PHYSIOLOGY Team 433

Physiology Revision (MCQ's)

Contact us: PHT433@gmail.com

Important notes :

- **In White blood cells you have to focus on (Types of WBC's, their function and when they increase and decrease)**
- **In Blood Group lecture you have to focus on (the importance of blood transfusion and what happened if there is a mistake in blood transfusion)**
- **In Hemostasis lecture you have to focus on (intrinsic & extrinsic factors , importance of thrombin and plasmin)**

Hemostasis explanation (Animation) from doctor Mohammed Al otaibi

http://www.mhhe.com/biosci/esp/2002_general/Esp/folder_structure/tr/m1/s7/trm1s7_3.htm

Physiology revision

Body fluids & ELECTROLYTES

1-Infants have the greatest body water content due to:

A- Have High body fat.
B- High amount of skeletal muscles.
C- Have low body fat
D- Have High bone mass.

2-Which one of these is a Physiological factor that affects the Total Body Weight:

A- Vomiting.
B- Climate.
C- Diarrhea.
D- Diabetes.

3-Which one of these represents the 2/3 of Total Body Weight:

A- Intracellular fluid.
B- Extracellular fluid.
C- Interstitial fluid.
D- Transcellular fluid Compartment.

4-Which one is the major anion in Extracellular fluid:

A- Sodium.
B- Chloride
C- Potassium.
D- Phosphate.

5- Hypokalemia is:

A- Decrease in K concentration in the ECF.
B- Increase in Na concentration in ECF.
C- Increase in Na concentration in ICF.
D- Decrease in Na concentration in ECF.

6- Synovial fluid is one of :

A. Intracellular fluid.
B. Extracellular fluid.
C. Interstitial fluid.
D. Transcellular fluid Compartment.

7- The Largest source causing the water out of the body is:

A. Urine.
B. Sweat.
C. Feces.
D. Metabolism.

Cell membrane structure and transport across cell membrane:

8- which of the following is not a feature of peripheral proteins :

A. Hormone receptors
B. Structural channels
C. Present on one side
D. Cell surface antigens

9- which cell membrane compound enters in the immune reactions :

A. Lipids
B. Proteins
C. Carbohydrates
D. None

10-A non -carrier mediated transport down the concentration gradient :

A. Facilitated diffusion
B. Simple diffusion
C. Active transport
D. Osmosis

11-which of the following examples is not a primary active transport:

A. Na and K pump
B. Active transport of hydrogen
C. Co-transport and counter transport
D. Active transport of calcium

12-in co-transport and counter transport the downhill solute is:

A. potassium
B. hydrogen
C. sodium
D. calcium

13-the rate of simple diffusion depends on:

A. the temperature
B. the saturation
C. the amount of substance available
D. a&c

14-which is not a function of Na and K pump:

A. maintaining low Ca+2 concentration inside the cell
B. the basis of signal transmission
C. maintaining –ve potential inside the cell
D. maintaining Na and K concentration difference

Homeostasis:

15-Plasma and interstitial fluid are almost having the same composition except for high ……. Concentration in plasma:

A. Calcium
B. Potassium
C. Protein
D. Sodium

16-which of the following statements is correct:

A. Potassium is the chief anion in intracellular fluid
B. Phosphate is the chief cation in intracellular fluid
C. Sodium is the chief anion in extracellular fluid
D. Chloride is the chief anion in extracellular fluid

17-hyponatremia means:

A. Decrease in Na concentration in the ECF
B. Increase in Na concentration in the ECF
C. Decrease in Na concentration in the ICF
D. Increase in Na concentration in the ICF

18-Which of the following mechanisms of movement acquire energy:

A. simple diffusion
B. Facilitated transport
C. active transport
D. none of these

19-the cell will shrink if:

A. The solutes outside cell more than inside
B. The solutes outside cell less than inside
C. The solutes outside cell and inside are same
D. The water outside is more than water inside

20- 1/3 of the body's fluid:

A. Intracellular fluid
B. Extracellular fluid
C. plasma
D. interstitial fluid

21-One of the following is not transitional fluid:

A. CSF
B. GIT
C. Synovial fluid
D. plasma

Homeostasis 2:

22-A diuretic is which of the following?

A. a substance that causes water retention
B. a substance that causes increased urine production
C. a drug that may be administered in order to prevent water excretion in the urine
D. a drug that may be administered in order to reduce water loss through sweating

23- Thirst is caused by which of the following?

A. increased ECF volume
B. decreased ECF osmolarity
C. increased ECF osmolarity
D. decreased ICF volume

24-Drinking too much water could cause each of these changes EXCEPT:

A. decreased ECF osmolarity
B. decreased cell volumes
C. increased ECF volume
D. increased urine output

25-When the body has to get rid of excess water, the mechanism that is used is:

A. sweating
B. diarrhea
C. increased respiratory rate and depth
D. increased urine production

26-When large amounts of pure water are consumed

A. a fluid shift occurs and the volume of the ICF decreases.
B. the ECF becomes hypertonic to the ICF.
C. the volume of the ICF will increase due to osmosis.
D. osmolarities of the two compartments will be slightly lower.
E. the volume of the ECF will decrease.

27-What condition is caused by an increase in osmolarity and a decrease in volume of both ECF and ICF

A. Water deprivation
B. Diarrhea
C. renal insufficiency
D. Syndrome of inappropriate antidiuretic hormone (SIADH)

28-Infusion of isotonic solution NaCl shows

A. increase in ECF volume
B. decrease In ICF volume
C. increase in ECF osmolarity
D. decrease in ICF osmolarity

ANS (Autonomic Nervous System):

29-the location of parasympathetic ganglia is:

A. in the wall of organ
B. near vertebral bodies
C. near large blood vessel in gut

30-the preganglionic neurons in sympathetic nervous system are:

A. longer than postganglionic neurons
B. shorter than postganglionic neurons
C. the same length of postganglionic neurons

31-the sacral fibers from pelvic plexuses in parasympathetic nervous system innervate the:

A. heart and lung
B. reproductive organ
C. upper intestine

32-in the sympathetic nervous system Bronchial muscles are:

A. relaxed
B. contracted

33-the origin of the sympathetic nervous system arise from:

A. T1-L2
B. T2-L2
C. S2-S4

34-the Chemical or neural transmitter in postganglionic neurons in parasympathetic:

A. Acetylcholine (Ach).
B. Norepinephrine

35-the activation of α receptor in sympathetic nervous system leads to smooth muscles:

A. Contraction
B. Relaxation

36-In the sympathetic nervous system Preganglionic neurons are:

A. Myelinated
B. Unmyelinated

Blood Composition

37-Normal blood pH is?

A- 7.20
B- 7.40
C- 7.30
D- 7.50

38-Which of these are antibodies in plasma?

A- Albumin
B- Globulins Beta
C- Globulins Alpha
D- Globulins Gamma

39-The most abundant plasma proteins are?

A- Albumin
B- Globulins
C- Fibrinogen
D- Guanine

40-Thrombocytes are?

A- RBCs
B- WBCs
C- Platelets
D- Plasma

41-Which of the following is true about WBCs?

A- Have nuclei and lack of mitochondria
B- Have biconcave shape
C- Can move between the walls of capillaries
D- Have two types and regular shape

42-The percentage of Hematocrit is?

A- 55%
B- 45%
C- 99%
D- 0.1%

43-Low Concentration of …… will lead to edema

A- Fibrogen
B- Albumin
C- Globulins
D- Thrombin

Erythropoiesis

44-Which of the following is a site of RBC production in the last month of gestation?

A- Liver
B- Spleen
C- Bone morrow
D- Yolk sac

45-A committed stem cell that produces erythrocytes is called:

A-CFU-GM
B-CFU-E
C-CFU-M
D-None of above

46- RBC development is characterized by

A- Decrease in cell size
B- Disappearance of nucleus
C- Appearance of hemoglobin
D- All of them

47-Which of these stages contain nucleoli?

A- Proerythroblast
B- Basophilic erythroblast
C- Reticulocyte
D- Polychormatophilic erythroblast

48-At which of these stages the ejection of nucleus will take place?

A- Basophilic erythroblast
B- Polychromatophilic erythroblast
C- Reticulocyte
D- Normoblast

49- No more RBC's are produced after the age of:

A- 25
B- 20
C- 30
D- 15

50-Which of the following is a membranous bone that produce RBC?

A-Sternum
B-Clavicle
C-Patella
D-Radius

Regulation of Erythropoiesis

51-Which of the following may cause high levels of erythropoietin:

A- High Altitude
B- Polycythemia
C- Low Altitude
D- High glucose in blood

52-Princions Anemia may cause by:

A- Iron deficiency
B- Malabsorbation of folic acid
C- Chronic hemorrhage
D- Malabsorbation of Vitamin 12

53-Secondary Polycythemia can cause by:

A- Genetic defect
B- Erythema
C- Low Altitude
D- Hypoxia

54-Which of the following is necessary for iron metabolism?

A- Copper
B- Zinc
C- Cobalt
D- Magnesium

55-Which of the following statement is true?

A- Iron in food mostly in oxidized form (Ferrous)
B- Iron in food mostly in reduced form (Ferrous)
C- Iron in food mostly in oxidized form (Ferric)
D- Iron in food mostly in reduced form (Ferric)

56-Destruction of Heme part in Hemoglobin will lead to:

A- Store Heme in Liver & bone morrow
B- Convert Heme to amino acids
C- Convert Heme to bilirubin
D- Convert Heme to Ferric

57-excessive destruction of RBC will lead to:

A- Megaloblastic anemia
B- Microcytic hypochromic anemia
C- Aplastic anemia
D- Hemolytic anemia

White blood cells

58-Which of the following release histamine?

A- Neutrophil
B- Basophil
C- Eosinophil
D- Macrophage

59-Which of the following attach and kill parasite?

A- Neutrophil
B- B lymphocyte
C- Eosinophil
D- Macrophage

60-A patient with leukopenia may have:

A- Typhoid fever
B- Cancerous myeloid stem cells
C- Cancerous lymphoid stem cells
D- Hypoxia

61-Which of the following count 0.4% of WBCs?

A- Neutrophil
B- Basophil
C- Eosinophil
D- T Cells

62-Leukocytosis can occur due to?

A- Heavy physical exercises
B- Typhoid fever
C- Malnutrition
D- Deficiency of folic acid

63-The attraction of the neutrophils to inflamed area following chemotactic substances called:

A- Diapedesis
B- Migration
C- Chemotaxis
D- Amoeboid movement

64-The least abundant leukocyte is?

A- Monocyte
B- Basophil
C- Eosinophil
D- Neutrophil

Blood Group

65-When an individual represent AB- Group that means:

A- (No ABO Antigens – Antibodies A&B – Antigen D present)
B- (A&B Antigens – Antibodies A&B – Antigen D absent)
C- (A&B Antigens – No Antibodies – Antigen D absent)
D- (A&B Antigens – No Antibodies – Antigen D present)

66-Which of the following antibodies are NOT naturally occurring:

A- Antibody A only
B- Antibody B only
C- Antibody D only
D- Both A & B true

67-When a patient with blood group B transfused with blood group A which of the following will happen?

A- The antibody A in plasma will agglutinate the transfused group A cells
B- The antibody B in plasma will agglutinate the transfused group A cells
C- The antibody A in plasma will agglutinate the transfused group B cells
D- The antibody B in plasma will agglutinate the transfused group B cells

68- The universal recipient is?

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

69- When does the fetal Rh+ve RBC cross to maternal Rh-ve blood?

A- At delivery
B- Before birth
C- After delivery
D- None of these

70- How can we prevent erythroblastosis fetalis?

A- Replace baby blood with Rh-ve RBC several times
B- Injecting the mother with anti-D antibody immediately after 1st childbirth
C- Kills the fetus in the uterus
D- None of the above

71- Which of the following blood groups do not have antibodies?

A- A
B- B
C- O
D- AB

Hemostasis

72-Prevention or stoppage of blood loss is?

A- leukopoiesis
B- Homeostasis
C- Hemostasis
D- thrombopoiesis

73-Thrombopoietin a hormone released from the?

A-liver
B- Kidney
C- Thyroid
D- Megakayocyte

74-ONE of the fallowing do not represents Platelet Activation?

A- Adhesion
B- Shape change
C- prevention
D- Release

75- Inhibition of aggregation in the Intact endothelium secretes by?

A- Antihemophilic
B- Calcium
C- Serotonin
D- Prostacyclin

76- The trigger of the intrinsic pathway is the activation of factor ؟

A-X
B-II
C-XII
D-VI

77- Break down of fibrin by naturally occurring enzyme plasmin therefore prevent intravascular blocking IS?

A- Estimation
B- diapedesis
C- Platelets Plug
D- Fibrinolysis

78-Which of the following used for digests intra & extra vascular deposit of Fibrin?

A- thromboplastin
B- Plasmin
C- VII
D- Prothrombin

Answers

1	2	3	4	5	6	7	8	9	10	11	12	13
C	C	A	B	A	C	A	B	C	B	C	C	D
14	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**
A	C	D	A	C	A	B	D	B	C	B	D	C
27	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**
A	A	A	B	B	A	A	B	A	A	B	D	A
40	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**
C	C	B	B	C	B	D	A	D	B	A	A	D
53	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**
D	A	C	C	D	B	C	A	B	A	C	B	C
66	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**
C	A	C	A	B	D	C	A	C	D	C	D	B