

HLS

Final Exam Questions

2021 Bacth

collected by :



BIOCHEMISTRY

1) Platelet plug aggregation is platelet together mediated by :

- a) Von willbrand factor
- b) Fibrinogen
- c) Expose to extra cellular components as collagen
- d) Surface glycoprotein

2) True about Gla domains:

- A) Enhance of enzymes binding on platelets
- B) bind to Ca^{+2}
- C) Carboxylation of glutamate

3) Vitamin C is needed for iron absorption in order to:

- A) Transfer ferric into ferrous by ferrireductase
- B) Open the ferroportin channel to efflux iron
- C) Activate the divalent metal transporter
- D) Release iron from heme by heme oxygenase 1

Answers: B - B – A

4) Hepcidin is increased by all the following, except:

- A) Overexpression of hemojuvelin.
- B) Increases erythropoietin
- C) Stimulation of transferrin receptor 2
- D) Increased release of inflammatory cytokines
- E) Increased release of bone morphogenetic 5

5) The mechanism of action of proteins C & S:

- A) Degrade factor V & VIII
- B) Activate antithrombin II

6) one of the following is NOT true in regards to tissue factor:

- A) it is found on the surface of subendothelial cells
- B) It forms a complex with factor 7
- C) it links the intrinsic and extrinsic pathways
- D) its activity requires calcium ions
- E) it's critical in the activation of factor 9 and 10

Answers: B – A- E

PHYSIOLOGY

1) Which of the following is not a direct cause of lymphedema?

- A) Filarial nematodes
- B) Heart failure
- C) Breast cancer surgery
- D) Congenital absence or abnormality of lymphatic vessels
- E) Cancer

2) Which of the following is correct in relation with lymph flow:

- A) Inversely with capillary permeability
- B) Direct with interstitial hydrostatic pressure
- C) Inversely with capillary hydrostatic pressure
- D) Direct with capillary colloid osmotic pressure
- E) Inversely with colloid interstitial osmotic pressure

3) Incorrect regarding hydropfetalis disease:

- A) First born baby never get the disease
- B) Before pregnancy the women whom Rh-ve blood type is given antigen D

4) which of the following donor – recipient blood groups are compatible:

- A) B- to AB+ C) A+ to O+
- B) A+ to B- D) B+ to B-

Answers: B - B? – B – A

PHARMACOLOGY

1) Mismatched drug & major side effect:

- A) doxorubicin – cardiac toxicity
- B) Busulfan –pneumonitis
- C) carmustine - risk of clotting
- D) cyclophosphamide — hemorrhagic cystitis

2) All the following is correct regarding heparin side effects except.

- A) Thrombocytopenia
- B) Teratogenic
- C) Osteoporosis
- D) Bleeding
- E) Allergy

3) Leucovorin rescue is used in conjunction with high-dose (with which drug) therapy to rescue normal cells:

Answer: methotrexate

4) Vitamin k is given as antidote for which drug?

Answer: Warfarin

5) Acrolein & phosphoramidate mustard are toxic metabolites that produced from:

Answer: Cyclophosphamide

Answers: C – B

6) True regarding asparaginase drug:

A) Hydrolysis of L-asparagine

B) It is a protease inhibitor

C) hypersensitivity

7) Iron dextran is given in in a way that people in which disease can benefit?

A) A woman with increased menstrual blood loss

B) Malabsorption syndrome

C) A fast growing child

8) Which of the following is wrong regarding maribavir:

A) Have a unique MOA by inhibiting human CMV pUL97 kinase.

B) Treat post-transplant cytomegalovirus (CMV)

C) Causes Taste changes

D) Potentiates other antiviral drugs like ganciclovir and valganciclovir

9) Aspirin increases bleeding time via inhibition of:

A) Thromboxane A₂

B) Prostacyclin

10) Which of the following is wrong regarding Quinine:

- A) QT prolongation is a side effect
- B) Can cause black water fever
- C) Common resistance for Quinine
- D) come from natural source
- E) used for treat p.falciparum

11) All of the following cause thrombocyte activation , except:

- A) Interleukin 11
- B) Thrombopoietin
- C) Erythropoietin
- D) oprelvekin
- E) recombinant human GM-CSF

15) in B12 deficient patients , all of these can be seen except:

- A) microcyte in blood
- B) peripheral neuropathy.
- C) shuffling gait

ANSWERS: A? – B – D – A – C – C – A

12)(in its meaning) what does block platelet GPIIb/IIIa receptor?

Answer: Abciximab

13) Atazanvir :buffalo hump

14) wrong about chloroquine :

Ans : treat blood and tissue malaria

MICROBIOLOGY

1)

Given a diagnosis of uncomplicated *Plasmodium falciparum* malaria for the patient in Question 15, which one of the following treatment regimens is appropriate where chloroquine-resistance is known?

- (A) Oral artemisinin-based combination therapy (ACT)
- (B) Oral chloroquine
- (C) Intravenous chloroquine
- (D) Oral proguanil
- (E) Intravenous quinidine

2)

Given a diagnosis of *Plasmodium falciparum*, you should tell the patient in Question 15 that (select one)

- (A) Relapse occurs with *Plasmodium vivax* and *Plasmodium ovale*, not *Plasmodium falciparum* and therefore no treatment for hypnozoites is necessary.
- (B) Primaquine is used to prevent relapse of *Plasmodium falciparum*.
- (C) Returning to the tropics would be dangerous because hypersensitivity to the parasite may have developed.
- (D) The use of insecticide treated bednets in endemic areas is not necessary since she already had malaria.
- (E) It is not necessary for her to take antimalarials when traveling in endemic areas.

3) what is the transmission of causative agent in leishmaniasis:

- A) sandfly bite
- B) Black fly bite
- C) tick

Answers: A – A – A

4) Infectious stage babesia:

- A) Sporozoite
- B) Trophozoite

5) A 50 years old Brazilian man died and after autopsy they found he died from myocardial infarction and they found amastigotes in the dead tissue, which of the following microorganisms is most likely to be the cause of death (not so accurate)

- A) L.donovani
- B) L. braziliensis
- C) T.cruzi
- D) Bebsia

6) In a scientific experiment aiming to design a specific drug targeting a specific antigen, we brought CD19 + from healthy donors and drug was designed to target and mask the CD21 + antigen on the cell surface, which of the following viruses will be able to infect these cells?

- A) CMV
- B) Herpes simplex virus
- C) HIV
- D) EPV

7) all the following is caused by parvovirus B19, except?

- A) Thrombotic thrombocytopenic purpura
- B) Transient aplastic crisis
- C) erythema infectiosum
- D) Polyarthopathy syndrome

8) which of the following can be seen in infection with p.ovale :

A) doesn't form malarial pigment

B) schuffner dots appearance

C) applique forms

D) crescent shape gametocyte

E) trophozoite form bands

Answers: A – C – D – A- B

CLINICAL

1) A 51 old patient is suffering from low back pain for 3 last months, and he has high ESR, you think it's multiple myeloma, what is the further diagnostic procedure?

A) Iron

B) Protein electrophoresis

C) Hemoglobin electrophoresis

D) Blood film

2) a 23yo pregnant woman in her forth month of gestation has fatigue & other complications, her blood smear shows a macrocytic RBCs, her B12 level is normal, she has an increased transferrin, what is the most cause of her anemia?

A) Intrinsic factor

B) B12

C) Iron

D) Folic

E) Erythropoietin

3) Most abundant hemoglobin A in adults , contains ?

A) 2alpha, 2beta chains

B) 2alpha, 2delta chains

C) 2beta, 2alpha

D) 2 alpha, 2 gamma

4) patient come with multiple bruises, he has a family history of bleeding , which test would be abnormal :

A) aptt

B) pt

C) bleeding time

ANSWERS: B – D – A & C – C

PATHOLOGY

- 1) In which we can find prolonged PTT & thrombocytopenia?
 - A) Type IIA heterozygous von will-brand factor disease
 - B) After 2-week treatment with HMW heparin
 - C) Defect in ADAMST
 - D) E. coli O157:H7 infection
 - E) Acute promyelocytic leukemia

- 2) Most Hodgkin lymphoma that is associated with EPV:
 - A) Lymphocytes rich
 - B) Nodular
 - C) Mixed cellularity
 - D) Lymphocyte depleted

- 3) Not associated with Hemophagocytic lymphohistiocytosis:
 - A) Neutrophilia
 - B) Defects in gene PRF1
 - C) Increase in ferritin levels

- 4) Not associated with proliferation of T- lymphocytes:
 - A) Viral infections 'EBV'
 - B) Post- vaccination
 - C) Drug reactions
 - D) Rheumatologic diseases
 - E) Mycosis fungoides

Answers: A – C– A - D

5) DIC caused by extensive endothelial damage by:

- A) Pancreatic adenocarcinoma
- B) Heat stroke
- C) Difficult labor
- D) Major surgery
- E) Brain trauma

6) Wrong about AML

- A) IDH mutation
- B) MPO test positive
- C) Good prognosis, respond to chemotherapy
- D) Absence of Birbeck granules

7) Wrong about CML:

Ans: Convert only to AML

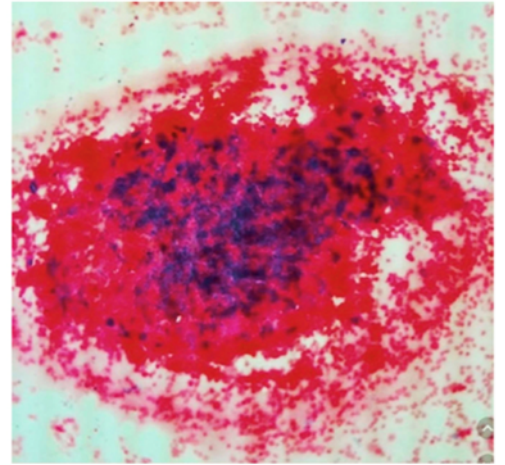
8) Wrong statement in case of myelodysplastic:

Answer: hyper segmented nuclei in Neutrophils

Answers: B– C

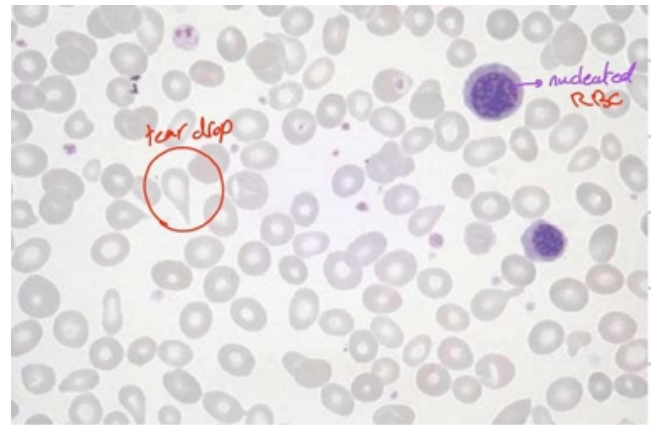
9) All of the following are helpful, but which one is not effective in diagnosing?

- A) Elevated HgA2
- B) Decrease in ferroportin
- C) Increase hepcidin level
- D) High TIBC (total iron binding capacity)
- E) Long term inflammation



10) all of these seen in disease cause the morphology in the picture, expect:

- A) JAK2 mutation
- B) Shift to the left Neutrophils
- C) Mild splenomegaly
- D) Thrombocytopenia
- E) Anemia



11) All of the following seen in case cause this blood design except?

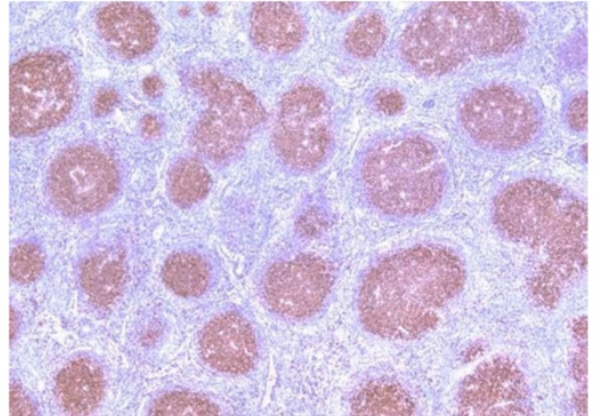
- A) hypercalcemia
- B) Amyloidosis
- C) Renal failure
- D) Bone fractures
- E) Less than 5 percent neoplastic cells in bone marrow (or something in this context)



Answers: A! – C - E

12) This morphology indicates disease:

- A) presence of follicular proliferation
- B) Presence of centroblast and centrocyte
- C) CD34
- D) presence of jak2 Mutation



13) leukopenia, splenomegaly , bone marrow fibrosis related to :

- A) elevated Bcl2
- B) BCR-ABL protein
- C) jak2 mutation
- D) BRAF mutation

Answers: B? — D

PHYSIOLOGY LAB

1) Wrong about ESR:

- A) Polycythemia Vera increase ESR
- B) Decrease ESR in spherocytosis
- C) ESR is normally lower in men than women
- D) ESR is a not specific marker for infection (مش متأكدة من الصيغة)
- E) Positive charged proteins neutralize negative charged erythrocytes

2) Wrong match:

- A) PCV – non heparinized tube
- B) ESR- mm/hr.
- C) Osmotic fragile test– spectrophotometer

3) Iron deficiency shows in OFT (osmotic fragility test)?

- A) Shift to the left & increased fragility
- B) Shift to the right & decreased fragility
- C) Shift to the right & increased fragility
- D) Shift to the left & decreased fragility

Answers: A- A -D

4) A patient have a WBC count of 20000, the distribution as following

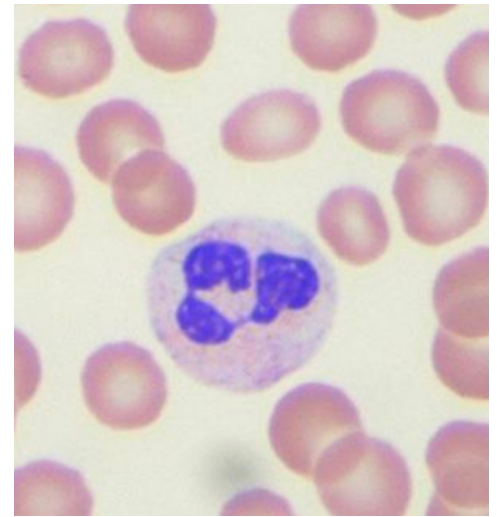
Neutrophils 70%

Monocytes 8%

Lymphocytes 20%

Basophils 0.5 %

(We made up the last 3 percentages for the sake of making a functional question)



What is the absolute count of the leukocyte in the following picture?

- A) 14000
- B) 1600
- C) 100
- D) 400

5) what is the blood type :

- A) O-
- B) AB-
- C) AB+
- D) B+
- E) A-



6) True about reticulocytes:

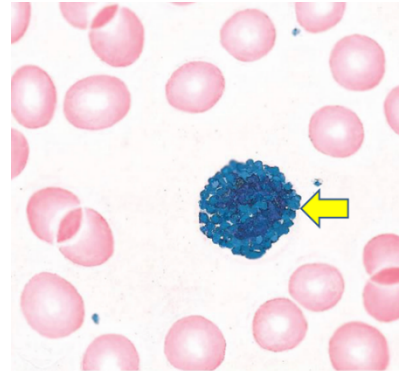
increase in hemolysis

Answers: A - C

HISTOLOGY LAB

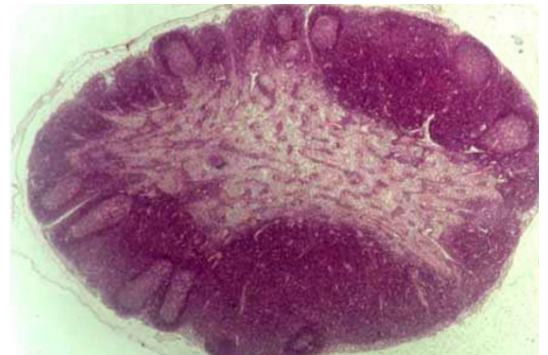
1) Identify the following cell:

Basophils



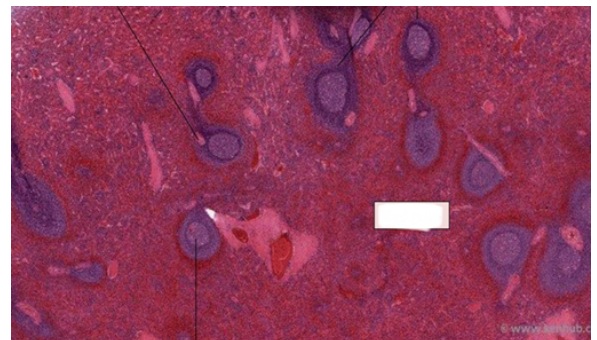
2) The following section is taken from?

Lymph node



3) The following section is taken from?

Spleen



Section taken from ? Thymus



The cell shown here : neutrophil

