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MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – SEPTEMBER 2021
SUBJECT: PAPER I: BASIC SCIENCE

Wednesday, September 01, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long questions:**

1. Discuss the etiology of hyposmolar disorders and management of hyponatremia.
(20 marks)

2. Describe Human Leukocyte antigen system and its role along with non HLA antigens in Kidney transplantation.
(20 marks)

3. **Write short notes on:**

- 3A. Treatment of hypercalcemia.
- 3B. Etiology of normal anion gap acidosis and principles of treatment.
- 3C. Management of X linked Hypophosphatemic Rickets
- 3D. Overview of kidney development and maturation.
- 3E. Heparin
- 3F. Renal hemodynamics in pregnancy.

(10 marks × 6 = 60 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – SEPTEMBER 2021

SUBJECT: PAPER II: CLINICAL NEPHROLOGY

Thursday, September 02, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

Answer ALL the questions.

Long questions:

1. Describe etiology, pathogenesis, pathology and management of steroid resistant nephrotic syndrome.

(20 marks)

2. Describe etiology, pathogenesis, pathology and management of thrombotic microangiopathy.

(20 marks)

3. **Write short notes on:**

3A. Promoters and Inhibitors of nephrolithiasis

3B. Drug induced acute kidney injury

3C. Kidney in Malaria

3D. Evaluation of 5 year old male child with Urinary tract infection

3E. Trade off hypothesis in CKD

3F. Management of Membranous Nephropathy

(10 marks × 6 = 60 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – SEPTEMBER 2021

SUBJECT: PAPER III: RENAL REPLACEMENT THERAPY

Friday, September 03, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long question:**

1. Describe Ultrafiltration failure in continuous ambulatory peritoneal dialysis and its management with a note on normal relevant peritoneal membrane physiology
(20 marks)

2. Describe Calendar of Infections after Kidney Transplant and management of Cytomegalovirus infection
(20 marks)

3. **Short notes:**

3A. Risks associated with kidney donation

3B. Steroid resistant rejection in kidney transplant

3C. Hemodiafiltration

3D. Calcineurin inhibitor toxicity

3E. Hemodialyser reuse

3F. Complications of Central Venous Catheterization in Hemodialysis patients

(10 marks × 6 = 60 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – SEPTEMBER 2021

SUBJECT: PAPER IV: RECENT ADVANCES

Saturday, September 04, 2021

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Describe genetics of Focal and segmental glomerulosclerosis and implications for management

(20 marks)

2. Discuss steroid sparing immunosuppressive strategies in kidney transplant and their advantages and disadvantages

(20 marks)

3. **Short notes:**

3A. Recent advances in treatment of Autosomal Dominant Polycystic Kidney disease

3B. Fibrillary Glomerulonephritis

3C. Newer anti diabetic drugs and their relevance in CKD

3D. Urinary peptidomics

3E. Toll like receptors

3F. Preservation of residual kidney function in patients on continuous ambulatory peritoneal dialysis

(10 marks × 6 = 60 marks)

