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## SURGICAL SCIENCES EXAMINATION IN UROLOGY

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### RATIONALE

This examination will test for knowledge of the basic sciences that underlies urologic surgery and practice. General anatomy, physiology and pathology have been tested previously in the Generic Surgical Science Examination and advanced understanding of urologic management will be tested in the Fellowship Examination. Urology trainees at the level of nSET2-nSET3 will be expected to know the anatomy, physiology and pathology relevant to urology and how this applies to urology practice.

### SYLLABUS

The following texts are recommended only. Candidates should not confine their reading to these sources and are encouraged to read widely. Candidates are expected to apply knowledge from reading and clinical experience.

### TEXTBOOKS

Campbell-Walsh-Wein Urology, 12<sup>th</sup> edition.

Chapter	Topic
1	Evaluation of the Urologic Patient: History and Physical Examination
2	Evaluation of the Urologic Patient: Testing and Imaging
3	Urinary Tract Imaging: Basic Principles of CT, MRI and Plain Film Imaging
4	Urinary Tract Imaging: Basic Principles of Urologic Ultrasonography
5	Urinary Tract Imaging: Basic Principles of Nuclear Medicine
18	Urologic Consideration in Pregnancy
20	Embryology of the Genitourinary Tract
62	Molecular Genetics and Cancer Biology
63	Surgical, Radiographic, and Endoscopic Anatomy of the Male Reproductive System
64	Male Reproductive Physiology
75	Surgical, Radiographic, and Endoscopic Anatomy of the Retroperitoneum
84	Surgical, Radiologic, and Endoscopic Anatomy of the Kidney and Ureter
105	Surgical and Radiographic Anatomy of the Adrenals
108	Surgical, Radiographic, and Endoscopic Anatomy of the Female Pelvis
109	Surgical, Radiographic, and Endoscopic Anatomy of the Male Pelvis

Ganong's Review of Medical Physiology, 26<sup>th</sup> edition.

Chapter	Topic
13	Autonomic Nervous System
17	Hypothalamic Regulation of Hormonal Function
18	The Pituitary Gland.
19	The Adrenal Medulla & Adrenal Cortex
21	Hormonal Control of Calcium & Phosphate Metabolism & The Physiology of Bone
22	Reproductive Development & Function of the Female Reproductive System
23	Function of the Male Reproductive System
37	Renal Function & Micturition
38	Regulation of Extracellular Fluid Composition & Volume
39	Acidification of the Urine & Bicarbonate Excretion



Last's Anatomy Regional and Applied (McMinn), 9<sup>th</sup> edition.

Chapter	Topic
1	Introduction to Regional Anatomy
5	Abdomen

Robbins and Cotran Pathologic Basis of Disease (Kumar, Abbas and Aster), 9<sup>th</sup> edition

Chapter	Topic
1	The Cell as a Unit of Health and Disease
2	Cellular Responses to Stress and Toxic Insults: Adaptation, Injury, and Death
3	Inflammation and Repair
4	Hemodynamic Disorders, Thromboembolic Disease, and Shock
5	Genetic Disorders
6	Diseases of the Immune System
7	Neoplasia
8	Infectious Diseases
9	Environmental and Nutritional Diseases
10	Diseases of Infancy and Childhood
20	The Kidney
21	The Lower Urinary Tract and Male Genital System

Textbook of Medical Physiology, 13th Edition Guyton and Hall (2016)

Chapter	Topic
19	Role of the Kidneys in Long-Term Control of Arterial Pressure and in Hypertension: The Integrated System for Arterial Pressure Regulation
24	Circulatory Shock and Its Treatment
25	The Body Fluid Compartments: Extracellular and Intracellular Fluids; Edema
26	The Urinary System: Functional Anatomy and Urine Formation by the Kidneys
27	Glomerular Filtration, Renal Blood Flow, and Their Control
28	Renal Tubular Reabsorption and Secretion
29	Urine Concentration and Dilution; Regulation of Extracellular Fluid Osmolarity and Sodium Concentration
30	Renal Regulation of Potassium, Calcium, Phosphate, and Magnesium; Integration of Renal Mechanisms for Control of Blood Volume and Extracellular Fluid Volume
31	Acid-Base Regulation
32	Diuretics, Kidney Diseases
76	Pituitary Hormones and Their Control by the Hypothalamus
78	Adrenocortical Hormones
80	Parathyroid Hormone, Calcitonin, Calcium and Phosphate Metabolism, Vitamin D, Bone, and Teeth
81	Reproductive and Hormonal Functions of the Male (and Function of the Pineal Gland)

Smith and Tanagho's General Urology (McAninch and Lue), 18<sup>th</sup> edition.