

March -1990

D.M. DEGREE EXAMINATION, MARCH 1990.

(Higher Specialities)

Branch III — Nephrology

BASIC SCIENCES

Time: Three hours.

Answer ALL the questions.

Discuss sodium handling by kidneys and how would you approach a case of hyponatraemia.

Write notes on :

- (a) Glomerular mesangium.
- (b) Regulation of distal RTA.
- (c) Urine sediment in renal disease.

Discuss briefly :

- (a) Free water clearance.
- (b) Role of Tamm Horsfall proteins in renal diseases.

Write short notes on :

- (a) Acute serum sickness.
 - (b) C_3b receptors.
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D.M. DEGREE EXAMINATION, SEPTEMBER 1990

(Higher Specialities)

Branch III — Nephrology

Paper I — NEPHROLOGY — BASIC SCIENCES

Time : Three hours.

1. Discuss counter current mechanisms and various factors which control concentration and dilution of Urine.
 2. Discuss handling of Uric acid by kidney.
 3. Discuss the role of kidney biopsy in pediatric nephrology.
 4. Discuss the Patho Physiological factors and mechanisms of progression of glomerular diseases.
 5. Write brief notes on :
 - (a) Functional abnormalities in Proximal RTA.
 - (b) Heyman nephritis.
 - (c) Pathogenesis of IgA nephropathy.
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D.M. DEGREE EXAMINATION, MARCH 1991.

(Higher Specialities)

Branch III — Nephrology

Paper I — NEPHROLOGY — BASIC SCIENCES

Time : Three hours.

Answer ALL the questions.

1. Discuss the role of various nephron segments in the acidification of urine.
 2. Briefly review the regulation of glomerular blood flow.
 3. Write short notes on :
 - (a) Mechanism of hypercoagulability in nephrotic syndrome.
 - (b) Is glomerulosclerosis a consequence of altered glomerular permeability ?
 - (c) Role of newer Triazole agents in transplant recipients.
 - (d) Masugi nephritis.
 - (e) Thin basement membrane disease.
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March -1992

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D.M. DEGREE EXAMINATION, MARCH 1992.

Branch III — Nephrology

NEPHROLOGY - BASIC SCIENCES

Time : Three hours.

Maximum : 100 marks.

1. Discuss Glomerulo-tubular feed back mechanisms. (25)
 2. Discuss the Macula Densa functions. (25)
 3. Write notes on :
 - (a) Free radicals in renal disease.
 - (b) The membrane attack complex of complement.
 - (c) Proteoglycans in glomerular disease.
 - (d) Biocompatibility of dialysis membranes.
 - (e) Extra-renal control of potassium. (5 × 10 = 50)
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April-1994

(Higher Specialities)

Branch III - Nephrology

(Old/New Regulations)

Paper I - NEPHROLOGY - BASIC SCIENCES

Time: Three hours

Max.marks: 100

Answer ALL questions.

Discuss the mechanism regulating Renin release and describe the physiologic functions of the Renin-Angiotensin system. (25)

Discuss the pathophysiology, clinical features and laboratory diagnosis of Distal Renal Tubular Acidosis. Describe its management. (25)

Write short notes on:

- a. Physiology of Erythropoietin synthesis and release.*
- b. Medullary cystic disease.*
- c. Dense deposit disease.*
- d. Chyluria.*
- e. Growth in children with chronic Renal failure. (5 x 10=50)*

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April-1995

D.M. DEGREE EXAMINATION

(Old/New Regulations)

(Higher Specialities)

Branch III — Nephrology

Paper I — NEPHROLOGY — BASIC SCIENCES

Time: Three hours.

Maximum: 100 marks.

Answer ALL questions.

Discuss biochemical changes in brain in uremia. (25)

Discuss renal hemodynamics adaptation to altered physiologic states. (25)

Write short notes on:

- (a) Insulin-like growth factors
- (b) Carnitine
- (c) Interleukin-2 gene transcription
- (d) Low anion gap
- (e) Lyons hypothesis.

(5 × 10 = 50)

D.M. DEGREE EXAMINATION

(Higher Specialities)

(Old/New Regulations)

Branch III - NEPHROLOGY

Paper I - NEPHROLOGY - BASIC SCIENCES

Time: Three hours

Max. marks:100

Answer All Questions

1. Discuss the etiology, classification and management of hyponatremia. (25)
2. Discuss the pathogenesis, pathology and management of acute renal failure following snake bite. (25)
3. Write short notes on:
 - (a) Compensatory renal growth
 - (b) Use of diuretics in nephrotic syndrome and in chronic renal failure
 - (c) Lupus anticoagulant
 - (d) Synthesis of calcitriol and its regulation
 - (e) Diagnostic significance of hypocomplementemia.

(5x10=50)

D.M. DEGREE EXAMINATION**(Higher Specialities)****Branch III - Nephrology****Old/New/Revised Regulations****Paper I - NEPHROLOGY - BASIC SCIENCES****Time: Three hours****Max. marks:100****Answer All Questions**

1. **Discuss the etiopathogenesis of metabolic alkalosis and the role of the kidney in this disorder. Describe its management. (25)**
2. **Describe the synthesis, localisation and actions of nitric oxide in the kidney. Discuss its role in renal pathophysiology. (25)**
3. **Write short notes on:**
 - (a) **Laboratory assessment of urinary acidification.**
 - (b) **Regulation of renin release**
 - (c) **Beta-2 microglobulin-mediated bone disease**
 - (d) **Laboratory diagnosis of primary hyperparathyroidism**
 - (e) **Renal reserve. (5x10=50)**

D.M. DEGREE EXAMINATION

(Higher Specialities)

Branch III - Nephrology

(Revised Regulations)

Paper I - NEPHROLOGY - BASIC SCIENCES

Time: Three hours

Max.marks:100

Answer All Questions

All questions carry equal marks.

1. Describe briefly role of Proteoglycans in glomerular pathology.
2. Tumour Necrosis Factor (TNF) and the kidney. Discuss.
3. Polymerase chain reaction (PCR) in renal pathology- Elucidate.
4. 3 Proteins in renal disease. Discuss.
5. Discuss pathogenesis and aetiology of primary F.S.G.S.
6. Discuss role of lipids in the pathogenesis and progression of renal disease.
7. Discuss Habilitation thesis of Carl Ludwig
8. Describe glomerular permeability factor.
9. Describe cell adhesion molecules in glomerulonephritis.
10. Discuss endothelial cell antibodies.

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D.M. DEGREE EXAMINATION

(Higher Specialities)

Branch III - Nephrology

(Revised Regulations)

Paper I - NEPHROLOGY - BASIC SCIENCES

Time: Three hours

Max.marks:100

Answer All Questions

1. Discuss the role of radioisotopes in assessing renal structure and function. (25)
2. Classify hyponatremia. Describe its clinical manifestations and management. (25)
3. Write briefly on:
 - (a) Synthesis of calcitriol and its regulation
 - (b) Laboratory diagnosis of pheochromocytoma
 - (c) Effects of ageing on renal structure and function
 - (d) Diagnostic significance of formed elements of the urine sediment.
 - (e) Idiopathic hypercalciuria.

(5x10=50)

October-1999

[KA 009]

Sub. Code : 1201

D.M. DEGREE EXAMINATION

(Higher Specialities)

Branch III — Nephrology

(Revised Regulations)

Paper I — NEPHROLOGY — BASIC SCIENCES

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Describe the factors and mechanisms involved in renal handling of magnesium. Mention the causes and manifestations of hypomagnesemia. (25)
2. Describe the structure and function of the glomerulus. Describe the methods for measurement of glomerular filtration rate. (25)
3. Write briefly on : (5 × 10 = 50)
 - (a) Urine anion gap
 - (b) Asymptomatic bacteriuria
 - (c) Bartter's syndrome
 - (d) Demonstration of vesicoureteric reflux and reflux nephropathy
 - (e) Radiocontrast media nephrotoxicity.

April-2000

[KB 009]

Sub. Code : 1201

D.M. DEGREE EXAMINATION

(Higher Specialities)

Branch III — Nephrology

(Revised Regulations)

Paper I — NEPHROLOGY — BASIC SCIENCES

Time : Three hours

Maximum 100 marks

Answer ALL questions.

1. Describe the etiopathogenesis, clinical manifestations, laboratory diagnosis and management of distal renal tubular acidosis. (25)
2. Describe the mechanisms and types of proteinuria. What are the therapeutic interventions that may be used to reduce glomerular proteinuria. (25)
3. Write briefly on : (5 × 10 = 50)
 - (a) Management of hyperkalemia.
 - (b) Inhibitors of stone formation.
 - (c) Methyl alcohol poisoning.
 - (d) Genetic basis of cystic kidney disease.
 - (e) Histologic variants of focal glomerulosclerosis