

April-2001

[KD 067]

Sub. Code : 1404

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch X — Haematology

Paper IV — RECENT ADVANCES IN
HAEMATOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss pathophysiology of sickle cell anaemia and its impact on future therapies. (20)
 2. Discuss possible strategies that may be useful in expanding donor pool for allogeneic stem cell transplantation. (20)
 3. Discuss adoptive immuno-therapy. (20)
 4. Write short notes on : (4 × 10 = 40)
 - (a) Hirudin
 - (b) Rituximab (Rituxan)
 - (c) New variant Creutzfeldt-Jakob disease
 - (d) The stanford V Regimen for Hodgkin's disease.
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March-2002

[KG 067]

Sub. Code : 1404

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch X — Haematology

Paper IV — RECENT ADVANCES IN
HAEMATOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss advances and controversies in the management of thalassaemia major. (20)
 2. Discuss future of autologous stem cell transplantation in haematological disorders. (20)
 3. Discuss angiogenesis, anti-angiogenic factors and their clinical applications in haematology. (20)
 4. Write short notes on : (4 × 10 = 40)
 - (a) Abciximab (RheoPro)
 - (b) Radio-immunotherapy
 - (c) TT virus
 - (d) PEG Interferon.
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September-2002

[KH 067]

Sub. Code : 1404

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch X — Haematology

Paper IV — RECENT ADVANCES IN
HAEMATOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

- 1 Recent advances in iron metabolism (20)
- 2 Role of immunohistochemistry in the diagnosis of "Lymphocyte predominance Hodgkin's disease - LPHD" and "Classical Hodgkin's disease - CHD". (20)
- 3 Tyrosine kinase inhibitors in management of haematological malignancies. (20)
- 4 Write short notes on : (4 × 10 = 40)
 - (a) Mutations of p53 gene.
 - (b) Thrombopoietin.
 - (c) Unrelated bone marrow transplantation
 - (d) Angiogenesis inhibitors.

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Sub. Code : 1154

B. Short Notes :

(10 × 5 = 50)

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch X — Haematology

Paper IV — RECENT ADVANCES IN HAEMATOLOGY

Time : Three hours Maximum : 100 marks

Theory : Two hours and Theory : 80 marks
 forty minutes

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

A. Essay Questions : (2 × 15 = 30)

(1) What are monoclonal antibodies and how are they produced? Describe how these have been modified to produce the agents we use for therapy today and their place in hematology practice today.

(2) Discuss the possible approaches to gene therapy and its status for the future management of blood disorder.

- (1) Extracorporeal photopheresis.
- (2) Preimplantation diagnosis.
- (3) IL2 receptor antibodies.
- (4) NAT testing.
- (5) Farnesyl transferase inhibitors.
- (6) B domain deleted factor VIII.
- (7) Caspofungin.
- (8) Defibrotide.
- (9) 2deoxycoformycin.
- (10) Antenatal diagnosis from maternal blood.

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Sub. Code : 1404

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch X — Haematology

Paper IV — RECENT ADVANCES IN
HAEMATOLOGY

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay Questions : (2 × 15 = 30)

(1) Discuss the role of targeted therapy in haematology.

(2) Discuss the recent criteria for diagnosis of antiphospholipid syndrome.

II. Short notes : (10 × 5 = 50)

(a) Role of WT 1 gene in haematological malignancies.

(b) Fondaparinux.

(c) Newer diagnostic tests for Hereditary Spherocytosis.

(d) Haemopoetic stem cell plasticity.

(e) "Off-licence" use of recombinant F VII a.

(f) Cell adhesion-mediated drug resistance.

(g) PRV-1 gene.

(h) Application of Microarray in designing diagnostic tests.

(i) Assays for ADAMTS 13 activity.

(j) Annexin V and thrombosis.

[KO 067]

Sub. Code : 1404

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch X — Haematology

**Paper IV — RECENT ADVANCES IN
HAEMATOLOGY**

Time : Three hours Maximum : 100 marks

**Theory : Two hours and Theory : 80 marks
forty minutes**

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

I. Essay questions : . (2 × 15 = 30)

**(1) Newer concepts in the pathogenesis and
management of PNH.**

(2) Discuss Immunotherapy of Lymphoma.

II. Short note : (10 × 5 = 50)

(a) Current management of Thalassemea

(b) Thrombocytopenia in HIV infection

(c) Viral gene transfer

(d) Thrombo elastography (TEG)

(e) Immunomodulatory effect of Thalidomide

(f) Large granular cell leukemia

(g) Apoptotic pathways

(h) Direct thrombin inhibitors

(i) Lead poisoning

(j) Acute hybrid leukemia.

[KP 067]

Sub. Code : 1404

D.M. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations)

Branch X — Clinical Haematology

Paper IV — RECENT ADVANCES IN
HAEMATOLOGY

Time : Three hours Maximum : 100 marks

Theory : Two hours and Theory : 80 marks
forty minutes

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

I. Essay questions :

(1) Describe the recent advances in the
treatment of hyper eosinophilic syndrome. (20)

(2) Discuss prenatal diagnosis in
haemoglobinopathics – Indian perspective. (15)

(3) How micro array will help in the
management of haematological disorders. (15)

II. Short notes : (6 × 5 = 30)

(a) Immune reconstruction after standard
allogenic haematopoietic stem cell transplantation.

(b) Post transplantation lymphoproliferative
disorder.

(c) (ADMTS-13) and TTP.

(d) Activation of HbF production in the
management of haemoglobinopathics.

(e) Chronic GVHD – Current Management.

(f) Recent advances in understanding of
Rh blood group antigen.

August 2008

[KT 067]

Sub. Code: 1404

D.M. DEGREE EXAMINATION

(Higher Specialities)

Branch X – Clinical Haematology

(Revised Regulations)

Paper IV – RECENT ADVANCES IN HAEMATOLOGY

Q.P. Code: 161404

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40

1. Monoclonal antibodies for treatment of haematological disorders.
2. Challenges and promises of gene therapy in severe haemophilic.

II. Write short notes on:

10 x 6 = 60

1. Prenatal diagnosis in haemophilia.
2. Enzyme replacement therapy in haematological disorders.
3. Application of extra corpuscular photopheresis.
4. Nuclie acid amplification test for blood safety.
5. Comparative Genomic hybridization.
6. Management of post transplant lympho proliferative disorders.
7. Recent advances in antifungal therapy.
8. Understanding the molecular mechanism of haemophagocytic syndromes.
9. Eltrombopag and its application.
10. Management of imatinib resistance in CML in chronic phase.

August 2009

[KV 067]

Sub. Code: 1404

D.M. DEGREE EXAMINATION

(Super Specialities)

Branch X – Clinical Haematology

(Revised Regulations)

Paper IV – RECENT ADVANCES IN HAEMATOLOGY

Q.P. Code: 161404

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40

1. AIDS related lymphomas.
2. Management of a female patient with 4 first trimester fetal losses.

II. Write short notes on:

10 x 6 = 60

1. Post exposure prophylaxis of HIV.
2. Platelet refractoriness.
3. Helicobacter pylori and ITP.
4. Role of Cytogenetics in MDS.
5. Granulocyte transfusions.
6. Management of Hemophilia A with inhibitors.
7. Infections in a BMT unit – preventive measures.
8. Arsenic trioxide.
9. Osteonecrosis of the jaw.
10. Eculuzimab.

August 2011

[KZ 067]

Sub. Code: 1404

**DOCTORATE OF MEDICINE (D.M.) DEGREE EXAMINATION
(SUPER SPECIALITIES)**

BRANCH X – CLINICAL HAEMATOLOGY

RECENT ADVANCES IN HAEMATOLOGY

Q.P. Code: 161404

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Discuss the management of philadelphia chromosome negative of adult acute lymphoblastic leukemia.	11	35	15
2. Describe the congenital marrow failure syndromes and discuss the management of Fanconi anemia.	11	35	15

II. Write notes on :

1. Hb H disease.	4	10	7
2. Decitabine.	4	10	7
3. Type 1 von Willebrand disease.	4	10	7
4. Hemophagocytic lymphohistiocytosis.	4	10	7
5. Molecular mechanisms of iron homeostasis.	4	10	7
6. Congenital neutropenia.	4	10	7
7. Disease monitoring in CML on treatment with tyrosine kinase inhibitors.	4	10	7
8. Induced pluripotent stem cells.	4	10	7
9. Dendritic cells.	4	10	7
10. Eculizumab.	4	10	7

[LB 067]

AUGUST 2012

Sub. Code: 1404

D.M – CLINICAL HAEMATOLOGY

Paper – IV RECENT ADVANCES IN HAEMATOLOGY

Q.P. Code: 161404

Time: 3 hours

Maximum: 100 marks

(180 Min) Answer ALL questions in the same order.

I. Elaborate on:

Pages Time Marks
(Max.)(Max.)(Max.)

- | | | | |
|---|----|----|----|
| 1. Discuss the pathophysiology, molecular and immune defects and diagnosis in children with congenital bone marrow failure syndromes. | 16 | 35 | 15 |
| 2. Discuss in detail the diagnosis, prognostication and management of a 35 year old male with Acute Myeloid Leukemia. | 16 | 35 | 15 |

II. Write Notes on:

- | | | | |
|---|---|----|---|
| 1. Clofarabine. | 4 | 10 | 7 |
| 2. Risk stratification of myelofibrosis. | 4 | 10 | 7 |
| 3. Optimal frontline therapy for multiple myeloma. | 4 | 10 | 7 |
| 4. Echinocandins. | 4 | 10 | 7 |
| 5. Role of Hypomethylating agents in MDS. | 4 | 10 | 7 |
| 6. Brentuximab. | 4 | 10 | 7 |
| 7. Use of Rituximab in hematological disorders. | 4 | 10 | 7 |
| 8. Role of 2 nd generation TKI as first line therapy of CML. | 4 | 10 | 7 |
| 9. Posaconazole. | 4 | 10 | 7 |
| 10. Gene therapy. | 4 | 10 | 7 |

D.M. – CLINICAL HAEMATOLOGY
Paper – IV RECENT ADVANCES IN HAEMATOLOGY
Q.P.Code: 161404

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Describe in detail the processes involved in gene therapy, the vectors used and its applications in the treatment of haematological disorders.
2. Describe in detail the diagnosis and management of chronic myeloid leukemia (CML) including the use of newer drugs as first line agents and molecular monitoring while on treatment.

II. Write notes on:

(10X7=70)

1. Micafungin
2. Induced pluripotent stem cells
3. Gene therapy for hemophilia
4. Carfilzomib
5. Immunotherapy against Cytomegalovirus after BMT
6. Haplo-identical transplantation
7. Scoring systems in MDS
8. BRAF mutation
9. Kinase targeted strategies in CLL
10. Clofarabine

[LF 066]

AUGUST 2014

Sub. Code: 1404

D.M. – CLINICAL HAEMATOLOGY

Paper IV – RECENT ADVANCES IN HAEMATOLOGY

Q. P. Code: 161404

Time: Three Hours

Maximum: 100 Marks

Answer ALL questions in the same order.

I. Elaborate on:

(2 x 15 = 30)

1. Discuss in detail the principles of a haplo-identical stem cell transplant and the rationale of the currently used GVHD prophylaxis regimen in this procedure.
2. Discuss the different types of factor concentrates available for the treatment of haemophilia and recent advances.

II. Write notes on:

(10 x 7 = 70)

1. Treosulphan.
2. Calreticulin mutations.
3. Drugs that target CD20.
4. Gene therapy in haemophilia.
5. Arsenic resistance.
6. NK cell therapy.
7. Atypical hemolytic anemic syndrome.
8. Bendamustine.
9. Newer proteasome inhibitors.
10. Induced pluripotent stem cells.
