**Memory Test - Blood_Hematology_Class Test_Online_Foundation_1**

Total Mark: 100
Time: 90 Min

**1. Causes of Neutropenia**
A) Aplastic anemia
B) Daunorubicin
C) Congenital (Kostmann's syndrome)
D) Chronic myeloid leukemia
E) Idiaopathic thrombocytopenia purpura
**Answer:** T, F, T, F, F
**Discussion:** b) Daunorubicin causes BM suppression
**Reference:**

**2. DIC is characterized by**
A) Thrombocytopenia
B) Fall in the levels of coagulation factor V & VIII
C) Pancytopenia
D) Decrease in prothrombin time
E) Rising in level of fibrinogen
**Answer:** T, T, F, F, F
**Discussion:**
**Reference:** (Robins P- 664)

**3. Erythropoietin is produced by**
A) Spleen
B) Liver
C) Kidney
D) Thyroid
E) Heart
**Answer:** T, T, T, F, F
**Discussion:** b) In liver=10% c) In liver= Kidney 90% (Ref: Hoffbrand 13th/Page-13) In Guyton= Kidney=90th Page-416 Liver=10% Explanation: In Adult 85% from kidney & these comes from the liver. Both these organ contain the mRNA for erythropoietin . con also be extracted from the spleen & salivary glands But these tissue do not contain mRNA &do not manufacture the hormon

**Reference:** [Ref: Ganong physiology/25th/P-706]

**4. In the circulation-**
A) RBC survive for 16-18 weeks
B) Platelet have life span of 8-10 days
C) Life span of Monocyte in blood-72 hours
D) The half life of neutrophil 6-8 hours
E) Some of the red cells are nucleated
**Answer:** T, T, F, F, F
**Discussion:** Mitochondira- endoplasmc reticulum golicomplex nucleus are absetn (Ref: Sembulingum 8th/Page-67,
**Reference:** (Ref: Guyton 12th/Page-419)

**5. Platelet activation is caused by**
A) Collagen fibers
B) ADP
C) Epinephrine
D) Thromboplastin
E) Prothrombin
**Answer:** T, T, T, F, F
**Discussion:** Platelet activation is caused by 1. Collagen 2. ADP 3. Thrombin 4. Adrenaline (epinephrine) 5. Thromboxane A2
**Reference:** (Ref: Sembulingum 8th/Page-129) [Ref: Guyton 13th P-483]

**6. Poor prognosis of multiple myeloma**
A) Hyperviscosity
B) Low albumin
C) □2 microglobulin
D) Hypercalcemia
E) Low Hb
**Answer:** F, T, T, T, T
**Discussion:**
**Reference:** (Ref: Hoffbrand 7th Page-231-232)

**7. The following changes occur in pernicious anaemia**
A) Raised LDH
B) Raised serum bilirubin
C) Increased reticulocyte count
D) Increased platelet count
E) Hyper-segmented neutrophill
**Answer:** T, T, F, F, T
**Discussion:** As result of marroweu break done Reduced
**Reference:** (Ref: Khaleque pathology P-225 + Davidson P-943, 944) (Ref: Hoffbrand 7th Page-56)

**8. Anemia in chronic kidney disease is due to**
A) Deficiency of erythropoietin.
B) Vitamin B12 deficiency
C) Increased blood loss
D) Toxic effects of uremia on marrow precursor cells
E) Decreased life span of red blood cell
**Answer:** T, F, T, T, T
**Discussion:**
**Reference:**

**9. Causes of acquired aplastic anemia**
A) Viral hepatitis
B) Radiation
C) Paroxysmal nocturnal hemoglobinuria
D) Plasmodium falciparum
E) Azathioprine
**Answer:** T, T, T, F, T
**Discussion:**
**Reference:**

**10. Causes of prolonged prothrombin time are**
A) Treatment with oral anticoagulant drugs
B) DIC
C) Haemophilia A
D) Deficiency of factor XI and XII
E) Haemolytic disease of newborn
**Answer:** T, T, F, F, F
**Discussion:** Prothrombin time is increased in : Congenital afibrinogenemia Amyloid purpura Obstructive jaundice Severe fibrinogen deficiency Vitamin K deficency or Warfarin Deficiencies of factors II,V, VII or X Disseminated intravascular Coagulation (DIC) Hepatocellar disease: Liver failure
**Reference:** (Ref: Hoffbrand 7th Page-299)

**11. Features of haemolysis are**
A) Increased bilirubin
B) Increased LDH
C) Decreased reticulocyte
D) Increased haptoglobin
E) Increased Urobilinogen
**Answer:** T, T, F, F, T
**Discussion:**
**Reference:** (Ref: Davidson 23rd, Page-946)

**12. Followings are the causes of monoclonal paraproteinaemiae**
A) Infection
B) Sarcoidosis
C) Autoimmune disorder
D) Multiple myeloma
E) Waldenstorm macroglobinaemia
**Answer:** F, F, F, T, T
**Discussion:**
**Reference:**

**13. Hereditary spherocytosis**
A) Is an autosomal recessive disorder
B) May have no family history in 25 o/a of cases
C) May ne associated with pigment gall stone
D) Occurs due to deficiency of red cell membrane enzyme
E) Is confirmed by osmotic fragility test
**Answer:** F, T, T, F, F
**Discussion:** a) autosomal dominant b) New case c) In 50?se
**Reference:**

**14. Human plasma albumin -**
A) Contributes more to plasma colloid osmotic pressure than globulin
B) Filters freely at of the renal glomerulus
C) Is negatively charged at the normal pH of blood
D) Carries carbon dioxide in blood
E) Lacks the essential amino acids contents
**Answer:** T, F, T, T, F
**Discussion:** Explanation: a. Albumin contributes 80% and Globulin 20% of colloidal osmotic pressure. b. Only a small amount is filtered normally and this is reabsorbed by the tubules c. Blood pH is well above albumin's isoelectric point so negative charges predominate d. As carbamino protein (R-NH2-CO2-R-NHCOOH) e. It is a first class protein containing essential and non essential amino acids.
**Reference:** [Ref: Guyton 13th P-196 + Roddy 6th Q-10 P-3]

**15. In iron deficiency anemia shows**
A) Low serum iron
B) Low serum ferritin
C) High percentage of saturation of iron
D) Low total iron binding capacity
E) Low marrow sideroblast
**Answer:** T, T, F, F, T
**Discussion:**
**Reference:** [Ref:Hoffbrand 7th/Table-3.7/Page-38)

**16. In megaloblastic anaemia**
A) High reticulocyte
B) Neutrophil hypersegmentation
C) Raised LDH
D) Raised S. bilirubin
E) All have neuropathy
**Answer:** F, T, T, T, F
**Discussion:**
**Reference:** (Ref: Hoffbrand 7th/Page-55-56)

**17. Microcytic hypochromic anemia can be found in**
A) Iron deficiency anemia
B) Thalassemia
C) Hypothyroidism
D) Sideroblastic anemia
E) Evan's syndrome
**Answer:** T, T, F, T, F
**Discussion:**
**Reference:** (Ref: ABM Abdullah 5th Page-255)

**18. Mononuclear phagocytic system consists of**
A) Sinus histiocytes
B) Fibroblasts
C) Alveolar macrophages
D) Plasma cells
E) Kupffer cells
**Answer:** T, F, T, F, T
**Discussion:**
**Reference:** (Ref: Hoffbrand 7th Page-92)

**19. Myeloproliferative disorders include –**
A) Myelodysplastic syndrome
B) Myelofibrosis
C) Essential thrombocythemia
D) CLL
E) Polycythemia vera
**Answer:** F, T, T, F, T
**Discussion:**
**Reference:** (Ref: Hoffbrand 7th Page-166)

**20. Prothrombin activator consists of**
A) Prothrombin
B) Phospholipids
C) Factor V
D) Factor IX
E) Activated factor X
**Answer:** F, T, T, F, T
**Discussion:** Prothrombin activators 1. Factor x (activated) 2. Phospholipid 3. Ca++ 4. Factor V
**Reference:** [Ref: Guyton 13th/P-487,488/fig: 37.4]

**21. Regarding WBC**
A) Fibroblast come from lymphocyte
B) Eosinophil is a phagocytic cell
C) Eosinophil contain major basic protein
D) Monocyte is smallest
E) Bsophil is a phagocytic cell
**Answer:** T, T, T, F, T
**Discussion:**
**Reference:** (Ref: Sembulingum 8th Page-102,108, Ref: Hoffbrand 7th Page-88)

**22. Stem cells -**
A) Are characterized by prolonged self renewal
B) Have the capacity to differentiate into specialized cells
C) Slam cells from embryos are pluripotent
D) Are not found in adult
E) can be used in therapeutic purpose
**Answer:** T, T, T, F, T
**Discussion:** Exp : Stem cell are not specialized cell responsive to physiological stimulation
**Reference:**

**23. The following enzyme deficiencise lead to hemolytic anemia**
A) Lactate dehydrogenase
B) Pyruvate kinase
C) Pyruvater dehydrogenase complex
D) Glucose 6 phosphate dehydrogenase
E) NADPH Oxidase
**Answer:** F, T, F, T, F
**Discussion:** Red all enzyme deficiency 1) PK 2) GBP 3) Pyrimidinl 5' nucleotidase
**Reference:**

**24. The Philadelphia chromosome is**
A) Found only in neutrophil
B) A group chromosome, Number 22
C) Diagnostic of chronic lymphatic leukemia
D) Not found in lymphocytes.
E) Diagnostic of CML.
**Answer:** F, T, F, F, T
**Discussion:**
**Reference:** (Ref: Hoffbrand 7th Page-157)

**25. Viscosity of blood rises in**
A) Acidosis
B) Cyanosis
C) Jaundice
D) Anaemia
E) Oedema
**Answer:** T, T, T, F, F
**Discussion:** Viscosity decreaged in -Aneia -Fever -Excerise -Edema -Malaria -Lymphocytic leukemia -Raised remperature (Ref: CC Chartterjee 12th/Paeg-67) Explanation: Viscosity of blood increased by 1. Acidosis 2. Polycythemia 3. Diabetes mellitus 4. Multiple myeloma 5. Jaundice 6. Leukemia 7. Monocolonal gammopathy such as sickle cell anaemia 8. Sepsis 9. Cold temp 10. Cyanosis
**Reference:** [Ref: Guyton 13th P-245 + Orten 10th P-895]

**26. A 16-year-old boy presents to his GP complaining of nosebleeds and bleeding after brushing his teeth. He is unsure of how long this has been occurring but decided to seek advice after having to continually excuse himself from lessons. On examination you notice he has some skin bruises. A blood test shows a prolonged bleeding time and activated partial thromboplastin time (APTT), while platelet count and prothrombin times are all normal. The most likely diagnosis is:**
A) Von Willebrand disease
B) Liver disease
C) Disseminated intravascular coagulation
D) Congenital afibrinogenaemia
E) Glanzmann's thrombasthenia
**Answer:** A
**Discussion:**
**Reference:**

**27. A 30 year old female patient come to you with superficial bruising, epistaxis, menorrhagia) Investigation shows platelet count normal, BT and CT both prolonged) Which is the most likely diagnosis?**
A) HemophiliaA
B) Christmas disease
C) Von Willebrand disease
D) DIC
E) Thrombotic thrombocytopenic disorder
**Answer:** C
**Discussion:**
**Reference:** [Davidson 23th edition p 974]

**28. A 36 Y old man present with night time cough and wheezing over the previous 2 months. He has a previous history of eczema) What findings in his full blood count would be in fitting with the scenario and help towards the diagnosis.**
A) Basophil
B) Eosinophil
C) Lymphocytosis
D) Monocytosis
E) Neutrophilia
**Answer:** B
**Discussion:**
**Reference:** [Ref: Kahaleque/P-189]

**29. A child develops oligouria, hypertension, diarrhea, vomiting icteric) CBC shows thrombocytopenia, which is most likely diagnosis**
A) Cardia hemolytic anemia
B) Henoch-Scholein purpura
C) Thrombotic thrombocytopenic purpura
D) Hemolytic uremic syndrome
E) March hemoglobinuria
**Answer:** D
**Discussion:**
**Reference:** [Ref: Gruchy 5th /P-207]

**30. A known case of CKD patient came to you with anemia) You are going to treat the patient by erythropoietin. Before starting erythropoietin therapy, which levels should you correct?**
A) Vitamin B12
B) Thyroid hormone
C) Iron
D) Folic acid
E) Growth hormone
**Answer:** C
**Discussion:** Exp: Erythropoietin is less effective in the presence of iron def, active inflamation, malignancy.
**Reference:** [Davidson 23th Edition p 418]

**31. A patient is admitted into hospital for Hb-6g/dL, for this purpose this patient was treated with 3 unit fresh human blood) After this procedure patient complains of perioral numbness, paraesthesia,spasm in hand) What is the next possible treatment of this patient**
A) Inj. K+
B) Inj. Na+
C) Inj. Calcium
D) I/V saline
E) Inj. Lasix
**Answer:** C
**Discussion:**
**Reference:**

**32. A patient is getting clopidogrel. Which of the following investigation finding is appropriate**
A) Platelet count: Low
B) PFA100: Abnormal
C) PT: Prolonged
D) INR: More than 1.5
E) PTTK: Prolonged
**Answer:** B
**Discussion:**
**Reference:**

**33. A patient, known case of MM comes to emergency department feeling irritable, restlessness. On investigation findings, serum calcium level was high, which is the most immediate treatment of this patient**
A) I/V analgesic
B) Bisphonates for hypercalcemia
C) Allopurinol to prevent nephropathy
D) Plasmapheresis for hyperviscosity
E) I/V normal saline
**Answer:** E
**Discussion:**
**Reference:**

**34. Absolute indication of splenectomy**
A) ITP
B) Hereditary spherocytosis
C) Hereditary elliptocytosis
D) Thalassemia major
E) Felly's Syndrome
**Answer:** B
**Discussion:**
**Reference:** [de Gruchy 5th Edition p 358]

**35. Adult life haematopaetic marrow is confined to central skeleton due to**
A) Central skeleton contains yellow marrow
B) Central skeleton is devoid of red marrow
C) Fatty replacement of marrow throughout long bone
D) Lack of yellow marrow in long bones
E) Long bone. bone marrow are largely infiltrated by stromal cells
**Answer:** C
**Discussion:**
**Reference:**

**36. An 18 year old man presented to emergency department with a large haemarthrosis in Left knee that developed after he was tripped playing football.Which of the following abnormal investigation confirms that he is suffering from Hemophilia B**
A) PT
B) INR
C) PFA
D) APTT
E) Factor VIIIC activirty
**Answer:** D
**Discussion:**
**Reference:** [Ref : Davidson's 23rd P-971-973,Coagulation disorder]

**37. An 31 year old woman had recently undergone investigation for menorrhagia and had been diagnosed with von will brandi disease.Aside from the menorrhagia she had no h/o excessive bleeding.She was due to visit her dentist in 4 days time for a tooth extraction .What would be the most appropriate bleeding prophylaxis for her extraction**
A) Desmopressim
B) Factor VIII concentrate
C) Protamine
D) Prothrombin complex concentrate
E) Vitamin k
**Answer:** A
**Discussion:**
**Reference:** [Ref : Davidson's 23rd P-974]

**38. Bone marrow findings of megaloblastic anemia differs from iron deficiency anemia by**
A) Increased cellularity
B) Ragged cytoplasm
C) Giant metamyelocyte
D) Non-ring sideroblast
E) Increased iron in stores
**Answer:** E
**Discussion:**
**Reference:**

**39. Clopidogrel is an antiplatelet drug in which it binds**
A) Glycoprotein IIb/IIIa
B) Glycoprotein Ib/V/IX
C) Glycoprotein VI
D) Glycoprotein Ia/IIa
E) ADP receptor
**Answer:** E
**Discussion:**
**Reference:**

**40. Erythropoietin is a hormone which is a**
A) Protein hormone
B) Polypeptide hormone
C) Steroid hormone
D) Thyrosine derivative
E) Glycoprotein
**Answer:** E
**Discussion:**
**Reference:** [Ganong 26th editionPg:696]

**41. Marked ineffective erythropoiesis is biochemically suggested by**
A) Increased conjugated bilirubin
B) Increased LDH
C) Reticulocytosis
D) Bone marrow hyperplasia
E) Pancytopenia
**Answer:** B
**Discussion:**
**Reference:** [Ref: Hoff brand 7th ed /P-25]

**42. Most common symptoms of megaloblastic anemia**
A) Breathlessness
B) Parasthesine
C) Malaise
D) Sore mouth
E) Poor memory
**Answer:** C
**Discussion:** Exp: a).50%, b).80%, c). 90, d).20%
**Reference:** [Davidson 23th Edition p 943]

**43. Narrowest capillary in the circulation are in**

A) Liver
B) Kidney
C) Spleen
D) Brain
E) Lung
**Answer:** C
**Discussion:**
**Reference:** [Davidson 23th edition Pg:947]

**44. Warfarin dose monitoring mainly by which factors**
A) F VII
B) V VIII
C) F IX
D) F X
E) F II
**Answer:** A
**Discussion:** (PT depends on I, II, V, VII, IX,X; factor VII has shortest half life)
**Reference:**

**45. Which electrolyte is important for coagulation**
A) K+
B) Na+
C) Ca2+
D) SO4-
E) PO4-
**Answer:** C
**Discussion:**
**Reference:** [Ref: Ganong/25th/P-564]

**46. Which parameter is most specific for diagnosing DIC**
A) Platelet Count
B) FDP
C) APTT
D) D-dimer
E) Fibrinogen
**Answer:** D
**Discussion:**
**Reference:** [Ref : Davidson's 23rd P-978]

**47. A 78 year old hypertensive woman attended a routine check up: She is having warfarin for recurrent pulmonary emboli. Her investigation revealed normal blood count with INR 9.1 addition to withholding warfarin what is the most appropriate next step**
A) Discontinue the drug
B) FFP
C) Oral vitamin K
D) Protamine
E) Prothrombin complex concentrate
**Answer:** C
**Discussion:**
**Reference:**

**48. Confirm diagnosis of hemophilia**
A) Raised APTT
B) Normal PT
C) Factor assay
D) Normal platelet function test
E) Normal BT
**Answer:** C
**Discussion:**
**Reference:**

**49. Example of non-immune thrombocy topenia**

A) ITP
B) Post transfusion purpura
C) Thrombotic purpura
D) Drug induced/ associated
E) Neonatal alloimmune thrombocytopenia
**Answer:** C
**Discussion:**
**Reference:**

**50. In adult life haemopietic marrow is confined to central skeleton except**
A) Liver
B) Spleen
C) Spleen
D) Proximal femur
E) Distal humerus
**Answer:** D
**Discussion:**
**Reference:** [Ref: Hoff brand 7th ed /P-2]