

**MANIPAL UNIVERSITY**  
**DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2015**  
**SUBJECT: PAPER I: BASIC SCIENCE**

Tuesday, July 14, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

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✍ **Long Questions:**

1. Discuss pathogenesis, clinical features, evaluation, diagnosis and medical treatment of nephrolithiasis.

(20 marks)

2. Discuss pathogenesis of autosomal dominant polycystic kidney disease, diagnostic criteria and management of the same.

(20 marks)

3. **Write short notes on:**

3A. Physiology of immune recognition

3B. Complement system

3C. Bleeding diathesis in chronic kidney disease

3D. Renal hemodynamics in pregnancy

3E. Phosphorous homeostasis

3F. Pathogenesis of urinary tract infection

(10 marks × 6 = 60 marks)



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## DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2015

### SUBJECT: PAPER II: CLINICAL NEPHROLOGY

Wednesday, July 15, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

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#### **✍ Long Questions:**

1. Discuss the pathogenesis, pathophysiology, clinical and laboratory features and management of chronic kidney disease mineral bone disorders.

(20 marks)

2. Discuss the physiologic changes relevant to the kidney in pregnancy and evaluation and management of renal failure during pregnancy.

(20 marks)

#### **3. Write short notes on:**

- 3A. Atheroembolic acute kidney injury
- 3B. Isolated hematuria
- 3C. Analgesic nephropathy
- 3D. Radiocontrast nephropathy
- 3E. Treatment of rapidly progressive glomerulonephritis
- 3F. Scleroderma renal crisis

(10 marks × 6 = 60 marks)



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## DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2015

### SUBJECT: PAPER III: RENAL REPLACEMENT THERAPY

Thursday, July 16, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

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**Long Question:**

1. Discuss structure, function and mechanisms of peritoneal dialysis with emphasis on the 3 pore model and describe its noninfective complications.

(20 marks)

2. Discuss the mechanisms of transplant tolerance and strategies to induce the same.

(20 marks)

3. **Write short notes on:**

3A. Deceased donor maintenance in ICU.

3B. Rescue therapy

3C. Tidal peritoneal dialysis

3D. Hemodialyser reuse

3E. Short daily dialysis

3F. Estimation of dry weight in hemodialysis

(10 marks × 6 = 60 marks)



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## DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2015

### SUBJECT: PAPER IV: RECENT ADVANCES

Friday, July 17, 2015

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

#### ✍ Long Questions:

1. Discuss the pathophysiology and management of cardiorenal syndrome. (20 marks)
2. Describe the mechanisms, pathogenesis of antineutrophil cytoplasmic antibody induced renal vasculitis and recent advances in management of crescentic glomerulonephritis. (20 marks)
3. **Write short notes on:**
  - 3A. Obesity related glomerulopathy
  - 3B. Mechanism of epithelial repair and regeneration in acute kidney injury
  - 3C. Uremic toxicity
  - 3D. Pathogenesis of IgA Nephropathy
  - 3E. Klotho and chronic kidney disease
  - 3F. Classification of Membranoproliferative glomerulonephritis

(10 marks × 6 = 60 marks)

