1. **The normal range for the white cell count:**
    A. 1000 to 3000 cumm
    B. 10000 to 15000 cumm
    C. 4000 to 11000 cumm
    D. 8000 to 12000 cumm
    E. 4-6 million/ cumm

2. **In performing a WBC count, which of the following solution may be employed as diluted fluid:**
    A. Drabkin's solution
    B. 2% acetic acid solution
    C. Hayem's solution
    D. Physiological saline
    E. Water

3. **When blood is drawn to the 0.5 mark and diluting fluid to the 11, mark in the white cell pipette, the dilution factor:**
    A. 10
    B. 20
    C. 200
    D. 22
    E. 16
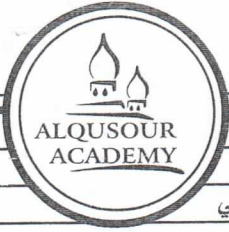
4. In accounting chamber with the improved Neubaur ruling the central square millimeter is subdivided into:
   A. 100 small squares
   B. 16 small squares
   C. 400 small squares
   D. 80 small squares
   E. 200 small squares

5. An "R" section has a depth of 0.1 mm and an area of squares mm^2:
   A. 0.02
   B. 1.00
   C. 0.04
   D. 0.08
   E. 0.06

6. In accounting chamber the central square millimeter is divided into:
   A. 100 small squares
   B. 25 small squares
   C. 16 small squares
   D. 80 small squares
   E. 9 small squares

7. In the improved Neubaur ruling both the "W" and " R" section are subdivided into:
   A. 25 squares
   B. 20 squares
   C. 16 squares
   D. 9 squares
   E. 4 squares

8. Volume correction factors of WBC is:
   A. 100
   B. 2.5
   C. 20
   D. 25
   E. 50

9. All of the following in performing WBCs count are correct except:
   A. Sample must be representative
   B. After diluted sample loaded on hemacytometer is seen immediately under microscope.
   C. 1 to 11 pipette used in dilution
   D. The first few drops in pipette discarded
   E. Flooding the Neubaur hemacytometer result in incorrect count
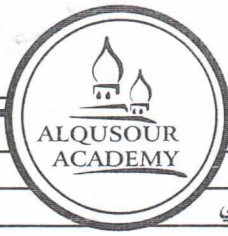
10. **The magnification used for WBCs count is:**
    - A. 4X
    - B. 10X
    - C. 40X
    - D. 100X

11. **If the counted WBCs in the four W squares found to be 100 the real WBCs is:**
    - A. 2000 cubic mm
    - B. 5000 cubic mm
    - C. 10000 cubic mm
    - D. 1000000 cubic mm

12. **All of the following cause Leukocytosis except:**
    - A. Bacterial infection
    - B. Drug poisoning
    - C. Measles
    - D. Acute hemorrhage
    - E. Metabolic disorder

13. **All of the following cause Leukocytopenia except:**
    - A. Typhoid infection
    - B. Infectious hepatitis
    - C. Tuberculosis
    - D. Chemical poisoning
    - E. Alcoholism

14. **The solution used in RBCs count is:**
    - A. Hayem's solution
    - B. Drabkin's solution
    - C. Physiological saline
    - D. 1% glacial acetic acid
    - E. Water

15. **When blood is drawn to the 0.2 mark and diluting to the 101 mark the red cell pipette, the blood is diluted:**
    - A. 1 in 100
    - B. 1 in 50
    - C. 1 in 200
    - D. 1 in 500
    - E. 1 in 20

أكاديمية القصور

ALQUSOUR ACADEMY

دورات ودروس مساندة واستشارات متخصصة لطلاب الجامعات في التخصصات الطبية والهندسية والعملية
محاضرات وتلاخيص خاصة للفصل الدراسي الأول ٢٠١٣ / ٢٠١٤
تحذير : لا تعتمد محاضرات وتلاخيص الفصول السابقة لأنها تكون غير متسلسلة وغير شاملة وغير مطابقة للفصل الدراسي الحالي

16. **Volume correction factor of RBC is:**
    A. 50
    B. 2.5
    C. 25
    D. 200
    E. 100

17. **The 5 "R" section of the counting chamber have a total volume of:**
    A. 0.1 cumm
    B. 0.02 cumm
    C. 0.04 cumm
    D. 1 cumm
    E. 0.85 cumm

18. **On counting the number of RBCs in each squares you have to include only those on the:**
    A. Top line
    B. Bottom line
    C. Top and left line
    D. Right line
    E. Left line

19. **The number 101 on the RBCs pipette means:**
    A. Its volume is 101 cumm
    B. Its surface area is 101 mm^2
    C. It can hold 102 cumm
    D. None of the above is correct

20. **In counting RBCs blood is diluted:**
    A. 20 times
    B. 200 times
    C. 50 times
    D. 25 times
    E. 250 times

21. **The magnification used for RBCs count is:**
    A. 4X
    B. 10X
    C. 40X
    D. 100X

22. **If the counted RBCs in the five R squares found to be 400, the real RBCs is:**
    A. 4000 cumm
    B. 8000 cumm
    C. 8000000 cumm
    D. 4000000 cumm

23. **All of the following cause Polycethemia _except_:**
    A. High altitude
    B. Newborn
    C. Respiratory disease
    D. Bone marrow malignancy
    E. None of the above

ALQUSOUR ACADEMY

أكاديمية القصور

لتقديم الإقتراحات والملاحظات و الشكاوى

* الخط المباشر مع المدير العام : الأستاذ إبراهيم الشواهين الإتصال 0795747445

* في حال عدم الرد إرسال **SMS** لرقم 0795747445

(الاســـم) ---

(الملاحظة) ----------- لدي ملاحظة -----------

رسالة إرشادية : أعزائي الطلبة هدفنا التفوق معاً ، و لترتقي بكم لأعلى الدرجات لابد من إعلامي بأي إقتراح

أو ملاحظة أو شكوى في الوقت المناسب و عدم إعلامي بها متأخراً ليتسنى لي حلها و أخذها بعين الإعتبار.

المدير العام

أ. ابراهيم الشواهين

Key Answer

Question No.	Answer
1	**C.** 4000 to 11000 cumm
2	**B.** 2% acetic acid solution
3	**B.** 20
4	**B.** 16 small squares
5	**C.** 0.04
6	**B.** 25 small squares
7	**C.** 16 squares
8	**B.** 2.5
9	**B.** After diluted sample loaded on hemacytometer is seen immediately under microscope.
10	**B.** 10X
11	**B.** 5000 cubic mm
12	**C.** Measles
13	**D.** Chemical poisoning
14	**A.** Hayem's solution
15	**D.** 1 in 500
16	**A.** 50
17	**B.** 0.02 cumm
18	**C.** Top and left line
19	**A.** Its volume is 101 cumm
20	**B.** 200 times
21	**C.** 40X
22	**D.** 4000000 cumm
23	**E.** None of the above

1. **Drabkin's solution contains:**
   a. Magnesium sulfate
   b. Calcium chloride
   c. Sulfuric acid
   d. Copper sulfate
   e. Cyanide

2. **In the cyano Methemoglobin method of determining hemoglobin the diluent used is:**
   a. Distilled water
   b. Hayem's solution
   c. Oxidic acid
   d. Physiological saline solution
   e. Drabkin's solution

3. **Hemoglobin is measured as cyano Methemoglobin, is a spectrophotometer at a wave length of:**
   a. 540 nm
   b. 620 nm
   c. 360 nm
   d. 450 nm
   e. 720 nm

4. **Drabkin's solution is used in:**
   a. Counting of RBCs
   b. Counting of WBCs
   c. Counting of platelets
   d. Hematocrit determination
   e. Hemoglobin estimation

5. **In the Cyanmethemoglobin method for the determination of hemoglobin, the test tube is allowed to stand the following number of minutes to allow for the formation of Cyanmethemoglobin:**
   a. 1-5 min
   b. 5-10 min
   c. 10-15 min
   d. 15-20 min
   e. None of the above

6. **The amount of cyanide solution used to estimate Hb is:**
   a. 1 ml
   b. 3.5 ml
   c. 5 ml
   d. 10 ml
   e. 15 ml

7. **All of the following decrease the hemoglobin in cells except:**
   a. Hemogloinopatheis
   b. Blood loss
   c. Polycythemia
   d. Iron deficiency anemia

8. **All of the following cause errors in hemoglobin measurement except:**
   a. The volume of blood sample is 20 ul
   b. Old or deteriorated reagents
   c. Dirty cuvette
   d. Using wavelength of 450 nm
   e. Mixed sample stand for 2 min before measurement

9. **The normal range for the MCV is:**
   a. 33-38%
   b. 27-32 micro grams
   c. 14.5 gm
   d. 10-15 ml
   e. 80-90 cu micron

10. **The normal values for the MCH are:**
    a. 14-18 g/ 100 ml
    b. 33-38%
    c. 80-90 cu micron
    d. 27-32 micro gram
    e. 10-15 ml

11. **To determine the MCV you divide the:**
    a. Hct X 10 by the Hb in grams
    b. Hb in grams by the RBCs in millions
    c. RBCs by the Hct
    d. RBC by the Hb in grams
    e. Hct X 10 by the RBCs in millions

12. **The percentage of volume of packed red blood cells to the volume of whole blood is called:**
    a. MCV
    b. PCV
    c. MCH
    d. Hb
    e. MCHC

13. **The normal range of hematocrit of a newborn is:**
    a. 37% - 47%
    b. 40% - 54%
    c. 50% - 60%
    d. 14% - 20%
    e. None of the above

14. **All of the following are <u>correct</u> in PCV measurement <u>except</u>:**
    a. Haparinized capillary tube used to collect blood
    b. The clay material put near to the centre of centrifuge
    c. The layer appear above the RBCs called puffy coat
    d. Centrifugation done for 5 minutes
    e. The speed of the centrifuge should be 11000 rpm

15. Which of the following puffy coat percentage considered abnormal
    a. 0.5
    b. 1
    c. 2
    d. 3
    e. None of the above

16. Mean corpuscular hemoglobin concentration measured by:
    a. Hct X by the Hb in grams
    b. Hb X 100 by the Hct
    c. RBCs by the Hct
    d. RBC by the Hb in grams
    e. Hct X 10 by the RBCs in millions

17. In a differential whit cell count, the following cell would have the highest normal range:
    a. Neutrophils
    b. Eosinophils
    c. Lymphocytes
    d. Monocytes
    e. Basophils

18. The largest cell found in the normal blood is:
    a. Neutrophils
    b. Eosinophils
    c. Lymphocytes
    d. Monocytes
    e. Basophils

19. In differential white cell count the following cell have the lowest normal range is:
    a. Neutrophils
    b. Eosinophils
    c. Lymphocytes
    d. Monocytes
    e. Basophils

20. The white blood cell which has red granules in the cytoplasm and a nucleus which is usually divided into 2 segments is:
    a. Neutrophils
    b. Eosinophils
    c. Lymphocytes
    d. Monocytes
    e. Basophils

21. If a patient has a white cell count of 10.000 and differential showing 30% Monocytes and 70% lymphocytes, his absolute monocyte count would be:
    a. 7,000 mm^3
    b. 10.000 mm^3
    c. 3,000 mm^3
    d. 3.5 mm^3
    e. Could not calculate from above data

22. All of the following in performing differential WBCs count are <u>correct except</u>:
    a. Wrights stain used for 20 minutes
    b. Using angle less than 45 leads to thicker smear
    c. Fast spreading leads to thin smear
    d. Methanol used in fixation of the smear
    e. Eosin gives the recd color in wrights stain

23. The magnification used for differential WBCs count is:
    a. 4X
    b. 10X
    c. 40X
    d. 100X

24. The cell type in differential WBCs count in which the nucleus is nearly covered by black granuies is:
    a. Neutrophils
    b. Eosinophils
    c. Lymphocytes
    d. Monocytes
    e. Basophils

25. Which of the following cells in differential WBCs count contain rounded nucleus:
    a. Neutrophils
    b. Eosinophils
    c. Lymphocytes
    d. Monocytes
    e. Basophils

26. Which of the following cells in differential WBCs count converted to macrophages:
    a. Neutrophils
    b. Eosinophils
    c. Lymphocytes
    d. Monocytes
    e. Basophils

27. Which of the following blood types can receive blood from any types:
   a. A
   b. B
   c. AB
   d. O

28. Person with AB blood type carry which type of antibodies:
   a. Anti A
   b. Anti B
   c. A and B antigens
   d. Neither Anti A and B
   e. Both anti A and Anti B

29. Person with OO genotype will carry which type of antigens:
   a. Antigen A
   b. Antigen B
   c. Both antigens A and B
   d. Neither antigen A or B

30. Person with positive blood type this means he carry what antigen:
   a. A
   b. B
   c. A and B
   d. D
   e. None of the above

Key Answer

Question No.	Answer
1	E. Cyanide
2	E. Drabkin's solution
3	A. 540 nm
4	E. Hemoglobin estimation
5	B. 5-10 min
6	C. 5 ml
7	C. Polycythemia
8	A. The volume of blood sample is 20 ul
9	E. 80-90 cu micron

10	D. 27-32 micro gram
11	E. Hct X 10 by the RBCs in millions
12	B. PCV
13	C. 50% - 60%
14	B. The clay material put near to the centre of centrifuge
15	D. 3
16	B. Hb X 100 by the Hct
17	A. Neutrophils
18	D. Monocytes
19	E. Basophils
20	B. Eosinophils
21	C. 3,000 mm^3
22	B. Using angle less than 45 leads to thicker smear
23	D. 100X
24	E. Basophils
25	C. Lymphocytes
26	D. Monocytes
27	C. AB
28	D. Neither Anti A and B
29	D. Neither antigen A or B
30	D. D