

Past papers for Hemato-physiology

Mid 2015

- 11- Wrong about a 40-year old woman with: 110 g/L Hb, 3×10^{12} /L RBCs and a mean cell diameter of 8.2 microns – Most likely is IDA
- 12- Wrong about eosinophils – with basophils form 10% of WBCs (maybe)
- 13- Wrong match about clotting – factor XIII is for the intrinsic pathway
- 14- Least important clotting factor – XII
- 15- Not activated by thrombin – IX
- 16- Wrong about von Willebrand disease – VIII:C is normal
- 17- Wrong about electrolytes – participate in the fluid movement between tissues and capillaries (mostly)
- 18- Wrong about lymph – fluids filtered are usually less than reabsorbed
- 19- Knowing Hb and cell count – you can find the MCH
- 20- A tissue that has no lymphatic capillaries – CNS
- 21- Wrong about Iron – is mostly absorbed in the jejunum (maybe)
- 22- Wrong about B12 – its deficiency mostly affects WBCs
- 23- True about Hb – its saturation curve is independent of Hb concentration
- 24- Wrong about albumin – transports CO₂

Mid 2013

7. A fall in sodium plasma concentration:

- (a) Decreases the freezing point of plasma
- (b) Increases intracellular fluid volume**
- (c) Is not associated with thirst
- (d) Can't be caused by excessive (uncontrolled) secretion of ADH (anti- deuteric hormone)
- (e) Causes edema

8. A 23 year old female with a red cell count of $3.2 \times 10^6/\mu\text{l}$, hematocrite of 37%, and haemoglobin concentration of 120g/L. According to the above parameters, which of the following statements is TRUE?

- (a) The RBCs are normocytic, normochromic
- (b) The RBCs are microcytic, normochromic
- (c) The RBCs are microcytic, hypochromic
- (d) The RBCs are macrocytic, normochromic**
- (e) The RBCs are macrocytic, hyperchromic

9. Which of the following about Haemophilia A and Von-Willibrand inheritance is NOT TRUE?

- (a) Von-Willibrand is a hemorrhagic disease
- (b) Haemophilia A is usually confined to males
- (c) Haemophilia A is inherited as a sex-linked abnormality
- (d) Haemophilia A passes from mother to child

(e) Von-Willibrand disease also appears in males only

10. A person with (A Rh⁻) blood can receive blood transfusion from which of the following?

- 1. A Rh⁺
- 2. B Rh⁺
- 3. AB Rh⁻
- 4. O Rh⁻
- 5. A Rh⁻

- (a) 1 only
- (b) 4 only
- (c) 3 only

(d) 4 + 5

(e) 1 + 5

11. Which of the following combinations is NOT TRUE?

	Factor #	Factor Name	Pathway involved
(a)	3	Tissue Thromboplastin	Extrinsic Pathway
(b)	10	Stuart Factor	Both Pathways
(c)	1	Fibrinogen	Both Pathways
(d)	12	Hageman Factor	Intrinsic Pathway
<u>(e)</u>	<u>13</u>	<u>Fibrin Stabilizing Factor</u>	<u>Intrinsic Pathway</u>

12. Which of the following combinations is NOT TRUE?

		Haemophilia A	Von-Willibrand Disease
(a)	Inheritance	Sex-linked	Autosomal
(b)	Bleeding Time	Normal	Prolonged
(c)	VIII:C	Low	Low
(d)	VIII:Ag	Normal	Low
<u>(e)</u>	<u>Aggregation</u>	<u>Normal</u>	<u>Normal</u>

13. Which of the following is NOT a function of thrombin?

- (a) VIII → VIII_a
- (b) Fibrinogen → Fibrin

(c) IX → IX_a

(d) XIII → XIII_a

(e) Protein C → Protein C_a

14. Which of the following statements most describe why RBC's are efficient in carrying oxygen:

1. Contains hemoglobin
2. Have no nucleus
3. Have many mitochondria needed to produce ATP
4. Biconcave shape
5. 4 oxygen molecules are carried by hemoglobin

(a) 1, 3, 4

(b) 2, 4, 5

(c) 1, 2, 4, 5

(d) 1, 2, 3, 5

(e) 1, 2, 3, 4, 5

15. Which of the following regarding iron absorption is NOT TRUE?

(a) The daily iron intake is usually equal to daily iron requirement

(b) Women have less store of iron than men

(c) More than 65 % of iron is present in hemoglobin

(d) Iron absorption is mainly in the upper part of the jejunum

(e) There is more iron absorption from meat and meat products than from vegetables

16. A blood sample was tested and the results indicated a red cell count of $3.8 \times 10^{12}/L$ and hemoglobin concentration of 16g/deciliter. From the following data:

(a) We can tell the person is a female

(b) We can calculate the mean corpuscular volume (MCV)

(c) We can calculate the mean corpuscular hemoglobin (MCH)

(d) We can calculate the mean corpuscular hemoglobin concentration (MCHC)

(e) We can tell if the red blood cells are normocytic, microcytic or macrocytic.

17. All of the following regarding the bleeding caused by a small cut wound in the skin are true EXCEPT:

(a) Can be stopped by a vascular spasm

(b) It will stop within a period of 5 minutes

(c) It will be prolonged if Von-Willibrand factor is deficient

(d) It will be prolonged in the case of thrombocytopenic purpura

18. Which of the following regarding % saturation of hemoglobin and oxygen content is NOT CORRECT?

- (a) The % saturation of hemoglobin is dependent on pO_2 and completely independent on the concentration of hemoglobin
 - (b) The oxygen content is dependent on the concentration of hemoglobin
 - (c) The % saturation of hemoglobin is dependent on pO_2 as well as on the concentration of hemoglobin**
 - (d) The oxygen content VS pO_2 will change when the concentration of hemoglobin is changed
 - (e) The % saturation of hemoglobin VS pO_2 graph will remain the same despite changing the hemoglobin concentration
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19. Which of the following statements regarding leukocytes are correct

- 1. They move out to the tissues by a process called emigration
- 2. Neutrophils and microphages are required in phagocytosis
- 3. Inflammatory cells are attracted by bacterial molecules and inflamed tissue by a process called chemotaxis
- 4. Leukopenia is an increase in the number of WBC's in the circulation

- (a) 1 and 2 only
 - (b) 2, 3, 4
 - (c) 1, 2, 3**
 - (d) 1, 2, 3, 4
 - (e) 3 and 4 only
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20. Which of the following regarding ABO blood groups is NOT CORRECT?

- (a) Full cross match involves reacting recipient's plasma with patient's RBCs**
 - (b) Most cases of blood incompatibility are due to not cross matching the different blood groups
 - (c) Anti- A and anti-B antibodies are sometimes absent in blood group O
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Mid 2011

5) F XIII (Fibrin Stabilizer) >> the wrong about it was: related only to the Intrinsic pathway of coagulation ((it's related to both; Intrinsic & extrinsic ones))

8) Which of the following about Haemophilia-A and Von-Willibrand inheritance is NOT TRUE:

- a) Von-Willibrand is a haemorrhagic disease
- b) Haemophilia-A is usually confined to males
- c) Haemophilia-A is inherited as a sex-linked abnormality
- d) Haemophilia-A passes on from mother to child
- >>> e) Von-Willibrand disease also appears in males only.

9) A 25 year old female with red cell count of $3.2 \times 10^6/\mu\text{l}$. Haematocrite of 37 and haemoglobin concentration of 120g/l

According to the above parameters.

Which of the following statements is TRUE?

- >>> a) The RBCs are macrocytic, normochromic
- b) The RBCs are normocytic, normochromic
- c) The RBCs are microcytic, normochromic
- d) The RBCs are microcytic, hypochromic
- e) The RBCs are macrocytic, hyperchromic

10) A guy with Chest Stab came to the hospital, his lab findings with regard to his RBC's are:

>> Normocytic Normochromic RBC's

11) Which of the following statements about iron is NOT TRUE:

- a) More than 65% in haemoglobin
- >>> b) The iron daily intake is usually equal to daily iron requirement
- c) Women have less store of iron than man
- d) Iron absorption mostly at upper part of jejunum
- e) There is more iron absorption from meat and meat products than that from vegetables

12) A man of blood group A has 2 children, plasma from the blood of one of them agglutinates his red cells while that from the other does not.

All of the following are TRUE EXCEPT ONE:

- a) Mother of 'agglutinating' child could be group B
- b) Father must be heterozygous group A
- >>> c) Children must have different mothers
- d) 'agglutinating' child could be group O
- e) 'Non-agglutinating' child could be group AB.

18) which of the following is not required for clot formation: (1) vitamin K (2) Ca (3)... (4)... (5) fibrinogen >>> 3 and 4

21) a patient has hemorrhage, he loses 1.5 L of blood, when his blood is tested:

- a) normochromic, normocytic anemia

27) a man with blood group A, has 2 children, one of them agglutinates his cells & the other one doesn't, which statement is false:

- a- the father must be heterozygous
- >>>b- children must have different mothers

32) which of the following is a rare cause of anemia:

- >>>a- vit B 12 deficiency

33) which of the following isnt a correct match haemophilia A Von wilbrands disease the answer is
>>> aggregation is normal in both

41) a woman with RBC count 3.2×10^6 /microliter HcT= 37% HB concentration is 120 g/l which of
the following best describes her RBC's ?
>> RBC's are macrocytic normochromic

Final 2015

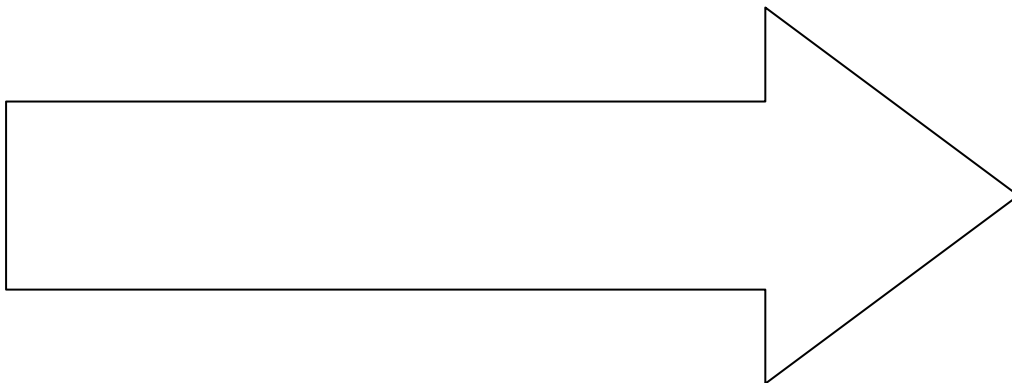
4- Least common blood group in the region – AB

5- Wrong about von Willibrand disease – recessive inheritance

6- Order of tissues from which red bone marrow biopsies are taken – vertebrae sternum ribs
femur tibia

7- Causes a shift to the right in O₂-Hb dissociation curve – exercise

8- The most important purpose of regulating extracellular fluid – prevent cells from
shrinkage or swelling



Final 2012

Physiology:

1. the least common blood group :
AB
2. which of the following is not true :
 - a- IDA & sideralstic anemia are the most common forms of microcytic anemia
 - b- indices calculated from blood cells are defined
 - c- IDA is a common clinical problem throughout the world
 - d- estimated to affect 30% of the worlds population
3. the cells that are found in allergic reactions :
 - a- basophills
 - b- eosinophills
 - c- monocytes
4. which is true about blood PH:
 - a- the reference of acid-base state is not according to neutral value of 7 but according to PH of 7.4
 - b- acidosis is any blood PH below 7.34
 - c- alkalosis is any blood PH above 7.54
 - d- normal value is 7.4
 - e- all of the above
5. which is wrong:
>>> thrombin, urokinase, streptokinase are plasminogen activators
6. which of the following tissue don't contain lymphatics:
>>> central nervous system
7. which of the following is wrong:
 - a- water accounts for 10 % of body weight of females and males
 - b- osmollality of palsma is 246 mOsmol
 - c- sodium chloride contribute by 164 mOsmole
8. arrange the following according to activity in hematopiosis:
vertebra, sternum,ribs, femur, tibia (not sure of the true arrangement)
9. which of the following result in shift to the right in hemoglobin oxygen saturation curve:
 - a- exercise
 - b- decrease temprature
 - c- increase PH
 - d- decrease PCO2
 - e- decrease diphosphpglycerate

Miscellaneous

33. A 29 year old woman suffering from severe menstrual bleeding for a few weeks had her blood tested. The results indicated a MCV of 63, MCHC of 28 g/dl and RCC of $3 \times 10^6/\mu\text{l}$. Which of the following indicators is inconsistent with the condition she has?

- (a) Decreased transferrin saturation
- (b) Low level of hepcidin
- (c) Decreased serum ferritin
- (d) Decreased total iron binding capacity

34. A 60 year old man suffers from episodes of infection and intermittent bleeding. Results showed that his hemoglobin concentration is below normal but with a normal MCHC. Thrombocytopenia was proven by a vast decrease in number of platelets. Which of the following conditions is least likely to be involved as well?

- (a) Monocytopenia
- (b) Granulocytopenia
- (c) Splenomegaly (NO hemolysis)
- (d) Absolute lymphocyte count is normal
- (e) Low RBC count

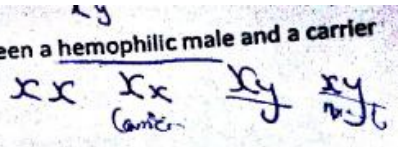
35. A 43 year old woman suffers from weakness and fatigue for almost 2 months. Her blood count came up with a MCV of 110, [Hb] of 8g/dl and MCHC of 32 g/dl. She is also positive for neutropenia, and has a decreased number of platelets. The reticulocyte levels have reached almost 4%. Which of the following is the most probable cause of her results?

- (a) Decreased utilization of iron
- (b) Increased level of hepcidin
- (c) Toxic effect on the stem cells
- (d) Drug adverse reaction
- (e) Antibody mediated

36. In anemia of chronic disease, which of the following is CORRECT?

- (a) MCV normal, [↓ serum ferritin] [↓ iron stores] [↓ TIBC]
- (b) MCV normal, [↑ serum ferritin] [↑ iron stores] [↓ TIBC]
- (c) MCV low, [↓ serum ferritin] [↓ iron stores] [↓ TIBC]
- (d) MCV high, [↓ serum ferritin] [↑ iron stores] [↓ TIBC]
- (e) MCV low, [↓ serum ferritin] [↓ iron stores] [↑ TIBC]

1. Which of the following is CORRECT regarding a cross between a hemophilic male and a carrier female?



- (a) All of the sons are hemophilic.
- (b) None of the daughters are hemophilic.
- (c) All of the daughters are hemophilic.
- (d) None of the sons are hemophilic.
- (e) Cannot be determined.

PHYSIO LAB 2015

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

10- Picture of eosinophil – true – increases in parasitic infection

11- Picture of Hb test showing 18g/dl – woman has – polycythemia

12- Wrong about intrinsic pathways – PT above 30 seconds indicates abnormality (mostly)

13- Wrong about ESR – can be used to exclude underlying disease

14- WBC count – 2000 cell/microL

15- HB 11, Cell diameter 8.2, RBC count 3000, wrong – this is typical of IDA

16- Wrong about reticulocyte – has no hemoglobin synthesis

PHYSIO LAB 2012

physio:

- picture of Erythropoiesis>>> at which stage erythropoietin act? ?

-question about ESR test:

a- increase in the case of polycythemia

anned by CamScanner



Lejan 2009/2

b) increase in the case if protein content of plasma increased

c- diagnostic

d- change according to age, sex

- question about reticylocte

a- stay in the bone marrow for 2-3 days

b- normally account for 1% of blood cells

c- mature in the blood within 1-2 days

d- can synthesis Hb

e- sth wrong

- O2 Dis. Curve : Anemia/ Shift to the right.

- Monocyte: Reenter Circulation / Wrong

- Q about Bleeding Time ????

- Wrong Combination of blood group Rh

- Progenitor/ Stem cell stimulated by most common stimulating factors..... ???