

I'd number 16463

Name sami ul haq

Section b

RADIOLOGY SEC B PHYSIOLOGY, 2<sup>ND</sup> SEMESTER

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Attempt all questions. Every question carry 10 marks.

Q1. Write the functions and composition of blood?

Ans formed elements

Cellular part oie rbc WBC & platelets =45

Plasma fluid part =55%

1 water 91% to92

2 solid 0 9%

Inorgaic =na k mg p, fe cu

Organic

1 protein serum albumin = 4.5g

Serum globulin 2.5%

Fibrogen =0.3g%

Prothrombin etc

3 non protein nitrogenous

Substance eg urea uric acid xanthine

1Hypoxanthine creatine creatine nh3 amin acid etc

Fats eg neutral fat phospholipid cholesterol etc

Carbohydrates eg internal secretion eg glucose etc

Other substance eg internal secretion antibodies enzymes amylase protein lipase etc

2 nutritive function it transport food (a) absorbed from gut (b) mobilized from storage deposit to tissue

3 excretory function it transport excretory metabolite and produce tissue to organ of excretion kidney lungs intestine skin etc

4 carrier function it carries hormones enzymes antibiotics vitamin inorganic and organic salts other essential chemical to their place of activity

Defensive function

A neutrophils macrophages phagocytose bacteria

B antibiotic combat disease causing organism

6 hemostatic functions it consists clotting factor so it prevent hemorrhage by coagulation

Regulation function

1 water balance

2 acid base balance or blood pH

3 ion balance

4 body temp

5 blood pressure

6 blood volume

7 blood viscosity osmotic pressure

Q2. What is erythrocyte, erythropoiesis, erythrocytosis and erythropenia?

Ans erythrocytes also known as red blood cells is a cellular part of blood which act as a transport for oxygen nutrients

Normal range males 4.8-5.4 mg/dl

Female 4-5 mg/dl

2 erythropoiesis it is the process of producing of red blood cells

3 erythrocytosis increases in red blood cell count greater than normal range in males = rbc's 5.4 in females rbc's 5

4 erythropenia

Decrease in red blood cells count less than normal range in males rbc's 4.8 in female rbc's 4

Q3. What is platelets and write about clotting mechanism and its all steps?

Ans 1 cause nervous reflex initiated by pain

2 local myogenic spasm initiated by direct damage to vessel wall

3 vasoconstrictor thromboxane  $\alpha_2$  released by platelets

Platelets these are minute round or oval discs 2-4 in diameter formed by fragments

Fragmentation of megakaryocytes

Function characters of plates it carries oxygen from lung to tissues and carries  $\text{CO}_2$  from tissues to lung

It defends the body from foreign antigen b/c it contains cells responsible for it neutrophils etc

It helps carrying nutrient from GIT to other organ i.e. liver it carries hormones from endocrine glands to site of action

It contains substances that help in clotting of blood i.e. platelet factors and clotting factors

Formation of platelet plug platelets come in contact with collagen fibers in damaged vascular wall they swell and irradiate process and become sticky they stick to collagen fiber secrete ADP and thromboxane  $\alpha_2$  ADP and thromboxane  $\alpha_2$  activity platelets a vicious cycle ensure increase number of plates accumulate to form platelet plug that closes rent in vessel wall

Q4. Write a detail note on ABO system?

Ans four o b blood group

1 blood group o genotype is oo agglutinogen anti a & anti b agglutinin

2 blood group a genotype is oa or aa agglutinogen is anti b agglutinin

3 blood group b genotype is ob ABB agglutinogen is b anti a agglutinin

4 blood group ab genotype ab agglutino are a & b no agglutinin

Universal recipient

Persons with ab blood group are called universal recipients because they have no circulation agglutinin cause agglutination of donor blood

Blood type with their genotypes and there

Genotypes	blood type	agglutination	agglutinin
Oo	o		anti a and anti b
Oa or aa	a	a	anti b
Ob or bb	b	b	anti a
Ab	ab		a and b

Q5.(i) A person fell down from a tree and become unconscious, with bleeding from head, what will you do as a first aid?

Ans manage this person according to atls guidelines which include

1 person should be immobilized immediately

2 next step will be to stop bleeding by place a pack on it

3 check the airway breathing and circulation of patient

4 patient should immediately to emergency and trauma centre

5 after control vitals of immediate xray skull and act scan should be done

6 and patient should be managed

(ii) you have to meet with your friend and you came to know he is covid positive, what precautionary measures will you take?

Ans following precautionary measures shall I take

1 first all of patient should be re assured and should be briefed about disease

2 patients should be immediately taken to government facility for covid 19 patients

3 patients should be isolated from all other family member

4 family members if show symptoms should be tested for covid

5 if patient develops sever breathing problem he should be managed in intensive care unit

6 patients should be advised not to contact other persons and to use n 95 filter maks