

MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2019
SUBJECT: PAPER I: BASIC SCIENCE

Tuesday, July 09, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long questions:**

1. Describe determinants of glomerular filtration rate and methods of measuring and estimating GFR.

(20 marks)

2. Describe mechanisms and pathogenesis of immunologically mediated renal injury.

(20 marks)

3. **Write short notes on:**

3A. Methods of estimating proteinuria

3B. Hyporeninemic hypoaldosteronism

3C. Costimulatory pathway and its relevance for kidney transplant

3D. Chloride resistant metabolic alkalosis

3E. Uric acid handling by kidney

3F. Nephron endowment

(10 marks × 6 = 60 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2019
SUBJECT: PAPER II: CLINICAL NEPHROLOGY

Wednesday, July 10, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

✍ Long questions:

1. Discuss pathogenesis Etiology and medical treatment of nephrolithiasis. (20 marks)
2. Discuss pathophysiology, Pathogenesis, clinical manifestations of cardiovascular disease and its management in chronic kidney disease. (20 marks)

3. Write short notes on:

- 3A. Sickle cell Nephropathy
- 3B. Endocrine manifestations of chronic kidney disease
- 3C. Assessment of hematuria
- 3D. Steroid sparing treatment in minimal change disease
- 3E. Etiology and treatment of rapidly progressive glomerulonephritis
- 3F. AL Amyloidosis

(10 marks × 6 = 60 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2019
SUBJECT: PAPER III: RENAL REPLACEMENT THERAPY

Thursday, July 11, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long question:**

1. Discuss the management of a patient of renal transplant in the first postoperative week.
(20 marks)
2. Discuss the physiology of peritoneal dialysis, assessment of adequacy and a typical prescription for a patient with diabetic nephropathy and chronic kidney disease stage 5.
(20 marks)

3. **Short Notes:**

- 3A. Acquired cystic disease in kidney
- 3B. Dialysis disequilibrium syndrome
- 3C. Intradialytic Hypertension
- 3D. Belatacept
- 3E. Anti-proliferative agents
- 3F. Hemodialysis Access Recirculation

(10 marks × 6 = 60 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2019
SUBJECT: PAPER IV: RECENT ADVANCES

Friday, July 12, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Discuss tolerance and strategies to achieve the same in a kidney transplant recipient.
(20 marks)

2. Discuss role of environmental pollution in kidney disease and understanding of pathogenesis of the same.
(20 marks)

3. **Write short notes on:**

3A. Voclosporin

3B. Dysbiosis in chronic kidney disease

3C. Wearable artificial kidney

3D. Current concepts of dry weight assessment in dialysis patients

3E. Potassium Binders

3F. Kidney paired donation (KPD)

(10 marks × 6 = 60 marks)

