Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Renal Dialysis Technology Degree Examination – 03-Nov-2026

Time: Three Hours **Max. Marks: 50**

Applied Physiology related to Dialysis Technology (RS-3)

Q.P. CODE: 3402

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

(Note: Both QP Codes 3302 and 3402 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Briefly explain the role of kidneys in calcium homeostasis
2. How is water reabsorbed in various parts of the nephron? Add a note in Diabetes insipidus

SHORT ESSAYS (Answer any Five) **5 x 5 = 25 Marks**

3. Explain tubuloglomerular feedback mechanism and tubuloglomerular balance
4. Name three abnormal constituents of urine and one condition each in which it is found
5. Discuss the role of renin angiotensin system in regulation of extracellular fluid volume
6. List six peculiarities of renal circulation. Explain autoregulation of renal circulation in detail
7. Discuss in detail the structure of platelets and list any three functions of platelets
8. With the help of diagram, Explain the role of counter current multiplier in concentration of urine

SHORT ANSWER (Answer any FIVE) **5 x 3 = 15 Marks**

9. List the differences between cortical and juxta medullary nephrons
10. Define plasma clearance. What are the substances used to measure GFR
11. What is the dietary advice given to a patient with renal failure?
12. Explain renal splay and discuss its clinical significance
13. Draw a neat labelled diagram of juxtaglomerular apparatus and list the functions
14. State the normal valves
    a) Sr-Calcium
    b) Sr-Phosphorous
    c) Sr-Sodium

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