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Exam : mid Term (spring 2020)

course Title: Blood Banking

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(i)

Q No. 1 Ans:

The destruction of RBC, occurs due to blood transfusion when the father RH is positive and mother is RH negative blood, and her immune system will make antibodies that attack all people have different blood group and different RH.

2) if the mother and father have separate blood group and RH group then RBC destruction occurs.  $\Rightarrow$  Mother blood RH is negative and father RH is positive and also the baby blood RH is positive like father that can produce an issue. if the baby RBC, cross the placenta, the RH negative mother immune see the RH positive baby RBC, then make antibodies to fight and destruction occurs and also fetal death.



Q NO # 2

**ANSWER:** Introduction:- The

Automated donation process called apheresis in which donor is allowed to maximize his/her blood type donation into its components.

e.g: Single Donor platelets  
Random Donor platelets.

**Single Donor platelets:**

when single donor person donated its platelets with

automated cell is called single donor platelets

OR platelet collected from single

blood with the help of automated

cell separator is called

single donor platelets.

P.T.O

2) usually the donor having intravenous lines in their arms, blood from one IV is sucked and then passed through centrifuge machine for platelets separators. The RBCs and plasma in turn back to donor arms.

2) Blood is processed in about 2hr.

2) These platelet can be stored for 5 days at room temperature with proper gaseous exchange.

### Advantages:

(i) The Leukocytes are mixed with small amount then random donor.

P.T.O



- 2) Less contaminated with RBCs.
- 3) Lower Risk of Bacterial infection.

## Random Donor platelets:

The platelets which is collected from entire blood as known as Random donor platelets.

2) platelets is separated first from RBCs having enriched plasma by centrifuge at low gravity force. This is done after Four hour of donation.

then platelet from plasma is separated at high gravitational force and poor plasma supernatant is removed

Q

These platelets are stored in plastic bags for 5 days, at room temperature with proper CO<sub>2</sub> and oxygen.

⇒ These platelets contain 0.5 ml of RBCs and concentrate have  $10^8$  to  $10^9$  white blood cells or 50% leucocytes.



Q NO# 3

(6)

Ans:.

	Reaction of cells Tested with		Reaction of serum Tested against		ABO Group
	Anti-A	Anti-B	A cells	B-cells	
1	0	0	+	+	O
2	+	0	0	+	A
3	0	+	+	0	B
4	+	+	0	0	AB