

# **RAJASTHAN PUBLIC SERVICE COMMISSION, AJMER**

## **SYLLABUS OF COMPETITIVE EXAMINATION FOR THE POST OF ASSISTANT PROFESSOR (Super Speciality) UROLOGY MEDICAL EDUCATION DEPARTMENT**

### **1. Clinical Decision Making-**

- Evaluation of Urologic Patient, Basics of Urinary Tract Imaging, Assessment of urologic & Surgical outcome, Ethics & Consent.

### **2. Basics of Urologic Surgery-**

- Principles of Urologic Surgery- Perioperative Care.
- Principles of Urologic Surgery- Incisions and Access.
- Principles of Urologic Surgery- Intraoperative Technical Decisions.
- Lower Urinary Tract Catheterization.
- Fundamentals of Upper Urinary Tract Drainage.
- Principles of Urologic Endoscopy.
- Fundamentals of Laparoscopic and Robotic Urologic Surgery.
- Basic Energy Modalities in Urologic Surgery.
- Evaluation and Management of Hematuria.
- Complications of Urologic Surgery.
- Urologic Considerations in Pregnancy.
- Intraoperative Consultation.
- Role of Isotope studies in urology.

### **3 . Pediatric Urology–**

- Embryology of the Genitourinary Tract.
- Urologic Aspects of Pediatric Nephrology.
- Perinatal Urology.
- Urologic Evaluation of Child.
- Pediatric Urogenital Imaging.
- Pediatric Urogenital Infection.
- Perioperative Management.
- Management of VUR.
- Bladder Anomalies.
- Exstrophy Epispadias Complex.
- Prune Belly Syndrome.
- Posterior Urethral Valve.
- Anomalies of Upper tract, Pelviuretric Junction Obstruction, Ureteric Anomalies
- Hypospadias.
- Undescended Testis.
- Pediatric Uro- Oncology.
- Management of Obstructive Megaureter.
- Management of Hydronephrosis.

#### **4. Infections & Inflammations-**

- Urinary Tract Infections.
- Bladder Pain Syndrome & Related Conditions.
- Sexually Transmitted Diseases, Tuberculosis & Parasitic Infection of Urinary Tract.

#### **5. Molecular and Cellular Biology-**

- Basic Principles of Immunology and Immunotherapy in Urologic Oncology.
- Molecular Genetics and Cancer Biology Tract.

#### **6. Andrology-**

- Normal Physiology of Male Reproduction.
- Diagnosis Approach in Male Infertility.
- Varicocele – Diagnosis & Management.
- Endocrine & Medical Management of Male Infertility.
- Surgical Management of Male Infertility.
- Overview of Assisted Reproduction Techniques.
- Physiology & Pharmacology of Penile Erection and Pathophysiology of Erectile Dysfunction.
- Diagnostic tests in Erectile Dysfunction.
- Medical and other therapies in Erectile Dysfunction.
- Peyronie's Disease.
- Priapism.
- Penile Prosthesis implantation – types, indications and complications.
- Integrated Men Health.
- Sexual Function & Dysfunction in Female.

#### **7. Genito Urinary Trauma-**

- Pathogenesis, Diagnosis & Management of Renal, Bladder, Urethral, Penile, Testis & Scrotal Trauma.

#### **8. Female Urology-**

- Management of Urogenital Fistulae in women.
- Gynecological tumors & its effect on Urinary Tract.
- Female Lower Urinary Tract Reconstruction, Evaluation and Management of Women with Urinary Incontinence and Pelvic Prolapse.
- Treatment of Stress Incontinence.
- Surgery for Incontinence.
- Stress Incontinence and Cystocele.
- Posterior & Anterior Vaginal Wall Prolapse.
- Enterocele.
- Uterine Prolapse.
- Urethral Diverticulum.

- Pathology affecting primarily Genital organs in females– causing secondary effects on urinary organs and management.

### **9. Renal Physiology and Pathophysiology-**

- Surgical, Radiologic and Endoscopic Anatomy of the Kidney and Ureter.
- Physiology and Pharmacology of the Renal Pelvis and Ureter.
- Renal Physiology and Pathophysiology Including Renovascular Hypertension.
- Renal Insufficiency and Ischemic Nephropathy.
- Pathophysiology of Ureteric obstruction.
- Pathophysiological changes in outlet obstruction.

### **10. Renal Transplantation-**

- Basic consideration of Acute & Chronic kidney Failure in relation to Urology.
- Basics of Donor & Recipient Preparation, Basic Immunology, Surgical aspect & post-Transplant Complications.
- Cadaveric Renal Transplant.

### **11. Urinary Lithiasis & Endourology-**

- Urinary Lithiasis Etiology, Epidemiology and Pathogenesis.
- Evaluation and Medical Management of Urinary Lithiasis.
- Strategies for Nonmedical Management of Upper Urinary Tract Calculi.
- Surgical Management for Upper Urinary Tract Calculi.
- Lower Urinary Tract Calculi.
- ESWL and its role in the management of Urolithiasis.

### **12. Male Genitalia-**

- Surgical, Radiographic and Endoscopic Anatomy of the Retroperitoneum.
- Etiology, classification, Diagnosis and management of Testicular Tumors.
- Surgery of Testicular Tumors.
- Laparoscopic and Robotic-Assisted Retroperitoneal Lymphadenectomy for Testicular Tumors.
- Etiology, classification, Diagnosis and management of Penile Tumors.
- Etiology, classification, Diagnosis and management of Urethral Tumors.
- Management of Inguinal Nodes in Penile and Urethral tumors.
- Inguinal Node Dissection.
- Surgery for Benign Disorders of the Penis and Urethra.
- Surgery of the Scrotum and Seminal Vesicles.

### **13. Neoplasms of the Upper Urinary Tract-**

- Diagnosis and treatment of Benign Renal Tumors.
- Renal Cystic Diseases.
- Etiology, classification, Diagnosis and management of various Malignant renal Tumors.
- Urothelial Tumors of the Upper Urinary Tract and Ureter.
- Surgical Management of Upper Urinary Tract Urothelial Tumors.
- Retroperitoneal Tumors.

- Open Surgery of the Kidney in Malignancies.
- Role of Laparoscopic and Robotic Surgery in Kidney disease.
- Focal Therapy for Renal Tumors.
- Treatment of Advanced Renal Cell Carcinoma.

#### **14. The Adrenals-**

- Surgical and Radiographic Anatomy of the Adrenal Gland.
- Pathophysiology, Evaluation and Medical Management of Adrenal Disorders.
- Surgery of the Adrenal Glands.

#### **15. Urine Transport, Storage and Emptying-**

- Surgical, Radiographic and Endoscopic Anatomy of the Female Pelvis.
- Surgical, Radiographic and Endoscopic Anatomy of the Male Pelvis.
- Physiology and Pharmacology of the Bladder and Urethra.
- Pathophysiology and Classification of Lower Urinary Tract Dysfunction Overview.
- Evaluation and Management of Women with Urinary Incontinence and Pelvic Prolapse.
- Evaluation and Management of Men with Urinary Incontinence.
- Urodynamic and Video-Urodynamic Evaluation of the Lower Urinary Tract.
- Urinary Incontinence and Pelvic Prolapse Epidemiology and Pathophysiology.
- Neuromuscular Dysfunction of the Lower Urinary Tract.
- Overactive Bladder.
- The Underactive Detrusor.
- Nocturia.
- Pharmacologic Management of Lower Urinary Tract Storage and Emptying Failure.
- Conservative Management of Urinary Incontinence Behavioral and Pelvic Floor Therapy, Urethral and Pelvic Devices.
- Electrical Stimulation and Neuromodulation in Storage and Emptying Failure.

#### **16. Benign and Malignant Bladder Disorders-**

- Bladder Surgery for Benign Disease.
- Etiology, Pathology and Evaluation of various Bladder Tumors.
- Tumors of the Bladder
- Management Strategies for Non–Muscle-Invasive Bladder Cancer (Ta, T1, and CIS).
- Management of Muscle-Invasive and Metastatic Bladder Cancer.
- Surgical Management of Bladder Cancer Transurethral, Open and Robotic.
- Use of Intestinal Segments in Urinary Diversion.
- Cutaneous Continent Urinary Diversion.
- Orthotopic Urinary Diversion.

#### **17. The Prostate-**

- Development, Molecular Biology and Physiology of the Prostate.
- Benign Prostatic Hyperplasia Etiology, Pathophysiology, Epidemiology and Natural History.

- Evaluation and Nonsurgical Management of Benign Prostatic Hyperplasia.
- Minimally Invasive, Endoscopic open and Laparoscopic Management of Benign Prostatic Hyperplasia.
- Simple Prostatectomy- Open and Robotic-Assisted Laparoscopic Approaches.
- Epidemiology, Etiology and Prevention of Prostate Cancer.
- Prostate Cancer Biomarkers.
- Prostate Biopsy Techniques and Imaging.
- Pathology of Prostatic Neoplasia.
- Diagnosis and Staging of Prostate Cancer.
- Active Management Strategies for Localized Prostate Cancer.
- Active Surveillance of Prostate Cancer.
- Open Radical Prostatectomy.
- Laparoscopic and Robotic-Assisted Laparoscopic Radical.
- Prostatectomy and Pelvic Lymphadenectomy.
- Radiation Therapy for Prostate Cancer.
- Focal Therapy for Prostate Cancer.
- Treatment of Locally Advanced Prostate Cancer.
- Management Strategies for Biochemical Recurrence of Prostate Cancer.
- Treatment of Metastatic Prostatic Carcinoma.

## **18. Stricture Urethra-**

## **19. Miscellaneous-**

- Special Urologic Consideration in Transgenders.
- Recent advances in Urology.

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### **Pattern of Question Papers:**

- 1. Objective Type Paper**
- 2. Maximum Marks: 150**
- 3. Number of Questions: 150**
- 4. Duration of Paper: 2.30 Hours**
- 5. All Questions carry equal marks**
- 6. There will be Negative Marking**  
(For every wrong answer one-third of the marks prescribed for that Particular question shall be deducted.)