1. What is ESBL (Extended Spectrum Beta Lactamase)? Describe the mechanism of bacterial resistance and mechanism to overcome them. 3+(3+4)

2. Describe the anatomy of anterior perineum and make diagrams of contents of superficial and deep perineal space. 10

3. Describe the pathophysiology of primary chyluria. How does chyle reach urine and what is the basis of dietary treatment? 3+(4+3)

4. Describe the molecular basis of use of BCG in NMIBC (Non Muscle Invasive Bladder Cancer). Describe WHO grading of common toxicities of BCG. 5+5

5. Describe the mechanism of renal osteodystrophy in Chronic Kidney Disease (CKD) and its treatment and prophylaxis. 4+3+3

6. What is the process of formation of calcium oxalate stones? Describe the principles of citrate therapy and pH monitoring in treating patients with recurrent stones. 4+(3+3)

7. Describe polymerase chain reaction (PCR). Which test based on PCR is being used in clinical practice? What is micro array technology? 3+3+4

8. What is the difference between nominal and ordinal data? Describe student t test and its use. What is a case control study? What does P value signify? 3+3+3+1

9. Describe the changes in nephrons and interstitium in chronic obstructive nephropathy. What is the role of supplementing iron and Calcium in CKD? 5+5

10. What is the basis of supplementing sodabicarb in a patient with orthotopic neobladder? What is the mechanism of night time incontinence in the patient? Can mucus production be minimized and how? 4+3+3

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