

HEMATOLYMPHATIC SYSTEM

MIDTERM EXAM - Wareed batch

إعداد :



1) Which of the following statements concerning lymph nodes is TRUE?

- a. They have Hassall's corpuscle in their medulla.
- b. Their white pulp contains central arteriole.
- c. T cells predominate in the deep cortex.
- d. They have single crypt.
- e. They don't contain secondary nodules.

2) Yersinia pestis is a bacterium responsible for plague, which of the followings is TRUE?

- a. Motile.
- b. Spore forming.
- c. Has a safety pin appearance (bipolar staining).
- d. Penicillin is the treatment of choice.
- e. Can not grow at 28°C.

3) A 53-year-old woman presents to her primary care physician with complaints of fatigue, loss of appetite, weakness and left upper quadrant abdominal pain. On physical exam her spleen is palpated 8 cm below the left costal margin. A complete blood count (CBC) identifies a total white blood cell (WBC) count of 144,000/microL, predominantly neutrophils, metamyelocytes and myelocytes. Hemoglobin is 11.6 g/dl along with thrombocytosis. Cytogenetic studies detected BCR-ABL fusion gene in these cells. One of the following is incorrect about this disease?

- a. The fusion gene is a result of the balanced translocation t(9;22).
- b. First line of treatment is tyrosine kinase inhibitors like Imatinib.
- c. Splenomegaly is as a result of extensive extramedullary hematopoiesis.
- d. Blasts crisis are 70% of lymphoid origin (Acute lymphoblastic leukemia).
- e. It rarely progresses to spent phase.

4) Among the following sets of proteins, one set is playing a role in cellular membranes transport of iron?

- a. Heparin, and matriptase2.
- b. Ceruloplasmin and heme carrier protein.
- c. DMT1 and transferrin.
- d. Duodenal cytochrome B and iron regulatory proteins.
- e. Ferritin and ferroportin.



5) A 65-year-old woman was found to have an elevated platelet count of $670 \times 10^9/L$ during a routine checkup. Bone marrow biopsy revealed an increased number of megakaryocytes with abnormal large forms. No abnormalities in other lineages. One of the following is a characteristic symptom in this disease?

- a. Pancytopenia.
- b. Melena.
- c. Erythromelalgia.
- d. Hematemesis.
- e. Splenomegaly.

6) The blood picture of a patient shows a total leucocytic count $16.000/mm^3$ and Monocytes 25% this probably goes with the diagnosis of?

- a. Parasitic infection.
- b. Acute bacterial infection.
- c. Bronchial asthma.
- d. Hemodialysis.
- e. Malaria.

7) Hemophilia is characterized by the following, EXCEPT?

- a. Prolonged prothrombin time.
- b. Prolonged clotting time.
- c. Prolonged activated partial thromboplastin time (APTT).
- d. Decrease clotting factors VIII or XI or IX .
- e. Heamo-arthrosis.

8) Site of formation of RBCs in 20 years old healthy male is?

- a. Flat bone.
- b. Center of Long bone.
- c. Liver.
- d. Yolk sac.
- e. Yellow bone marrow.

9) One of the following pairs between the haematopoietic neoplasms and the cytogenic abnormalities associated with them is wrongly matched?

- a. Acute promyelocytic Leukemia: $t(15;17)$.
- b. Pre—B Acute lymphoblastic leukemia: $t(12,21)$.
- c. Small Lymphocytic Lymphoma: $t(9;22)$.
- d. Follicular lymphoma: $t(14;18)$.
- e. Mantle Cell Lymphoma: $t(11;14)$.

10) In visceral leishmaniasis which one is not a manifestation of the disease?

- a. Promastigote is the infective stage.
- b. Inside the macrophages the parasites are multiply as a mastigotes.
- c. Bite reaction is clearly seen.
- d. Sand fly transmit the disease.
- e. Pentostam is the drug of choice.

11) Iron?

- 3. Requirement increases in female.
- b. Absorption increases by oxalate and phosphate containing foods.
- b. Absorption is about 50% of total intake.
- d. Stored in the body as transferrin.
- e. Absorbed in distal ilium.

12) Which one of the following is not associated with folate deficiency?

- a. Use of methotrexate.
- b. Coeliac disease.
- c. Liver disease.
- d. Chronic hemolytic disease.
- e. Blind loop syndrome.

13) The mutations in α and β globin genes are variable causing different types of hemoglobinopathies, among them one is due to a mutation leading to unstable mRNA'?

- a. Unstable hemoglobin disorder.
- b. Hemoglobin M variant.
- c. Hereditary persistence of Hb F.
- d. Hemoglobin Lepore.
- e. Hemoglobin Constant Spring.

14) Microcytic anemia is found in all the following EXCEPT?

- a. Iron deficiency anemia.
- b. Thalassemia trait (minor).
- c. Lead poisoning.
- d. Vitamin B12 deficiency.
- e. Anemia of chronic diseases.

15) Regarding parvovirus B19, which one of the following is the MOST accurate?

- a. Parvovirus B19 has a double-stranded DNA genome.
- b. Parvovirus B19 is transmitted primarily by sexual intercourse.
- c. Parvovirus B19 causes severe anemia because it preferentially infects erythrocyte precursors.
- d. Parvovirus B19 infection can be diagnosed by presence of heterophile antibodies in serum.
- e. Parvovirus B19 infection should be treated with acyclovir.

16) An 8-month-old male infant presented with a progressively worsening rash, fever, poor feeding, and a distended abdomen. On admission, he was found to have an extensive erythematous rash with crusting. Abdominal examination revealed gross hepatosplenomegaly confirmed by U/S. Lab studies were significant for anemia, thrombocytopenia. A skin biopsy showed a cellular infiltration in the papillary dermis, immunohistochemical staining of these cells was positive for CD1a. Which of the following is a characteristic finding in these cells?

- a. Cytoplasmic rodlike tubular structures look like tennis racket.
- b. Cell with abnormal nuclear contour and ring iron deposits.
- c. Harbor BCR-ABL gene.
- d. They are Hyperdiploidy.
- e. Express TdT.

17) The most common organ injured following blunt trauma is?

- a. Liver.
- b. Spleen.
- c. Small bowel.
- d. Large bowel.
- e. Uterus.

18) One of the following diseases and disorders is commonly associated with polyclonal gammopathy?

- a. Rheumatoid arthritis.
- b. Multiple myeloma.
- c. Smoldering myeloma.
- d. Monoclonal gammopathy of undetermined significance.
- e. Waldenstrom macroglobulinemia.

19) In the most widely used staging system for lymphomas, stage II means?

- a. Localized disease, single lymphoid region or single organ.
- b. Two or more lymphoid regions on the same side of the diaphragm.
- c. Two or more lymphoid regions above and below the diaphragm.
- d. Widespread disease with multiple organ involvements.
- e. Patient exhibit B symptoms (fever, weight loss, night sweats).

20) A 53 year-old female patient, who is diagnosed early with SLE (Systemic lupus erythematosus), presents with symptoms of anemia. Primary clinical evaluation along with CBC (Complete blood count) confirmed that, what is the next proper test to diagnose her anemic subtype?

- a. Serum vitamin B12 concentration.
- b. Serum iron indices.
- c. Coombs test.
- d. Hemoglobin electrophoresis.
- e. Bone marrow examination.

21) How do antimetabolites exert their cytotoxic effect?

- a. Inhibiting DNA synthesis by sliding between DNA base pairs.
- b. Inhibiting RNA synthesis by sliding between RNA base pairs.
- c. Acting as false metabolites in the microtubules.
- d. Acting as false substitutions in the production of nucleic acids.
- e. Promoting microtubule assembly and Stabilization.

22) Von Willebrand disease is one of the commonest blood coagulation disorders, it could be due genetic or acquired causes, what is correct about the disease?

- a. All mutations causing vWF disease are affecting quantitatively the gene product.
- b. The mutations affecting vWF gene are associated with reduction of Vlla factor.
- c. There are some subtypes of one of the types of vWF disease.
- d. The mutations affecting the gene encoding for vWF are not variable.
- e. Medications are not inducing vWF disease.

23) A patient complained of fever. bradycardia and rose maculopapular rash on his trunk must make you suspect?

- a. Brucella abortus.
- b. Brucella suis.
- c. Salmonella enteritidis.
- d. Salmonella typhimurium.
- e. Salmonella typhi.

24) Which of the following statements is true regarding the metabolic pathways in RBCs?

- a. All variants of glucose 6-phosphate dehydrogenase are accompanied by clinical consequences.
- b. The mutation 721G → T of pyruvate kinase is a missense mutation.
- c. Phosphoglucoseisomerase deficiency is not affecting reduced glutathione regeneration.
- d. Phosphoglycerate kinase deficiency shows 2, 3 biphosphoglycerate accumulation.
- e. Triacylglycerols synthesis in RBCs is not affected by triose phosphate isomerase deficiency.

25) One of the following is incorrect about Lymphopenia?

- a. Lymphopenia caused by acute viral infections stems from lymphocyte redistribution.
- b. It is the commonest form of leukopenia.
- c. Associated with rare congenital immunodeficiency diseases.
- d. Observed in advanced human immunodeficiency virus infection.
- e. Caused by high dose corticosteroids.

26) According to Elephantiasis: all of the followings are correct EXCEPT

- a. lymphadenitis and recurrent high fever every 8 to 10 weeks, which lasts 3 to 7 days.
- b. Lymphadenitis and lymphangitis are due to circulating microfilaria.
- c. Protection can be by avoidance of mosquitoes in endemic areas.
- d. Cooler climate reduces symptoms.
- e. Not all infections lead to elephantiasis.

27) Vitamin K is important for synthesis of which of the following clotting factors?

- 3. IV and VIII.
- b. II and VII.
- c. I and IV.
- d. XI and XII.
- e. I and III.

28) All following matches about immunosuppressants are true EXCEPT?

- a. Cyclosporine- Calcineurin inhibitor.
- b. Tacrolimus side effects- neurotoxicity.
- c. Azathioprine- inhibits purine synthesis.
- d. Muromonab- against CD28 antigen.
- e. Basiliximab- IL-2 receptor antagonist

29) The antigen for cluster of differentiation present in?

- a. Granular leucocytes.
- b. Different types of lymphocytes.
- c. Glycocalyx of platelets.
- d. Glycocalyx of RBCs.
- e. Monocytes and macrophages.

30) Glucose 6 phosphate dehydrogenase is the key regulatory enzyme in pentose phosphate pathway. responsible for reducing glutathione, what is wrong about the disease caused by the deficiency of this enzyme?

- a. Uncontrolled diabetes mellitus is one of the causes of the hemolytic crises.
- b. May be associated with acute renal failure.
- c. It is an X-linked disorder but females may show its manifestations.
- d. All variants encoding for the enzyme result in clinical consequences.
- e. The best way for the proper diagnosis of the disease is by genetic analysis.

31) A 48 years old man came to the liver clinic in a hospital. after the examination. clinically he was diagnosed of having jaundice due to hepatocellular failure, all of the following investigations for such a case are correct EXCEPT?

- a. No increase in reticulocytes %.
- b. Both types of bilirubin are elevated.
- c. All liver enzymes are elevated.
- d. Urine urobilinogen is reduced.
- e. Vitamin K cannot prolonged PT.

32) The most common organ injured following penetrating trauma to the abdomen is?

- a. Liver.
- b. Spleen.
- c. Small bowel.
- d. Large bowel.
- e. Urinary bladder.

33) A 22-year-old woman complained of a 2-year history of arthralgia and her skin was pale. Laboratory studies show total RBC count of 4.7 million/mm³. hemoglobin of 11.5 g/dL. platelet count of 200,000/mm³. and WBC count of 5000/mm³, The peripheral blood smear shows hypochromic and microcytic RBCs. Hemoglobin electrophoresis shows an elevated hemoglobin A2 level of about 5.8%. What is the most likely diagnosis?

- a. Autoimmune hemolytic anemia.
- b. Beta-Thalassemia minor.
- c. Anemia of chronic disease.
- d. Iron deficiency anemia.
- e. Infection with Malaria.

34) A 71-year-old man presented with multiple painless masses on the left side of his neck for the past 3 months. On examination he has firm, non-tender, lymph nodes palpable in left posterior cervical region. No splenomegaly or hepatomegaly. Complete blood count is unremarkable. Histopathologic examination of the cervical lymph node shows numerous crowded nodules of small cleaved cells with occasional larger cells with several nucleoli. Which of the following markers will be most likely expressed by these cells?

- a. CD4.
- b. CD5.
- c. CD10.
- d. TdT.
- e. CD30.

35) Intravascular hemolysis of erythrocytes is associated initially with increased the rate of expression of the gene encoding for this protein?

- a. Transferrin.
- b. Hemosidrin.
- c. Ferritin.
- d. Haptoglobin.
- e. Methemalbumin.

36) A 12-year-old male patient has suffered from a long history of spontaneous bleeding from mucous membranes without any deep muscle hemorrhage. Which of the following are the correct laboratory test findings that consistent with this case?

- a. Prolonged PT, PTT and BT.
- b. Prolonged PTT and PT with normal BT.
- c. Specific assay for factor IX or factor VIII less than 2%.
- d. Prolonged BT, normal PT and PTT and Platelets less than 100,000/mm³.
- e. Prolonged BT and normal PT and PTT'.

37) All the following are indications and clinical uses of HEPARIN EXCEPT?

- a. Treatment of venous thrombosis.
- b. Treatment of MI.
- c. Treatment of pulmonary embolism.
- d. Prophylactic in blood transfusion to prevent clotting.
- e. Treatment of osteoporosis.

38) The defensive function of plasma protein is due to?

- a. Albumin.
- b. Globulins. XXX
- c. Fibrinogen.
- d. Prothrombin.
- 9. Both Albumin & Fibrinogen.

39) Heparin is characterized by the following. EXCEPT?

- a. It prevents blood coagulation in vivo only.
- b. It is sulfate muco—polysaccharide.
- c. It is formed by mast cells and basophils.
- d. Its antidote is protamine sulphate.
- e. Anti-thrombocytic.

40) The following are adverse effects of iron sucrose, given IM EXCEPT?

- a. Dizziness and disorientation.
- b. Brown-black staining at IM injection site.
- c. Does not cause hypotension.
- d. Lower incidence of anaphylaxis than IV iron dextran.
- e. Metallic taste in mouth.

41) A 4 years old boy came to the hospital suffering from burning sensation in the exposed areas of the skin to sun light, his blood analysis reveals the presence of porphyrin in the erythrocytes, which one of the following genes is suspected to have a mutation responsible for this disease?

- a. Coproporphyrinogen oxidase.
- b. Uroporphyrinogen decarboxylase.
- c. Ferrochelatase.
- d. ALA synthase.
- 9. Uroporphyrinogen synthase III.

42) Agglutinins of ABO system?

- a. Are monovalent.
- b. Can cross placental barrier.
- c. Belong to IgM type of immunoglobulins.
- d. Are present on RBCs. XXX
- 8. Are present on WBCs.

43) One of these paired cytotoxic agents have similar mechanism of action?

- a. Vincristine and paclitaxel.
- b. Etoposide and paclitaxel.
- c. Docetaxel and paclitaxel.
- d. Docetaxel and etoposide.
- e. Vincristine and etoposide.

44) Brucella, one is WRONG?

- a. Gram negative coccobacilli.
- b. Motile.
- c. Human usually get infected from animal products such as ingesting goat raw milk.
- d. Results in granulomatous infection that can involve almost all organs.
- e. Blood culture is necessary for diagnosis.

45) One of the following parasites are acquired through consumption of infected raw or undercooked meat containing oocyst?

- a. Fasciola hepatica.
- b. Wuchereria bancrofti.
- c. Plasmodium malariae.
- d. Babesia microti.
- e. Toxoplasma gondii.

46) Anemia occurs at all stages of the life cycle, but is more prevalent in?

- a. School age.
- b. Pregnant women.
- c. Preschool children and pregnant women.
- d. Men (above 15 years).
- e. Non pregnant women.

47) Epidemic typhus is caused by?

- a. R. rickettsii.
- b. O. tsutsugamushi.
- c. R. prowazekii.
- d. R. typhi.
- e. Coxiella burnetii.

48) The asymmetric substitution of the tetrapyrrole ring of heme starts with the activity of the following enzyme?

- a. ALA synthase.
- b. PBG synthase.
- c. Uroporphyrinogen synthase III.
- d. Coproporphyrinogen oxidase.
- e. Coproporphyrinogen decarboxylase.

49) Which of the following is TRUE concerning Erythroblastosis fetalis (hemolytic disease of the newborn)?

- a. it occurs when a Rh+ mother has an Rh- child.
- b. it is prevented by giving the mother a blood transfusion.
- c. A complete blood transfusion after the first birth will prevent HDN.
- d. The father of the child has to be Rh+.
- e. This occurs when a Rh+ mother has an Rh+ child.

50) The characteristic 4 ring form trophozoites are present in the following parasite?

- a. Leishmania tropica.
- b. Entamoeba histolytica.
- c. Trypanosoma brucei.
- d. Plasmodium malariae.
- e. Babesia microti.

51) The following are false about vitamin B12 deficiency EXCEPT?

- a. It must be converted to deoxyadenosyl cobalamine to become useful for erythropoiesis.
- b. It leads to trapping of tetrahydrofolate in tissues.
- c. Folate administration corrects the clinical features of vitamin-B12 deficiency.
- d. Anemia is due to defective synthesis of deoxythymidylate for DNA synthesis in bone marrow.
- e. It is best treated by IV administration of folic acid.

52) One of the following pairs between the hematopoietic lineage and the dysplastic features that could be observed in myelodysplastic syndrome is wrongly matched?

- a. Erythroid: Nuclear bridging.
- b. Megakaryocyte: Pawn ball cell.
- c. Myeloid: Hypogranulation.
- d. Myeloid: Macrocytosis.
- e. Erythroid: Pseudo-Pelger—Huet cells.

53) A 32-year-old female patient who presents with petechial hemorrhages, easy bruising, and mucosal bleeding. Her past medical history was free. Laboratory studies show total RBC count of 4.7 million/mm³, hemoglobin of 13.5 g/dL. Platelet count of 70,000/mm³, and WBC count of 5000/mm³. Which of the following are the correct laboratory test findings that consistent with this case?

- a. Prolonged PT, PTT and BT.
- b. Prolonged PTT and PT with normal BT.
- c. Mild prolongation of BT and normal PT and PTT.
- d. Prolonged PT and normal BT and PTT.
- e. Mild prolongation of PTT and normal BT and PT.

54) The defensive function of neutrophils is achieved by the following. EXCEPT?

- a. Margination.
- b. Ameboid movement.
- c. Phagocytosing bacteria and killing them by hydrogen peroxide.
- d. Producing fibrinolysis.
- e. Opsonization

55) The discoid shape of the blood platelets is preserved by?

- a. Actin and myosin in the granulomere.
- b. Spectrin and ankyrin.
- c. Bundles of microtubules in the granulomere.
- d. Open canalicular system.
- e. Bundles of microtubules in hyalomere.

56) All following are true about immunosuppressants EXCEPT?

- a. Cyclosporine can be given orally or intravenously.
- b. Cyclosporine is more potent than tacrolimus.
- c. Combination of sirolimus and cyclosporine is synergistic.
- d. Mycophenolate is given orally.
- e. Azathioprine is prodrug that is converted to 6-mercaptopurine.

57) A 21-year-old female. blood type B. Her platelet count is 75,000/ul. She will need blood transfusion before and during surgery. Which of the following blood types would be used to collect platelets that are compatible with the patient?

- a. Type A only.
- b. Type B only.
- c. Type AB only.
- d. Types B and O.
- e. Types A and B.

58) Micropages are leucocytes referring to?

- a. Monocytes.
- b. T-lymphocytes.
- c. Neutrophils. XXX
- d. Natural killer cells.
- e. Mast cell of the blood.

59) Bubonic plague is transmitted by which of the followings?

- a. Xenopsylla cheopis flea bite.
- b. Sexually.
- c. Fecally.
- d. Armored mites bite.
- e. African ticks bite.

60) Concerning WARFARIN, all the following sentences are true EXCEPT?

- a. It is structurally related to vitamin K.
- b. It inhibits synthesis of clotting factors TWO, SEVEN, NINE and TEN.
- c. It has delay onset of action, eight to twelve hours. .
- d. It blocks adenyl cyclase enzyme.
- e. Maximum effect obtained after three to five days.

61) A 19-year-old college freshman has a sore throat, sore and enlarging cervical lymph nodes, and a fever. The student is also greatly fatigued. A diagnosis of infectious mononucleosis is made. The MOST rapid, and clinically useful test to make this diagnosis is?

- a. IgG antibody to viral capsid antigen.
- b. Parvovirus B19 IgM antibodies.
- c. Antibodies to EBV membrane antigen.
- d. Antibody to EBV nuclear antigen.
- e. IgM antibody to viral capsid antigen.

62) Protein electrophoresis is showing dense Alpha2 globulin band when there is increase in the concentration of the following plasma proteins?

- a. Transcortin and haptoglobin.
- b. Ceruloplasmin and Alpha 2 macroglobulin.
- c. a fetoprotein, thyroid binding protein.
- d. Polyclonal antibodies and transcortin.
- e. C-reactive protein and B lipoprotein.

63) Which of the followings is INCORRECT about the thymus?

- a. Divided into lobes and incomplete lobules.
- b. Has afferent and efferent lymphatic's vessels.
- c. The cortex of the lobule has epithelial reticular cells.
- d. The medulla of the lobule has Hassall's corpuscles.
- e. Involutates after puberty.

64) A 43 year old female presented with right chest pain, non-radiating for 2 months duration. Chest CT scan revealed well defined hypodense soft tissue mass involving the fifth rib and the parietal chest wall. Histopathologic examination of the mass revealed an infiltration of mature plasma cells. M protein is absent in the blood, urine is negative for Bence jones proteins, and the bone marrow biopsy is normal. What is the most likely diagnosis?

- a. Smoldering myeloma.
- b. Solitary Plasmacytoma.
- c. Monoclonal gammopathy of undetermined significance.
- d. Lymphoplasmacytic lymphoma.
- e. Waldenstrdm macroglobulinemia.

65) Regarding the thoracic duct: Select the wrong choice?

- a. Lies on the bodies of the inferior seven thoracic vertebrae.
- b. At the level of the T4—T6 vertebrae, the thoracic duct crosses to the left.
- c. It often receives the jugular, subclavian, and bronchomediastinal lymphatic trunks.
- d. Conveys most lymph of the body to the right venous angle.
- e. Originates from the cistema chyli in the abdomen.

66) Which one of the following is least likely to be a mechanism of cancer cell resistance to antineoplastic drugs?

- a. Change in properties of a target enzyme.
- b. Decreased activity of activating enzymes.
- c. Increase in drug—metabolizing cytochrome P450.
- d. Increase in DNA repair.
- e. Increase in production of drug-trapping Molecules.

67) A 50-year-old man has experienced minor fatigue for the past 7 months. His medical history and physical examination are unremarkable. Laboratory studies show hemoglobin of 11.0 g/dL, MCV of 73 μm^3 , platelet count of 300,000/ mm^3 , and WBC count of 8000/ mm^3 . Which of the following is the most sensitive and cost-effective test that the physician should order to help to determine the cause of these findings?

- a. Serum iron.
- b. Serum transferrin.
- c. Serum ferritin.
- d. Serum haptoglobin.
- e. Hemoglobin electrophoresis.

68) A 30-year-old man has complained recently of passing dark brown urine. By taking his medical history, he said that he recently had taken antimalarial drug. On the physical examination, he appears pale, afebrile and there is no organomegaly. Laboratory studies revealed that his serum haptoglobin level is decreased. Which of the following is the most likely explanation of these findings?

- a. Oxidative injury to hemoglobin.
- b. Reduced deformability of the RBC membrane.
- c. Increased susceptibility to lysis by complement.
- d. Impaired globin synthesis.
- e. Hemolysis of antibody-coated cells.

69) One of the following statements is FALSE?

- a. Hydroxyurea may decrease risk of sickling and microinfarcts in patients with HbS.
- b. Large doses of erythropoetin in renal anemia can increase risk of thrombosis.
- c. Oprelevkin is useful to stimulate platelet production and activity after cancer chemotherapy.
- d. Mutation of JAK 2 gene stimulates transferrin receptors by bone marrow progenitors.
- e. Molograstim (GM-CSF) may increase peripheral blood neutrophils, monocytes, and PBSCs.

70) During granulopoiesis. the appearance of the specific granules in the cytoplasm starts at the stage of?

- a. Myeloblast.
- b. Promyelocytes.
- c. Metamyelocytes.
- d. Myelocytes.
- e. Mature granulocytes.

71) The main plasma protein that affect osmotic pressure of plasma is?

- a. Gamma Globulins.
- b. Albumin.
- c. Prothrombin.
- d. Fibrinogen.
- e. Alpha Globulins.

72) Of the WHO recommendations for reduction of anemia among females?

- a. Intermittent oral iron and folic acid supplementation during pregnancy.
- b. Iron supplementation in postpartum period for at least one month.
- c. Daily iron and folic acid supplementation for females in the reproductive age.
- d. Daily iron supplementation during infancy.
- e. Daily oral iron and folic acid supplementation during pregnancy.

73) Erthropoitin hormone is produced by?

- a. Liver.
- b. Spleen.
- c. Kidney.
- d. Liver and kidney.
- e. Bone marrow.

74) A 15-year—old male patient has suffered from a long history of bleeding for hours or days after the injury as well as recurrent painful haemarthroses. The laboratory test showed normal BT and PT while the PTT is prolonged. Which of the following is the most sensitive test that the physician should order to help to determine the cause of these findings?

- a. Plasma vWF concentration.
- b. Specific assay for factor IX.
- c. Specific assay for factor VIII.
- d. Plasma vWF concentration and specific assay for factor IX.
- e. Specific assay for factor IX and specific assay for factor VIII.

75) The peak of synthesis of the hemoglobin proteins occurs during the stage of the along the erythropoeitic process?

- a. CFU-erythrocytes.
- b. Proerythroblast.
- c. Basophil erythroblast.
- d. Polychromatophil erythroblast.
- e. Normoblast.

76) In a patient with diffuse lymphoma, the oncologist suggests a treatment strategy that involves the initial administration of doxorubicin to obtain a significant log— kill, followed by the cell cycle—specific drugs cytarabine and Vincristine. This therapeutic strategy is called?

- a. Pulse therapy.
- b. Recruitment.
- c. Rescue therapy.
- d. Sequential blockade.
- e. Synchrony

77) In which of the following sites will be abnormal RBCs be removed from the circulation?

- a. Thymic cortex.
- b. Periarterial lymphoid sheath.
- c. Medullary sinuses of lymph nodes.
- d. Thymic medulla.
- e. Marginal zone.

78) One of the following is not among the morphologic features observed in the bone marrow of patients with primary myelofibrosis?

- a. Diffusely fibrotic.
- b. Erythroid dysplastic changes.
- c. Clustered large megakaryocytes.
- d. Thick irregular bone trabeculae.
- e. Hypocellularity.

79) Prevention of blood clotting by calcium removal include the following EXCEPT?

- a. Heparin.
- b. Na⁺ oxalate.
- c. Na⁺ citrate.
- d. EDTA.
- e. K⁺ oxalate.

80) A 53 year old female patient presented with a suspicious palpable breast mass with a clinical and radiological suspicion of malignancy. The histological examination of a biopsy from the mass confirmed the diagnosis of invasive ductal carcinoma. Mastectomy and axillary lymph nodes dissection was scheduled for this patient. Which of the following findings will you most likely detect in this patient axillary lymph nodes?

- a. Sinus histiocytosis.
- b. Paracortical hyperplasia.
- c. Follicular hyperplasia.
- d. Granulomatous lymphadenitis.
- e. Acute Nonspecific Lymphadenitis.

أنتهى
بالتوفيق لكم جميعاً

