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MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2020
SUBJECT: PAPER I: BASIC SCIENCE

Wednesday, July 01, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long questions:**

1. Describe normal glomerular morphology and assessment of clinical settings where glomerulus is normal on light microscopy.
(20 marks)

2. Define Polyuria, its etiology, approach to diagnosis and management of Diabetes Insipidus.
(20 marks)

3. **Short Notes:**

- 3A. Ischemia reperfusion injury in kidney
- 3B. Thin basement membrane disease
- 3C. Countercurrent Multiplier system in kidney
- 3D. Pathogenesis of preeclampsia
- 3E. Urinary casts
- 3F. Mechanism of renal fibrosis

(10 marks × 6 = 60 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2020
SUBJECT: PAPER II: CLINICAL NEPHROLOGY

Thursday, July 02, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long questions:**

1. Describes pathogenesis, pathology, clinical features management of Chronic interstitial nephritis.
(20 marks)

2. Describe pathogenesis, pathology, clinical features management of ANCA (Anti Neutrophil Cytoplasmic Antibody) associated Vasculitis.
(20 marks)

3. **Short Notes:**

- 3A. Management of Hepatorenal syndrome
- 3B. Antibiotic prophylaxis for vesicoureteral reflux in children
- 3C. Calcimimetics
- 3D. C3 glomerulopathy
- 3E. Bleeding diathesis in CKD
- 3F. Nutritional management of Chronic Kidney Disease

(10 marks × 6 = 60 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2020
SUBJECT: PAPER III: RENAL REPLACEMENT THERAPY

Friday, July 03, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long question:**

1. Define brain death, its diagnosis and protocol for starting a deceased donor kidney transplant program. Write brief note on new changes made in THOTA 2014.

(20 marks)

2. Discuss the principles and role of plasmapheresis in Nephrology.

(20 marks)

3. **Write short notes on:**

3A. Early initiation of dialysis in chronic kidney disease

3B. Ultrafiltration Failure in Peritoneal Dialysis

3C. Diagnosis of Antibody mediated rejection in Kidney Transplant

3D. Antiviral therapy for Hepatitis C virus infection

3E. Online hemodiafiltration

3F. Polyoma or BK Virus Nephropathy

(10 marks × 6 = 60 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEPHROLOGY) DEGREE EXAMINATION – JULY 2020
SUBJECT: PAPER IV: RECENT ADVANCES

Saturday, July 04, 2020

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Questions:**

1. Discuss a highly sensitized potential kidney transplant recipient and strategies for prevention, monitoring and treatment of antibody mediated rejection.

(20 marks)

2. Discuss methods of surveillance of vascular access in hemodialysis and interventions used for repair and prevention of access failure.

(20 marks)

3. **Write short notes on:**

3A. Rituximab in management of kidney disease

3B. Pulmonary hypertension in Chronic Kidney disease

3C. CREDENCE Trial

3D. Immune tolerance

3E. Biomarkers of acute kidney injury

3F. Virtual crossmatch

(10 marks × 6 = 60 marks)

