEPT:

- a. Dilution factor
- b. Volume of fluid in the counting areas
- c. The counting method

- d. Number of the counting areas
- e. Magnification (Lens power) used in counting

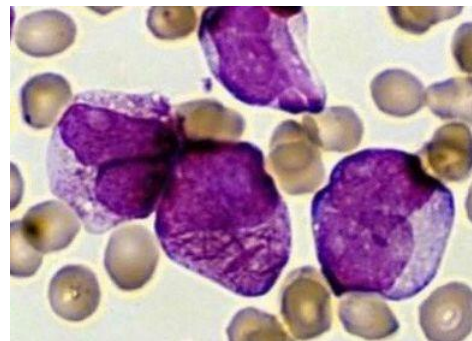
14-Which of the following statements applies to the labeled cells?

- a. Their number increases in cases of hemolysis
- b. Their number increases in cases of bone marrow failure
- c. They play a major role in fighting parasitic infections
- d. The first cell to arrive at the site of inflammation.
- e. They play a major role in stopping bleeding



15-The following cells are positive for:

- a. t(15;17) and CD34
- b. CD19 and TDT
- c. t(15;17) and myeloperoxidase
- d. CD30 and CD15
- e. t(9;22) and bcr-abl



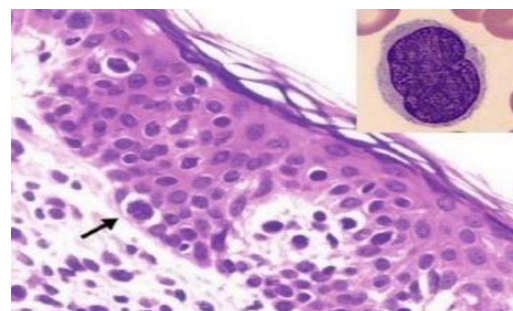
16-You have a patient who needs blood transfusion, you performed a test to identify his blood type the results are shown in the picture. What is this patient's blood type?

- a. B+ve
- b. AB+ve
- c. A+ve
- d. A-ve
- e. B-ve



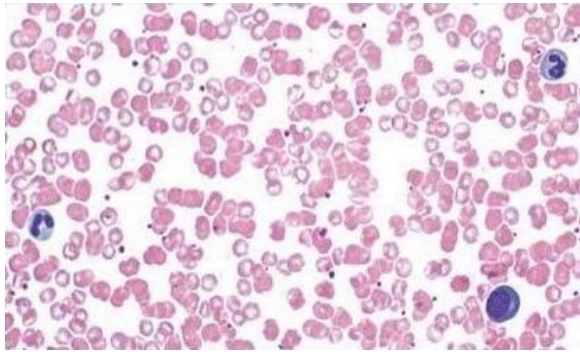
17-Which of the following is characteristic of this disease?

- a. Proliferation centers
- b. Positive for CD4
- c. Hyperdiploidy
- d. Presence of hairy projections
- e. History of previous chemotherapy



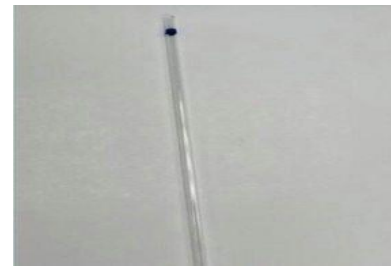
18-All the followings can be found in this section EXCEPT:

- a. Neutrophil
- b. Lymphocyte
- c. Thrombocyte
- d. Erythrocyte
- e. Monocyte



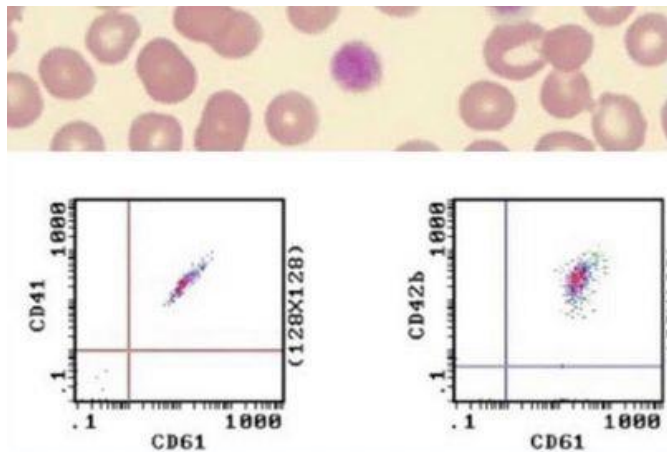
19-The tube is used in our laboratory to obtain which of the following values.

- a. Bleeding time
- b. Hemoglobin Concentration
- c. Erythrocyte Sedimentation Rate (ESR)
- d. Clotting time
- e. Osmotic fragility



20- A 7year old boy developed mild recurrent ecchymosis in legs and arms and gum bleeding when he brushes his teeth . The following images represent his blood film and flow cytometry which of the following findings is expected :

- a. Isolated thrombocytopenia
- b. Positive JAK2 mutation test
- c. Non-corrected mixing test 1999
- d. Antibody against factor 4
- e. Correct mixing test



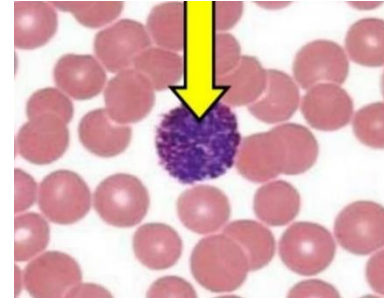
Answers:

1	B	6	B	11	C	16	B
2	D	7	E	12	A	17	B
3	E	8	A	13	C	18	E
4	E	9	E	14	A	19	D
5	A	10	A	15	C	20	A

# Histology Lab

## 1-Identify

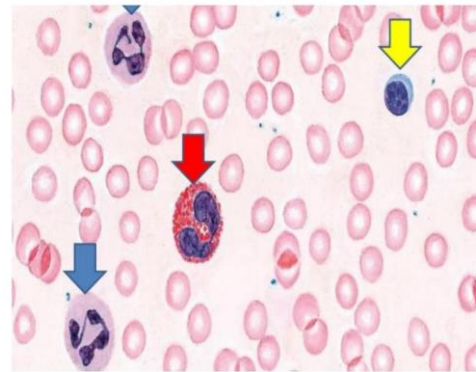
- a. basophil
- b. eosinophil
- c. neutrophil
- d. macrophage



answer: a

## 2-Which type of cells is not presented in the picture

- a. neutrophil
- b. eosinophil
- c. monocyte
- d. lymphocyte



answer: c

## 3-True about monocytes

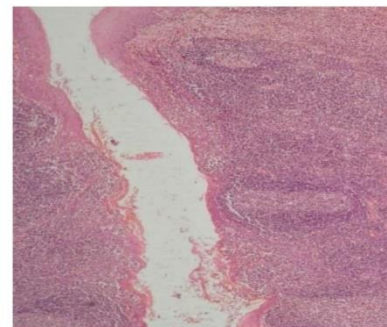
- a. multinucleated cell
- b. frosted glass appearance
- c. nucleus is masked by granules

answer: b

## 4-Wrong about this picture

- a. represents palatine tonsil
- b. covered by stratified squamous non keratinized epithelium
- c. taken from nasopharynx

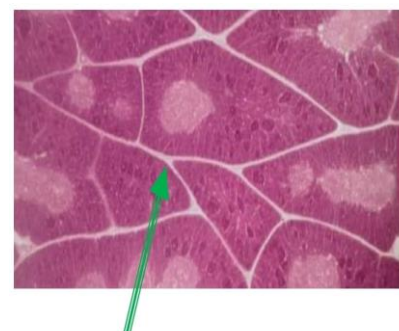
answer: c



## 5-The arrows represents

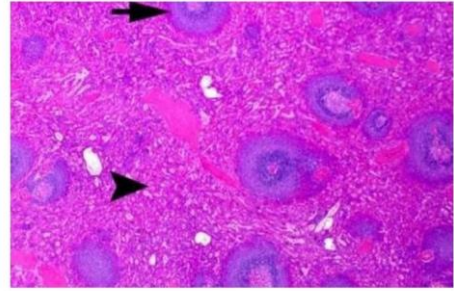
- a. Outer cortex of lymphnode
- b. Paracortex
- c. outer cortex of thymic lobule

answer: c



**6-Which of the following isn't seen in this section**

- a. thymus dependent zone
- b. central arteriole
- c. high endothelial venules



**answer: c**

**7-Cross section**

- it's the ileum which contain the most prominent Peyer's patches

**8-Wrong about thymus section**

- it contains afferent lymph vessels

**9-Blood film**

- said that an arrow is a reticulocyte which is wrong

**10-About the tube we use in blood smear**

- EDTTA

**11-A picture shows reticulocyte and asking about correct statement ?**

- a. increase in hemolysis
- b. seen in parasitic infection

**answer: a**

**12-Wrong about monocyte:**

- a. pink
- b. it has azurophlic granules
- c. neutrophil most abundant in plasma

**answer: a**

**13-A picture of postcapillary venule of a lymph node, which is true:**

- a. present in the medulla of lymphnode
- b. used by the lymphocytes to get from lymph to blood
- c. both are correct
- d. neither of which

**answer: d**

14-A picture of 2ry follicle, which is true:

- a. it contains plasma cells and memory cells
- b. it's present in the cortex of lymph node
- c. both correct
- d. neither is true

answer: c

15- Picture of thymus pointing at cortex and medulla

- a. tolerance in cortex
- b. mature T cells in medulla
- c. A+B

answer: c

16-Picture of medulla of lymph node

- a. this region contains follicles
- b. this region contains medullary cords

answer: b

17-Which of the following cells can give rise to an APC ?

- a. myeloblast
- b. basophil
- c. monocyte

answer: c

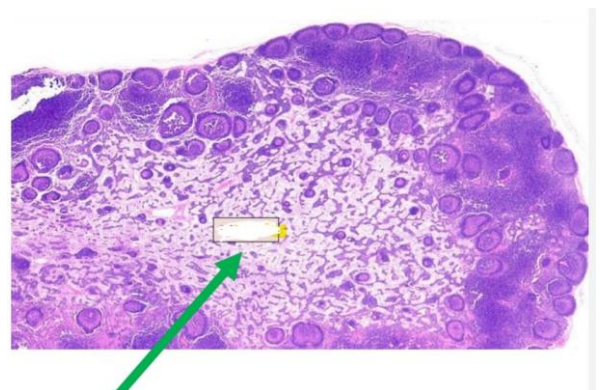
18-Pictures of neutrophil, band cell, metamyelocyte and myelocyte – which can increase in bacterial infections?

- a. neutrophil
- b. band cell
- c. metamyelocyte
- d. myelocyte
- e. all of the above

answer: e

19-In this section, the arrow contains?

- a. plasma cells
- b. follicles
- c. sinuses
- d. B lymphocytes





e. A+C

answer: e

## Physiology Lab

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

- a. 51.7%
- b. 57%
- c. 60%

answer: a

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

answer: b

3-Choose the wrong combination

- a. Sahli test with PCV
- b. blue tip capillary tube with ESR
- c. PCV with anemia types

answer: b

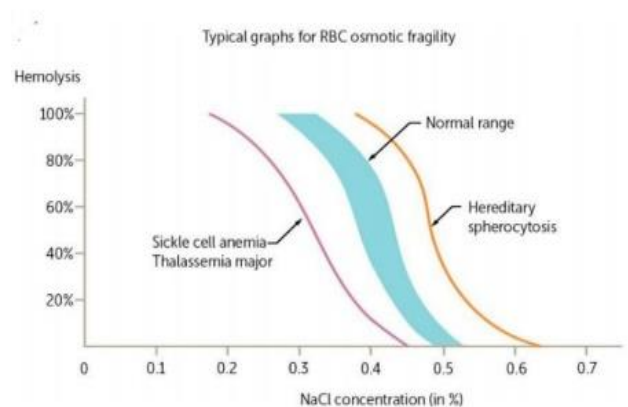
4-BLEDDING TIME is prolonger in all of the following except

- a. thrombocytopenia
- b. vit K deficiency
- c. abnormal platelet function
- d. use of Aspirin
- e. A+D

answer: b

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



answer: c

**6-Given easy numbers, calculate the differential leukocyte count and absolute count**

- Choices include the same numbers with two different UNITS

**7-Information about 4 squares with their RBCs counting numbers in hemocytometer, and picture of the fifth square:**

- you have to count the RBCs and then what is the overall RBCs number

\*الدكتورة تمارة حكمت إنه في سؤال بالامتحان على هذا النمط\*

**8-Choose the wrong statement:**

- ESR increases in polycythemia
- ESR decreases in polycythemia
- If you forget to check the ESR in the first hour you can check it in the second hour

answer: a

**9-About ESR test:**

- increase in the case of polycythemia
- increase in the case if protein content of plasma increased
- diagnostic
- change according to age, sex

answer: d

**10-Measuring Hb concentration by**

- cyanmethemoglobin

**10-Increases bleeding time**

- thrombocytopenia

**11-There was a picture for the blood type test**

- B+
- B-
- A+
- A-

answer: b

**12-Blood test showed agglutination only when adding Anti-A Abs – patient can receive transfusion from?**

- a. AB+
- b. AB-
- c. A-
- d. B+

answer: c

**13-Picture of eosinophil – true –**

- increases in parasitic infection

**14-Picture of Hb test showing 18g/dl woman has**

- polycythemia

**15-Wrong about intrinsic pathways**

- PT above 30 seconds indicates abnormality

**16-Wrong about ESR**

- can be used to exclude underlying disease

**17-HB 11, Cell diameter 8.2, RBC count 3000, wrong**

- this is typical of IDA

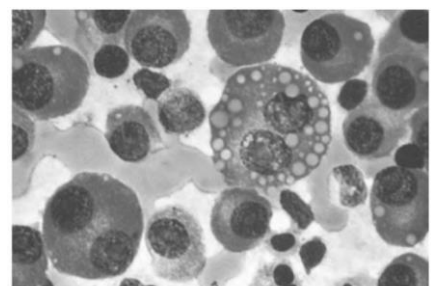
**18-Wrong about reticulocyte**

- has no hemoglobin synthesis

## Pathology Lab

**1-The following section represents?**

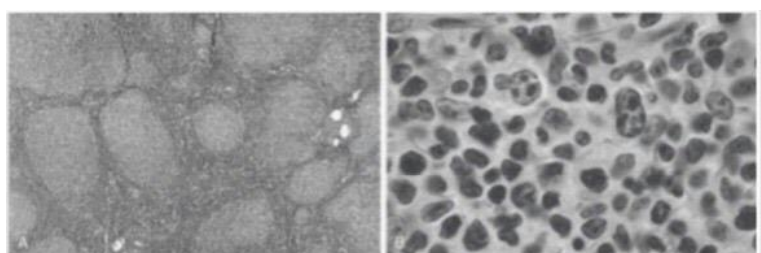
- a. Hodgkin lymphoma
- b. Follicular lymphoma
- c. Hairy cell leukemia
- d. Plasma cell myeloma



answer: d

**2-These two sections represents?**

- a. Follicular hyperplasia
- b. Follicular lymphoma
- c. Hodgkin lymphoma

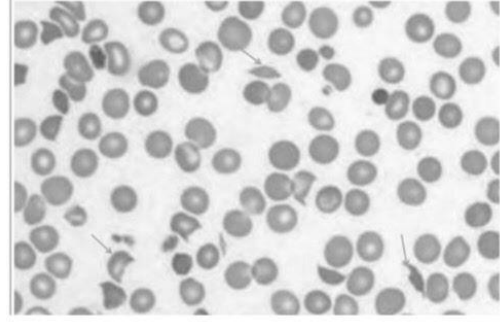


d. ALL

answer: b

3-This section represents ?

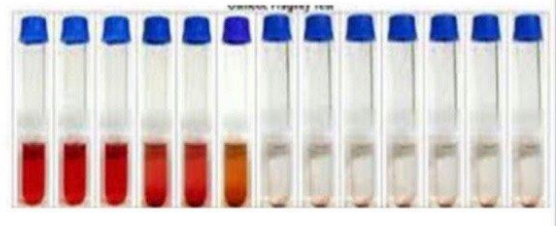
- a. Iron deficiency anemia
- b. Megaloblastic anemia
- c. Schistocytes
- d. Spherocytosis



answer: c

4-This test is used for?

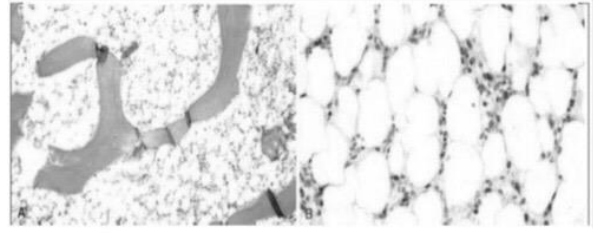
- a. Hereditary spherocytosis
- b. Iron deficiency anemia
- c. Leukemias



answer: a

5-The second picture represents

- a. Myelophthisic anemia
- b. Anemia in liver disease
- c. Aplastic anemia
- d. Anemia of renal disease



answer: c

لهون خلص التجميع يلي قدرنا عليه، للأسف الملف يا دوب انجمع ما لحق يتدقق أو يترتب، وكان هالمرة مو شامل كل اشي لو حابب تطلع كان ممكن تلاقي هون؛ ساعونا عالتأخير والقصور، وموقفين يا رب ✨

وَاجْعَلْ خَيَالِكَ سَامِيًا فَلَطَّالِمَا... سَمَتِ الْحَقِيقَةُ بِامْتِطَاءِ خَيَالِ  
أَبْعُدْ مَنَّاكَ عَلَى الدَّوَامِ فَكُلَّمَا... دَانَ النَّجَاحُ عَلَتْ مَنَى الْأَبْطَالِ