

**NEPHROLOGY**

PAPER – I

NEPH/J/16/20/I

Time : 3 hours

Max. Marks : 100

**Important instructions:**

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

1. a) Draw labeled diagram(s) glomerular basement membrane. 4+6  
b) Mechanisms of proteinuria.
2. a) Draw and label the parts of the Juxta Glomerular Apparatus. 4+6  
b) Counter current multiplier system
3. a) Transtubular Potassium Gradient. 5+5  
b) Fractional excretion of sodium.
4. a) Diuretic resistance. 7+3  
b) Urinary anion gap.
5. a) Pathogenesis of glomerular crescents. 5+5  
b) Antigens identified in glomerulonephritis.
6. Syndrome of inappropriate secretion of anti-diuretic hormone (SIADH): Etiology, diagnosis & management. 3+3+4
7. a) Approach to renal biopsy in a patient on antiplatelet agents. 6+4  
b) Mention the distinguishing histopathological features of primary versus secondary membranous nephropathy.
8. a) Draw a diagnostic algorithm for hypokalemic metabolic alkalosis. 5+5  
b) Approach to a patient with hypercalcemia
9. a) C3 glomerulonephritis. 5+5  
b) Complement Membrane Attack Complex.
10. a) Molecular genetics of Alport's syndrome. 5+5  
b) Genetics of autosomal dominant polycystic kidney disease.

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