



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 6th Semester Examination, 2022

PHYACOR14T-PHYSIOLOGY (CC14)

FORMATION AND EXCRETION OF URINE

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

Answer any five questions from the following

8×5 = 40

1. Discuss, with a suitable diagram, the counter current exchanger system, mentioning its significance. What is vasa recta? 7+1
2. Discuss the non-excretory functions of kidney. What are Malpighian corpuscles? 6+2
3. State the functions of podocytes and mesangial cells. What is macula densa? (2+2)+2+2
What do you mean by tubulo-glomerular feedback?
4. Discuss the role of renin-angiotensin system in the regulation of blood pressure. Why is glomerular filtration called ultrafiltration? 6+2
5. Explain the mechanism of sodium reabsorption by the kidney. What are diuretics? Give two examples. 6+1+1
6. What do you mean by facultative and obligatory water reabsorption? What is the significance of MTAL region of loop of Henle? (2+2)+4
7. Elucidate the nervous regulation of micturition. What is cystometrogram? 6+2
8. State the chemical composition of urine. Mention the factors regulating urine volume and concentration. What is haematuria? 2+4+2

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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