

IMMUNOHEMATOLOGY & TRANSFUSION MEDICINE

PAPER – I

IMHT/D/15/15/I

Time : 3 hours

Max. Marks : 100

Important instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

1.	a) Platelet formation in human body and distribution in vivo.	6
	b) List possible interferences with platelet count on the Coulter.	2
	c) Explain the procedure to follow if there are platelet clumps in sample.	2
2.	a) Complement cascade in health.	5
	b) Mechanism of complement mediated haemolysis.	5
3.	a) Principles of flow cytometry using diagrams and flow charts.	5
	b) Uses of flow cytometry in current Transfusion Medicine Practice.	5
4.	Laboratory diagnosis of G6PD deficiency and discuss its importance in Transfusion Medicine.	10
5.	a) Mechanism of drug induced autoimmune hemolytic anaemia.	5
	b) Laboratory diagnosis of drug induced autoimmune hemolytic anaemia.	5
6.	a) What is reticulated platelet?	2
	b) Methods for detection of reticulated platelets.	5
	c) Its importance in platelet transfusion.	3
7.	a) Hardy Weinberg Principle.	5
	b) Its application in transfusion medicine.	5
8.	a) Structure and physiochemistry of immunoglobulin molecules.	6
	b) What are the different IgG subclasses and their function?	4
9.	Defect and laboratory tests used for the diagnosis of following disorders:	
	a) Activated protein C.	3
	b) Hyperhomocysteinemia.	3
	c) Antiphospholipid syndrome.	4
10.	a) Explain how the fibrinolytic system removes clots.	5
	b) List activators and inhibitors of plasmin.	5
