

M.D. Examination

Immuno-Hematology & Blood Transfusion : Branch XIII

Paper-I

(Applied Basic Sciences)

[Max. Marks : 100]

Date : 02-04-2019, Tuesday]

Time : 3 Hours]

- Instructions : (1) Figure to the right indicates marks.
 (2) Write legibly and to the point.
 (3) Draw diagrams wherever necessary.

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| 1. (a) Describe briefly regulation of Oxygen delivery to the tissues. | 10 |
| (b) Megakaryopoiesis and its regulation | 10 |
| 2 (a) Write a note on complement system and its role in Transfusion Medicine | 10 |
| (b) Describe briefly labile coagulation factors | 10 |
| 3 (a) Write a note on Major Histocompatibility class I antigens | 10 |
| (b) Discuss the Role of hybridoma technology in transfusion medicine | 10 |
| 4 (a) Write short note on Erythropoietin | 10 |
| (b) Write note on development of polyvinyl chloride(PVC) blood bags | 10 |
| 5 (a) Discuss briefly factors affecting Antigen-Antibody Reactions | 10 |
| (b) Describe Bilirubin Metabolism | 10 |
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M.D. Examination

Immuno-Hematology & Blood Transfusion : Branch XIII

Paper II

(Immuno-Hematology, Immunogenetics & Applied Serology)

[Max. Marks : 100]

Date : 04-04-2019, Thursday]

Time : 3 Hours]

- Instructions : (1) Figure to the right indicates marks.
 (2) Write legibly and to the point.
 (3) Draw diagrams wherever necessary.

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| 1. (a) Explain Hardy -Weinberg Law | 10 |
| (b) Describe the techniques used for HLA antibody detection | 10 |
| 2. (a) Discuss the various factors affecting Antiglobulin test | 10 |
| (b) Describe ABO blood group discrepancies | 10 |
| 3. (a) Write a note on Pan-agglutination | 10 |
| (b) Explain briefly Kidd blood group system | 10 |
| 4. (a) Describe Red Cell Storage lesions | 10 |
| (b) Discuss critical steps in Pretransfusion testing | 10 |
| 5. (a) Explain Rh _{null} Syndrome and Rh _{mod} Phenotype | 10 |
| (b) How will you investigate a case of Severe Anemia with Positive Direct Antiglobulin Test | 10 |
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M.D. Examination

Immuno-Hematology & Blood Transfusion : Branch XIII

Paper III

(Blood Centre Operation, Blood Preservation, Donor Organization & Technology of Components)

Date : 08-04-2019, Monday

[Max. Marks : 100]

Time : 3 Hours]

Instructions : (1) Figure to the right indicates marks.

(2) Write legibly and to the point.

(3) Draw diagrams wherever necessary.

1. (a) Describe briefly innovative steps to improve donor motivation and recruitment for voluntary blood donation 10
 - (b) Define Febrile non hemolytic transfusion reaction. Explain its pathophysiology and prevention. 10
 2. (a) Discuss the transfusion support in Disseminated Intravascular Coagulation 10
 - (b) Describe the measures to prevent Bacterial contamination of blood products. 10
 3. (a) Write a note on hematopoietic growth factors 10
 - (b) Describe the process of Equipment maintenance as per Drug And Cosmetics Rules, Government of India. 10
 4. (a) Discuss briefly Specialized Therapeutic Hemapheresis Techniques 10
 - (b) Discuss the management of severe Hemophilia A with Inhibitors 10
 5. (a) Write an SOP for preparation of Prestorage leucoreduced Platelets from whole Blood 10
 - (b) Explain Root Cause Analysis with a suitable example 10
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M.D. Examination

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Paper IV

(Modern Trends & Recent Advances)

Date : 10-04-2019, Wednesday]

Time : 3 Hours]

[Max. Marks : 100

- Instructions :** (1) Figure to the right indicates marks.
(2) Write legibly and to the point.
(3) Draw diagrams wherever necessary.

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| 1. (a) Describe the Donor Hemovigilance Program | 10 |
| (b) Explain the salient features of National Plasma Policy | 10 |
| 2. (a) Write a note on rVII | 10 |
| (b) Explain Adoptive Immunotherapy | 10 |
| 3. (a) Discuss the role of Transfusion Services in Disaster Management | 10 |
| (b) Explain in detail Scope and Rationale of Patient Blood Management | 10 |
| 4. (a) Describe the Auditing process in Blood Banking | 10 |
| (b) Discuss briefly role of Prions Diseases in Blood Bank | 10 |
| 5. (a) Write a note on Platelet refractoriness | 10 |
| (b) Role of Automation in Blood Transfusion Services | 10 |
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