 NATIONAL BOARD OF EXAMINATIONS

IMMUNO HAEMATOLOGY AND BLOOD TRANSFUSION

PAPER-III

Time: 3 hours IMHT/D/20/15/III
Max. Marks:100

Important Instructions:

- ***You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.***
- ***Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.***
- ***No additional supplementary answer sheet booklet will be provided.***
- *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. An O RhD negative antenatal mother at 28 weeks of 2nd gestation is found to have anti D titer of 8. 2+3+3+2
   a) What follow-up advice you would give to the treating obstetrician?
   b) What is the critical titer of anti D and write down the doubling dilution procedure to find out the titer in this patient?
   c) What measures you would initiate to plan for intrauterine transfusion, if indicated at later date of gestation?
   d) How do you prevent RhD alloimmunization in RhD Negative mothers?

2. First newborn in a family presents with petechiae and isolated thrombocytopenia at birth. 2+5+3
   a) What is the probable diagnosis?
   b) Explain the pathophysiology and clinical manifestations of the condition diagnosed.
   c) Laboratory diagnosis, treatment and prevention of recurrence in future pregnancy.

3. Blood sample was collected from a 40-year-old female with suspected hemolytic anemia showed positive DAT and nonreactive eluate. The patient was recently treated for urinary tract infection. 2+3+5
   a) What is the probable diagnosis?
   b) How do you confirm the diagnosis?
   c) Proposed theoretical mechanisms & treatment of the condition diagnosed.

4. Discuss the etiopathogenesis of disseminated intravascular coagulation (DIC). Discuss the laboratory diagnosis and transfusion support in a case of DIC. 4+(3+3)

5. Explain in detail the RBC, Platelet and Plasma transfusion support for patients undergoing ABO incompatible Hematopoietic Stem cell Transplantation. 10

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6.	Role of fresh whole blood transfusion in trauma patients.	10
7.	Collection and processing of hematopoietic progenitor cells.	10
8.	a) Salient changes incorporated in the new donor selection criteria and its impact in transfusion services. b) Donor deferral criteria with respect to Covid vaccination.	7+3
9.	Pathogen inactivation methods.	10
10.	Discuss the basic concepts of RBC freezing and rejuvenation. Describe the techniques involved in this procedure. Enumerate the advantages and disadvantages of this technique.	3+3+4

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