

MANIPAL UNIVERSITY**DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2017****SUBJECT: PAPER I: BASIC SCIENCE**

Monday, July 10, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Describe Vitamin D metabolism and its role in mineral bone disorders and their management.
(20 marks)
2. Describe the role of blockade of Renin angiotensin aldosterone system in kidney disease.
(20 marks)

3. **Write short notes on:**

- 3A. Anion gap
- 3B. Immune monitoring of kidney transplant
- 3C. Clinical management of CAKUT
- 3D. Adaptation to diuretic therapy
- 3E. Renal scintigraphy
- 3F. Clinical application of estimated GFR

(10 marks × 6 = 60 marks)



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DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2017

SUBJECT: PAPER II: CLINICAL NEPHROLOGY

Tuesday, July 11, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Discuss the pathophysiology, pathogenesis and evaluation and treatment of anemia in a patient with chronic kidney disease.

(20 marks)

2. Discuss clinical approach, tools for diagnosis, staging and evaluation of acute kidney injury.

(20 marks)

3. **Write short notes on:**

3A. Calcimimetics

3B. Erythropoiesis stimulating agents

3C. Management of urinary tract infection in polycystic kidney disease

3D. Physiologic inhibitors of nephrolithiasis

3E. Treatment of Immunoglobulin A nephropathy

3F. Weil's disease

(10 marks × 6 = 60 marks)



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DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2017

SUBJECT: PAPER III: RENAL REPLACEMENT THERAPY

Wednesday, July 12, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Question:**

1. Discuss peritoneal membrane structure and pathogenesis, types and management of ultrafiltration failure in peritoneal dialysis.

(20 marks)

2. Describe the three signal model of immune recognition and its relevance to immunosuppression strategies for kidney transplantation.

(20 marks)

3. **Write short notes on:**

3A. Frequent Hemodialysis

3B. Principles of Plasmapheresis

3C. Hemodialyser structure

3D. Evaluation of a living kidney donor

3E. Iron therapy in chronic kidney disease stage 5

3F. Adynamic bone disease

(10 marks × 6 = 60 marks)



MANIPAL UNIVERSITY**DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2017****SUBJECT: PAPER IV: RECENT ADVANCES**

Thursday, July 13, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Discuss the pathogenesis and pathology of diabetic nephropathy and novel strategies and agents for its management.

(20 marks)

2. Discuss the mechanisms of immune recognition of a renal allograft and strategies for inducing tolerance.

(20 marks)

3. **Write short notes on:**

- 3A. Biomarkers of acute kidney injury.
- 3B. Acute cardiorenal syndrome type 1
- 3C. Non glucose based peritoneal dialysis solutions
- 3D. Online haemodiafiltration
- 3E. Calcimimetics
- 3F. Target hemoglobin in chronic kidney disease

(10 marks × 6 = 60 marks)

