

NEPHROLOGY

PAPER-I

Time: 3 hours
Max. Marks:100

NEPHRO/D/02/20/I

Important Instructions:

- *You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.*
- *Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.*
- *No additional supplementary answer sheet booklet will be provided.*
- *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) Water handling by kidney. 4+3+3
b) Etiology of hyponatremia.
c) Management of hypovolemic hyponatremia.
2. a) Dialysis adequacy in hemodialysis. 5+5
b) Different trials in hemodialysis adequacy.
3. a) Podocyte pathophysiology. 5+5
b) Podocyte involvement in minimal change disease and FSGS.
4. a) Role of antigen presenting cell in transplant immunology. 5+5
b) Different types of cross-match and their relevance.
5. a) Glomerular ultrafiltration pressure. 2+3+5
b) Factors affecting GFR.
c) Conditions where single nephron GFR is increased.
6. a) Implications of FGF-23 in chronic kidney disease-mineral bone disease. 5+5
b) Adynamic bone disease in chronic kidney disease and its management.
7. a) Illustrate juxta-glomerular apparatus. 3+4+3
b) Tubuloglomerular feedback.
c) Glomerulotubular balance.
8. a) Structure of peritoneal membrane. 5+5
b) Conditions associated with filtration failure.

P.T.O.

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| 9. | a) Define chronic kidney disease of unknown origin (CKDu).
b) Status of CKDu in India.
c) Study for assessing CKDu in a village. | 2+4+4 |
| 10. | a) Sodium glucose transporters in kidney.
b) Effects of SGL receptor inhibitor. | 5+5 |
