



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 6th Semester Examination, 2023

CC14-PHYSIOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

GROUP-A

1. Answer any **five** questions from the following: 1×5 = 5
- (a) What causes Oliguria?
 - (b) In which part of nephron absorption of filtrate is maximum?
 - (c) What are the two phases of micturition?
 - (d) What is the role of glomerular filtration rate?
 - (e) What is renin?
 - (f) What are the functions of Podocyte cells?
 - (g) What is the function of inulin in kidney?
 - (h) What causes diabetes mellitus?

GROUP-B

Answer any three questions from the following 5×3 = 15

- 2. Write a short note on Renal plasma clearance. 5
- 3. Discuss the mechanism of acidification of urine. 5
- 4. What is tubular secretion and reabsorption process? $2\frac{1}{2} + 2\frac{1}{2}$
- 5. What is the difference between countercurrent multiplier and countercurrent exchanger? 5
- 6. Write a short note about – The tubuloglomerular feed-back mechanism. 5

GROUP-C

Answer any two questions from the following 10×2 = 20

- 7. State the mechanism of reabsorption of glucose from the PCT of the kidney. Define and classify diuresis. 5+5
- 8. Describe the filling and emptying of the urinary bladder. Write a short note about Juxtaglomerular apparatus. 5+5
- 9. Define GFR. Explain briefly about mechanism of factors regulating GFR. Describe the best test for estimation of GFR. What is Creatinine clearance? 2+4+2+2
- 10. What is the mechanism of bicarbonate reabsorption in renal tubule? Describe the hormones influencing renal functions. 5+5

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