



WBCS PRE 2023



SCIENCE

BLOOD

PART-2

নতুনদের এই ভিডিওটি দেখতে হবে

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06:15 PM | ((•)) **LIVE**



BLOOD

By

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Genetic construction

- **Three genes are responsible for this different blood groups. These are collectively called i genes**
- **These genes are present on chromosome number 9**
- **They are IA,IB & IO gene. They are allele to each other. Among them the first two are dominant gene and the last one is recessive gene**

Blood group	Genotype
A	
B	
AB	
O	

BOMBAY PHENOTYPE



- **Discovered by Y.M.Bhende in Mumbai**
- **Also called h/h blood group**
- **Rarest blood group**

Blood group	Antigens	Antibodies
A	A.H	b
B	B,H	a
AB	A.B.H	-
O	-,H	a,b
Bombay phenotype	-	a,b,h

Q1. Antigens are present on

- a. Leukocytes**
- b. Erythrocytes**
- c. Thrombocytes**
- d. Lymphocytes**

Q2. Antibodies are present in

- a. Blood cells**
- b. Haemoglobin**
- c. Plasma**
- d. Plasma and platelets**

Q3. When an antigen reacts with a corresponding antibody then the reaction is called

- a. Agglutinin**
- b. Agglutination**
- c. Agglutinogen**
- d. None of these**

Q4. A person having blood group AB can give his blood to the person having blood group

- a. A,AB**
- b. B,AB**
- c. O,AB**
- d. AB only**

Q5. A person having blood group O can take the blood from the person having blood group

- a. A,O**
- b. O only**
- c. B,O**
- d. AB,O**

Q6. Which type of exception of Mendelism is shown by ABO blood group system?

- a. Incomplete dominance**
- b. Polygenic inheritance**
- c. Multiple allelism**
- d. Multiple gene action**

Q7. Which type of deviation of Mendelism is shown by AB blood group?

- a. Incomplete dominance**
- b. Codominance**
- c. Polygenic inheritance**
- d. Multiple allelism**

Q8. If mother is having O blood group and father is having B blood group then which of the following blood group is possible in offspring?

a. B

b. O

c. A

d. Both (a) and (b)

Rhesus factor

- **Discovered by Landsteiner and Weiner in 1940**
- **This antigen is also present on the surface of RBC**
- **D gene is responsible for producing this antigen.**
- **D gene is considered as Dominant gene**

- **The person having Rh antigen is considered as Rh+ and the person do not have this antigen, is considered as Rh-**
- **Rh+ having genotype DD or Dd and Rh- having genotype dd.**
- **85% of the total human population is Rh+ and 15% is Rh-.**

Erythroblastosis Foetalis

- **Also called Congenital haemolysis**
- **This condition occurs from the second pregnancy onwards**
- **In this condition mother is Rh- and foetus is Rh+.**
- **At the time of delivery, mother's blood is exposed to baby's blood and Rh antibody is developed in mother's blood.**

- **During second pregnancy onwards, this antibody crosses the placental barrier and destroys the Rh antigen as well as RBC of foetus.**
- **The foetus may suffer from severe anaemia.**

Which of the following statement is true for the condition of Erythroblastosis Foetalis?

a. Mother Rh+ & foetus Rh+

b. Mother Rh- and foetus Rh-

c. Mother is Rh+ and foetus Rh-

d. Mother is Rh- and foetus is Rh+

Body fluids

- **60% of the total body weight is body fluid**
- **40% of it is intracellular fluid (fluid inside the cell)**
- **15% of it is interstitial fluid (fluid between the cells)**
- **5% of it is blood and lymph**

- **Composition of blood : Plasma(55%) and Blood cells(45%)**
- **Plasma contains :**
 - i. **90-92% proteins**
 - ii. **8-10% proteins and minerals**
- **Blood cells are of three types :**
 - i. **RBC / Erythrocytes (44%)**
 - ii. **WBC / Leukocytes. }**
 - iii. **Platelets/ Thrombocytes }(1%)**

Q. What is the percentage of plasma in human blood?

a.70%

b.90%

c.55%

d.75%

Q. Which of the following protein maintains osmotic balance of blood?

a. Albumin

b. Globulin

c. Prothombin

d. Fibrinogen

Q. Which of the following protein(s) help in blood coagulation?

a. Albumin

b. Prothombin

c. Fibrinogen

d. Both b and c

Q. Which of the following mineral helps in blood clotting?

a. Sodium

b. Potassium

c. Chlorine

d. Calcium

Q. Which of the following vitamin helps in blood clotting?

- a. Vitamin A**
- b. Vitamin D**
- c. Vitamin E**
- d. Vitamin K**

Q. What is the pH of human blood?

a.6.0

b.6.8

c.7.4

d.9.0

Q. Blood is an example of _____ tissue?

a.epithelial tissue

b.connective tissue

c.nervous tissue

d.muscular tissue

Q. Lymph is composed of

a. Plasma and blood cells

b. RBC and WBC

c. Plasma and platelets

d. Plasma and WBC