



**BHARATI VIDYAPEETH
(DEEMED TO BE UNIVERSITY), PUNE**

**Faculty of Medical Sciences
M.Ch. - Pediatric Surgery
New Syllabus**



**Bharati Vidyapeeth Deemed to be University,
Pune**

Faculty of Medical Sciences

**Curriculum for MCh
As per Guidelines of
National Medical Commission**

NATIONAL MEDICAL COMMISSION
Postgraduate Medical Education Board

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**GUIDELINES FOR COMPETENCY
BASED
POSTGRADUATE TRAINING
PROGRAMME FOR M.Ch. IN
PEDIATRIC SURGERY**

GUIDELINES FOR COMPETENCY BASED POSTGRADUATE TRAINING PROGRAMME FOR M.Ch. IN PEDIATRIC SURGERY

1. PREAMBLE

The aims and objectives of M.Ch. training should be to train candidates with knowledge in surgical sciences and an aptitude to care for neonates and children with specific knowledge, skills and attitudes in the specialty of Pediatric Surgery. The training should help him/her to function as a safe Pediatric surgeon, an independent clinical consultant, a medical teacher and conduct research studies.

2. SUBJECT SPECIFIC OBJECTIVES

The aim of course is to produce Pediatric surgeons who are capable of setting a standard and demonstrate commensurate expertise in the field. The training should aim to facilitate the candidate's acquisition of a judicious mix of the three domains of learning that will be practiced ethically-

- Cognitive (knowledge),
- Psychomotor (practice) and
- Affective (communication).

2.1 Cognitive domain (Knowledge)

- Understand the basic sciences (embryology, anatomy, physiology, biochemistry, pharmaco-therapeutics etc.) and principle of pediatric medical care as applicable to pediatric surgical practice.
- Be conversant with the embryology, etiology, pathophysiology, diagnosis and management of common neonatal and pediatric surgical problems - elective or emergency.
- **Group approach:** Recognize the role of multidisciplinary and interdisciplinary approach in the management of various pediatric surgical disorders so as to obtain relevant specialist consultation, where appropriate.
- **Research Methodology:** Basic knowledge of research methodology and bio-statistics; familiarity and participation in clinical and experimental research studies; involvement in scientific presentation and publication.

- Recognize the importance of family, society and socio-cultural environment in the treatment of the sick child.

2.2 Psychomotor domain(Practical)

- Evaluate a patient thoroughly (history, clinical examination), order relevant investigations and interpret them to reach a diagnosis and plan of management.
- Plan and carry out simple investigations/ procedures (bedside, laboratory, radiology suite) independently.
- Provide Basic and Advanced Life Support services in emergencies e.g. NALS, PALS.
- Acquire familiarity with and provide critical care of surgical neonates and infants - airway support, ventilation, central vascular access etc.
- Prepare a patient for an elective/emergency surgery and provide specific post-operative care.
- Provide counseling to the patient and primary caretakers for the smooth dispensation of medical care.
- Acquire skills in routine ward procedures (e.g. bladder catheterization, wound dressings, peripheral vascular access, child restraint etc.).
- Acquire proficiency in prescribed minor and major operative procedures, and provide these, initially with assistance and later independently.
- Monitor the post-operative patient in the routine post-op ward / high dependency unit / and in the intensive care setting.
- Provide specific and relevant advice to the patient and family at discharge time for proper domiciliary care, hospital reporting in emergency and routine follow up.

2.3 Affective domain(Communication)

- Develop and practice effective communication skills.
- Professionally interact and obtain relevant specialist/ancillary services' consultation where appropriate.
- While teaching others in a clinical care unit, ensure team work and establish a pediatric surgical unit.
- Establish effective communication with the caregivers of the patient including counseling and terminal care.

- **Medical Ethics and Human values:** The student will inculcate ethical principles in all aspects of pediatric surgical practice/research (professional honesty and integrity, humility, moderation, informed consent, counseling, awareness of patients' rights and privileges, etc.).

3. SUBJECT SPECIFIC COMPETENCIES

3.1 COGNITIVE (KNOWLEDGE) DOMAIN

3.1.1 Competencies to be acquired in the cognitive domain (knowledge)

a. History and Physical

- Establish rapport with child and parent/guardian who has complete knowledge of the child and obtain comprehensive history,
- Perform a complete physical examination of relevant systems based on history,
- Should have knowledge of systemic examination in a child,
- Summarize history and physical examination results to arrive at a provisional diagnosis with other differential diagnosis in order of possibility and communicate the same to the team members.

b. Evaluation and Management

- List out and order appropriate investigations towards arriving at a final diagnosis or narrowing the list of differential diagnosis. Prioritize emergency and routine investigations,
- Should know to interpret the results of the investigations ordered, including acceptable normal variations and confirm a working diagnosis,
- Plan management based on the final diagnosis arrived at,
- Communicate effectively the diagnosis, plan of management and possible outcomes to the parents/ caretakers,
- Communicate clearly the investigation results, plan of management to the team justifying the same,
- Should be able to recognise abnormal results and reports and prioritise those requiring immediate response,
- Train and mentor junior team members.

c. Documentation

- Should be able to systematically document case history, examination findings, summarize management plan based on investigations and clinical examination,
- Uses the electronic record when available to keep the team informed of progress,

- Flow chart of management with orders which are clear and understandable by juniors,
- Should be able to write appropriate cross departmental referrals,
- Should be able to write lucid discharge summaries chronicling the admission, evaluation, management and post-operative course in the hospital with clear instructions regarding medications on discharge and follow up.

d. Communication

- Communicates the diagnosis, plan of management clearly to parents/guardians,
- Communicates orally and by documentation to junior healthcare workers the treatment plan,
- Communicates appropriately while handing over to maintain uninterrupted care of patient,
- Obtain informed consent for surgery and procedures after explaining alternatives to the parents,

e. Team work.

- Should work as an active member of the professional team
- Should accept responsibilities and carry them out effectively
- Should ask for help from team members when needed and should be willing to help when asked for
- Should be actively involved in patient care and follow up

f. Others.

- Have empathy for patients and parents/guardians,
- Incorporates all the four pillars of medical ethics and practise them diligently,
- Recognizes medico-legal issues, patient confidentiality and other regulations pertaining to medical practice,
- Conceptualises and carries out research incorporating the principles of Good Clinical practices,
- Teach relevant aspects of Pediatric surgery to resident doctors, junior colleagues, nursing, and para-medical staff,
- Understand factors for hospital infection and take appropriate universal precautions to prevent hospital infection,
- Should be well versed in the administrative functioning of the department and the ward including the staffing requirements, procurement and maintenance of electro-medical equipment,

3.1.2 Competencies to be acquired in basic sciences applicable to Pediatric Surgery:

- a) Genetic basis of disease
- b) Molecular biology applicable to congenital anomalies
- c) Fetus as a patient
 - Antenatal diagnostic tools
 - Antenatal prognosticators
 - Fetal interventions
- d) Normal and anomalous embryogenesis of all systems:
 - Gastrointestinal tract
 - Hepatobiliary and pancreas
 - Respiratory system including diaphragm and related Cardiovascular system
 - Genito-urinary tract, including descent of testes, sexual differentiation.
 - Lymphatic system
 - Face and neck including lip, palate, branchial and thyroglossal apparatus
 - Abdominal wall, umbilicus and inguinal canal
 - Central nervous system and spine
- e) Surgical anatomy of all above mentioned systems
- f) Physiology and biochemistry
 - Physiology of fetus and newborn including transition from former to latter
 - Gastrointestinal physiology including deglutition, esophageal motility, antireflux mechanism, intestinal motility & defecation and neuroenteric regulation
 - Altered biochemistry in intestinal obstruction
 - Hepatic function including bilirubin metabolism.
 - Physiology of micturition and neurogenic regulation of same
 - Biochemical changes in obstructive uropathy and renal failure.
 - Cardiovascular physiology including fetal & neonatal cardiac function
 - Pulmonary physiology and basis of mechanical ventilation
 - Fluid and electrolyte balance.
 - Hemolytic disorders
 - Nutritional requirements in health and disease including parenteral nutrition.
 - Sexual differentiation including biochemical aspects in anomalous conditions.
 - Physiological changes during pre-operative and post-operative period and changes during different types of anesthesia and laparoscopic surgery

g) Microbiological principles governing:

- Pathophysiology of sepsis in neonates, infants and children, and inflammatory response,
- Maintenance of asepsis, sterility in newborn nursery, ward and operation theatre,
- Sterilization of surgical instruments including endoscopes & ventilators,
- Common surgical infections, including osteomyelitis and septic arthritis,
- Surgical tuberculosis including atypical mycobacterial infection,
- AIDS/HIV in Pediatric Surgery,
- Parasitic surgical conditions,
- Elements of immunology including its importance in organ transplantation & immunosuppression,
- Immunization and vaccination.

3.1.3 Competencies to be acquired in general patient care applicable to Pediatric Surgery

- Basic and Advanced life support in Neonates and Pediatrics
- Basics of mechanical ventilation, different types of ventilatory support
- Different types of venous access, arterial access - monitoring
- Principles and types of physiological monitoring
- Transport and restraint of the sick child

3.1.4. Trauma

A. General principles of trauma

Upon completion of this, the trainee should be able to describe & discuss:

- Epidemiology of Pediatric trauma
- Different types of trauma, presentation
- Acute care of trauma patients including immediate assessment, triaging, evaluation tools to be used, scoring systems and prognostications

B. Systemic trauma

Upon completion of this, the trainee should be able to describe & discuss the different types of trauma pertaining to, their management, indications for surgery, outcomes of :

- Head injury
- Thoracic injuries including airway, chest wall and mediastinum
- Abdominal injuries including blunt and penetrating, solid and hollow viscera, retroperitoneum

- Genitourinary trauma including kidney, ureter, bladder, urethra and genital organs
- Musculoskeletal and spine trauma
- Burns
- Child abuse
- Soft tissue and envenomation

3.1. 5 Pediatric Oncology

A. General principles

Upon completion of this, the trainee should be able to describe & discuss:

- Genetic basis of tumours
- Tumour markers
- Principles and application of chemotherapy including toxicities of routinely used chemotherapeutic drugs
- Principles and application of radiotherapy including toxicities of routinely used radiotherapy
- Immuno-therapy
- Gene therapy and newer modalities of treatment
- Various evaluation modalities in Oncology

B. Systemic oncology

Upon completion of this, the trainee should be able to describe & discuss in detail the presentations, staging, prognostication, various treatment systems applicable to specific tumours:

- Wilms' tumour
- Neuroblastoma
- Liver tumours
- Rhabdomyosarcomas
- Germcell - tumours

Upon completion of this, the trainee should be able to describe & discuss an outline of the presentation and management of the following tumours:

- Common lymphomas and leukemias
- Common bone tumours
- Central nervous system tumours

3.1.6 Evaluation methods in Pediatric Surgery

A. Radiology

Upon completion of this, the trainee should be able to describe & discuss the principles of, applications, pitfalls, modifications in specific situations, how to carryout various investigations and interpret:

1. X rays
2. Ultrasonography including Doppler
3. CT scan
4. Voiding Cystourethrography
5. Contrast upper and lower GI series
6. Intravenous pyelography
7. MRI
8. PET - CT scan

B. Nuclear Medicine

Upon completion of this, the trainee should be able to describe & discuss the principles of, applications, pitfalls, modifications in specific situations, how to carryout various investigations and interpret:

1. Renal Dynamic Diuretic Radionuclide scintigraphy with various isotopes like EC, MAG3, DTPA
2. Static Cortical renogram - DMSA
3. Direct Radionuclide Cystography (DRCG)
4. Hepatobiliary scintigraphy
5. MIBG scan
6. Lymphatic scintigraphy
7. Thyroid scintigraphy
8. Gastro-esophageal reflux scintigraphy
9. RBC blood pool scan
10. Technitium Meckel's scan
11. PET scan
12. Liver-Spleen scan
13. Bone scan

C. Urodynamics

Upon completion of this, the trainee should be able to describe & discuss the principles of, applications, pitfalls, modifications in specific situations, how to carryout various investigations and interpret:

1. Uroflowmetry

2. Cystometrogram
3. Video urodynamics

D. Others

Upon completion of this, the trainee should be able to describe & discuss the principles of, applications, pitfalls, modifications in specific situations, how to carryout various investigations and interpret:

1. 24 hour pH monitoring
2. Esophageal and anorectal manometry
3. Intracranial pressure monitoring
4. Basics of pathological biopsies, examination including frozen section immunohistochemistry

3.1.7 Transplantation

Upon completion of this, the trainee should be able to describe & discuss:

1. Principles of transplantation including immunology and selection of recipients
2. Organ procurement and preservation
3. Outcomes including complications of transplantation
4. Immuno-suppression and its toxicities
5. Indications, preparation of recipient, techniques and post transplantation management and outcomes of the following:
 - a. Kidney transplantation and liver transplantation in detail
 - b. An outline of pancreatic transplantation, intestinal transplantation, bone marrow transplantation, heart & heart-lung transplantation

3.1.8 Regional and Special Pediatric Surgery

At the end of the training, the student should be able to describe, discuss, analyse and present pathogenesis, clinical presentations, differential diagnosis, diagnostic approach, roles of specific diagnostic tools, interpretation of the test results, management options (both non-operative and surgical), indications for surgery, preparation for surgery, peri- and post-operative management, surgical steps, complications and their management, outcomes (short and long - term) of the various congenital and acquired pathologies in each system as below (elaborated in detailed in the syllabus sections):

A: Head and Neck:

B: Thorax:

- C: Abdomen:
- D: Genitourinary Tract
- E. Special Pediatric Surgery

3.1.9 Recent Advances

Upon completion of this, the trainee should be able to describe & discuss the advanced technology, its applications in diagnosis and treatment, complication and research options related to the fields outlined above. In addition, he must be conversant with:

- Minimal Access surgery of all areas including laparoscopy, thoracoscopy, ventriculoscopy, STEALTH and endoscopic surgeries, gastrointestinal endoscopy including ERCP (endoscopic retrograde cholangio-pancreatography), Bronchoscopy and Endourology.
- Robotics in Pediatric Surgery
- Use of newer energy sources in surgery including LASER, harmonic scalpel etc.
- Use of various types of staplers: Intestinal, Vascular, Endo GI etc.

3.2 AFFECTIVE DOMAIN (ATTITUDES AND VALUES)

The post graduate student should imbibe the following:

- **Group /Team approach:** function as a part of a team, co-operate with colleagues, and interact with the patient to provide the optimal medical care.
- **Ethical practice:** Abide by ethical principles in medical practice, maintain proper etiquette in dealings with patients, caretakers and other health personnel including due attention to the patient's right to information, consent and second opinion. Maintain professional integrity while dealing with patients, colleagues, seniors, pharmaceutical companies and equipment manufacturers.
- **Skills:** Preparation of oral presentation, medical documents, professional opinion in interaction with patients, caretakers, peers and paramedical staff – both for clinical care and medical teaching. Effective communication with the patient/caretakers regarding the nature and extent of disease, treatment options available and realistic outcome following optimal management is essential.

- During the course of three years the post graduate student is expected to attend instructive courses that facilitate proficiency relevant to this domain, eg., communication skills, biomedical ethics, patient counseling etc.

3.3 PSYCHOMOTOR DOMAIN (SKILLS)

The trainee pursuing MCh. in Pediatric Surgery course must acquire the following evaluations and skills - procedural and non-procedural skills - in the management of surgical diseases of children -

3.3.1. Clinical examination, outpatient and inpatient evaluation

Upon completion of the course, the post graduate student should be able to perform the following:

- Assess the child patient with surgical problems by:
 - Eliciting pertinent history.
 - Performing correct physical examination.
 - Making a working diagnosis.
 - Determining the type of care that is appropriate – outpatient/ inpatient /daycare.
 - Initiate and institute life-saving emergency care, including CPR.
 - Requesting appropriate investigations and interpretation of their result.
 - Identify pre-operative and post-operative complications promptly and deal with them safely.
 - Document and maintain a record of patients systematically.
 - Seek professional help from other colleagues where needed.
 - Treat patients and their relatives with respect and empathy.
 - Able to counsel caretakers and the family of patient and obtain requisite consent for care.

3.3.2 Radiological procedures

Upon completion of the course, the post graduate student should be able to perform the following:

- Apply knowledge of imaging modality (USG,CT,MR) to investigate surgical diseases of childhood,
- Interpret the radiological images to correctly identify normal structures, abnormalities and pathology,

- Familiarity with conduct and interpretation of intra-operative imaging – radiography and ultrasonography,
- The postgraduate student should be able to perform certain investigative and therapeutic procedures in the radiology suite with due precautions -
 - Esophageal swallow
 - Upper GI contrast study
 - Contrast enema
 - Therapeutic contrast enemas in meconium ileus
 - Reduction of select idiopathic intussusception with radiological (air/contrast enema) or ultrasonography (hydrostatic)
 - Voiding cystourethrogram
 - Retrograde urethrogram
 - Antegrade studies through drainage tubes
 - Percutaneous drainage, biopsy

3.3.3 Physiological studies:

The post graduate student should be able to perform a uroflowmetry and cytometry with standard precautions and interpret the results real time.

3.3.4 Operative procedures:

This includes elective, semi-emergency and emergency procedures.

- Minor surgery
- Major surgery
- Endoscopic procedures
- Minimally invasive surgery

The actual numbers performed may vary according to the patient load of the training unit and related departments.

At the end of his training period, the candidate must be able to PERFORM THE FOLLOWING PROCEDURES INDEPENDENTLY

General:

- Peripheral and central venous access, chemoport and Hickman catheter placement
- Arterial line placement
- Wound debridement and suturing
- Incision and drainage of abscess
- Excision of superficial lesions of skin / subcutaneous planes

- Limb amputation
- Percutaneous/open tumor, viscera (e.g. liver) and lymph node biopsy
- Skin grafting
- Fasciotomy
- Contracture release
- Muscle biopsy
- Nerve biopsy
- Umbilical vein cannulation
- Peritoneal dialysis catheter insertion
- Restraint of the sick child

Head and Neck:

- Repair of cleft lip
- Repair of cleft palate
- Salivary duct / orifice dilatation
- Ranula - marsupialization
- Release of ankyloglossia
- Sistrunk's procedure
- Excision of branchial remnants
- Excision of superficial head and neck masses
- Sternomastoid muscle release
- Diagnostic laryngoscopy
- Esophagostomy
- Cricothyroidotomy
- Injection sclerotherapy of accessible vascular lesions
- Tracheostomy

Thorax:

- Mastectomy
- Bronchoscopy - diagnostic, lavage
- Esophagoscopy - diagnostic
- Diagnostic thoracoscopy
- ICTD insertion
- Repair of eventration diaphragm
- Decortication
- Primary repair of TEF
- Diversion for TEF – esophagostomy, gastrostomy

Abdomen:

- Exploratory laparotomy for acute abdomen
- Laparoscopy - diagnostic, therapeutic minor
- Gastrostomy,
- Fundoplication
- Pyloromyotomy
- Ladd's procedure
- Repair of cong. diaphragmatic hernia -Bochdalek, Morgagni

- Repair of eventration diaphragm
- Per op cholangiogram
- Cholecystectomy, cholecystostomy
- Cystogastrostomy, cystojejunostomy
- Surgery for Vitello-intestinal duct remnants
- Feeding tube jejunostomy
- Ileostomy, colostomy
- Surgery for meconium ileus
- Mesenteric cyst excision
- Appendectomy
- Appendicular abscess – drainage
- Bowel resection, anastomosis
- Secondary suturing (burst abdomen)
- Surgery for inguinal hernias and hydrocele, Umbilical hernia, Femoral hernia
- Rectal biopsy
- Anoplasty for low anorectal malformation
- Splenectomy

Genitourinary

- Cystoscopy - Diagnostic, stent removal
- Nephrostomy
- Suprapubic cystostomy
- Vesicostomy
- Urolithiasis- pyelolithotomy, cystolithotomy
- Meatotomy/meatoplasty
- Distal hypospadias repair
- Urethral fistula repair
- Urethral calibration / dilatation
- Circumcision, preputioplasty and dorsal slit, reduction of paraphimosis
- Orchidopexy- open
- Fowler Stephen Stage 1 (open, laparoscopic) orchidopexy
- Exploration for torsion testes, orchidectomy

Neurosurgery

- Ventriculoperitoneal stunts.
- External ventricular drainage
- Repair of spina bifida

At the end of his training period, the post graduate student must be able to PERFORM THE FOLLOWING PROCEDURES UNDER SENIOR SUPERVISION:

General

- Vascular anastomosis
- HD catheter insertion

Trauma:

- Laparotomy for trauma

- Thoracotomy for trauma

Head and Neck:

- Salivary gland excision
- Excision of lymphatic malformations/ neck masses
- Thyroidectomy
- Repair of H-type TEF

Thorax:

- Bronchoscopy - foreign body extraction
- Esophagoscopy - foreign body extraction , dilatation
- Repair of Pectus Excavatum
- Repair of Pectum Carinatum
- Thoracoscopic procedures, VATS for empyema
- Mediastinal mass excisions
- Pulmonary resection
- Esophageal replacement.

Abdomen:

- Abdominal wall defects - Silo construction
- Surgery for varicocele
- Orchidopexy- lap assisted
- Duodeno-duodenostomy
- Neonatal small bowel atresia – resection, anastomosis
- Laparoscopy - therapeutic, major
- Pull through for Hirschsprung disease
- Excision of duplication cyst
- Operations for necrotizing enterocolitis
- Anorectal myectomy
- Surgery for high anorectal malformation: PSARP, ASARP, AP Pull through etc.
- Colonic resections
- Kasai's portoenterostomy
- Operations for choledochal cyst
- Liver abscess drainage
- Operation for liver hydatid
- Hepatic resection
- Operation for portal hypertension
- Operation for pancreatic pseudocysts
- Pancreatic resection
- Pancreatico-enteric anastomosis
- Adrenalectomy

Genitourinary

- Nephrectomy Nephroureterectomy
- Partial nephrectomy
- Cystoscopy, fulguration of PUV
- Pyeloplasty
- Ureterocele incision

- Ureterostomy
- Ureteric reimplantation
- Urolithiasis - nephrolithotomy, ureterolithotomy
- Exstrophy repair (turn in)
- Bladder augmentation
- Mitrofanoff procedure
- Bladder neck repair
- Ureterosigmoidostomy
- Epispadias repair
- Colonic conduit
- Urethroplasty for Hypospadias
- Operation for intersex disorder
- Correction of penoscrotal transposition

Oncosurgery

- Pediatric solid tumour surgery for Wilms' tumour, Neuroblastoma, Hepatoblastoma, Sacrococcygeal teratoma, Germ cell tumours, Thoracic tumours, Head & Neck tumours, Genitourinary tumours, Soft tissue tumours, Common bone tumours, Lymphomas

Neurosurgery

- Repair of encephalocele
- Repair of occult spinal dysraphism

In addition to the above procedures, the student must be familiar with, prepared a patient for and should have witnessed procedures like:

- UGI endoscopy and variceal sclerotherapy / banding,
- Colonoscopy,
- Extracorporeal shock wave lithotripsy, Percutaneous nephrolithotomy.

4. SYLLABUS

Course contents:

A. Cognitive domain

The following is a broad outline of the syllabus:

1. Basic sciences as applied to Pediatric Surgery

- Medical genetics and gene therapy.
- Antenatal diagnosis and fetal intervention
- Developmental and transitional physiology of the respiratory, cardiovascular and renal systems

- Neonatal physiology and assessment of the surgical neonate.
- Neonatal sepsis
- Nutrition – enteral, parenteral
- Vascular access
- Principles of imaging (radiodiagnosis, nuclear) in Pediatric practice
- Pharmacology and use of common drugs , antibiotics and policy
- Pediatric analgesia and anaesthesia , critical care , mechanical ventilation
- General principles of Endoscopy and Minimal Access Surgery – fetoscopy, genitourinary endoscopy, tracheo-bronchoscopy, laparoscopy, thoracoscopy, robotic surgery
- Biomedical ethics and legal issues in Pediatric surgical practice.
- The organisation of a Pediatric Surgical unit
- HIV/AIDS in children
- National health policy-programs pertinent to Pediatric practice
- Telemedicine and telesurgery - principles , practice and limitations

2. Trauma

- Birth trauma
- Pediatric trauma – general principles.
- Thoracic, abdominal, genitourinary, central nervous system trauma
- Soft tissue and envenomation injuries
- Musculoskeletal and vascular trauma
- Burns
- Child abuse.

3. Pediatric Oncology

- General principles of oncology, radiotherapy and chemotherapy
- Wilms' tumor
- Neuroblastoma
- Liver tumours

- Rhabdomyosarcoma
- Germ cell tumours
- Other tumor of childhood (outline)-Leukemias, Lymphomas, Bone tumours, CNS tumours,
- Retinoblastoma

4. Transplantation

- General principles
- Kidney and liver transplantation
- Outline of other solid organ and bone marrow transplantation

5. Head and Neck Disorders

- Craniofacial anomalies
- Cleft lip and palate
- Disorders of the upper airway and oral cavity.
- Salivary glands
- Disorders of lymph nodes.
- Thyroid and parathyroid gland
- Cysts and sinuses of the neck
- Torticollis

6. Thoracic Disorders

- Congenital chest wall deformities.
- Disorders of the breast.
- Diaphragmatic hernia and eventration
- Mediastinal mass lesions.
- Endoscopy of the upper aerodigestive tract.
- Congenital tracheal and Bronchopulmonary/ foregut malformations
- Infective pleuro-pulmonary condition.
- Congenital oesophageal anomalies

- Oesophageal motility disorders ,achalasia cardia , gastro-esophageal reflux
- Oesophageal rupture, injury, stricture, perforation.
- Oesophageal replacement.

7. Abdominal Disorders

- Umbilical disorders and abdominal wall defects.
- Inguinal hernias and hydroceles
- Testicular maldescent, torsion
- Hypertrophic pyloric stenosis.
- Duodenal atresia, annular pancreas.
- Jejunioileal atresia and stenosis
- Meconium ileus
- Meckel's diverticulum
- Intussusception.
- Disorder of midgut rotation.
- Short bowel syndrome
- Gastrointestinal endoscopy and laparoscopy.
- Gastrointestinal bleeding
- Gastrointestinal duplications.
- Mesenteric and omental cysts
- Ascites
- Polypoid disease of the GIT
- Necrotising enterocolitis.
- Intestinal stomas
- Primary peritonitis.
- Inflammatory bowel disease in children.
- Colonic atresia and functional obstruction.
- Appendicitis
- Hirschsprung disease, neuromuscular disorders of intestines
- Anorectal malformations.
- Congenital short colon /pouch colon

- Colonic and rectal tumours
- Neonatal/Infantile obstructive cholangiopathy
- Congenital biliary dilatation.
- Infective and inflammatory hepatobiliary disorders
- Benign liver tumours
- Portal hypertension
- Disorders of the pancreas
- Splenectomy and post-splenectomy sepsis.
- Adrenal gland.

8. Genitourinary and related disorders

- Renal agenesis, dysplasia, cystic disease, ectopia
- Pelvic ureteral junction obstruction
- Vesicoureteric reflux
- Infective and inflammatory renal disorder.
- Pediatric urolithiasis
- Congenital ureteric anomalies.
- Prune belly syndrome
- Urinary diversion and undiversion, bladder augmentation
- Disorders of bladder function.
- Structural bladder disorders
 - Exstrophy – epispadias complex
 - Hypospadias.
 - Anomalies of the external genitalia
 - Disorders of Sex Differentiation
 - Abnormalities of the female genital tract.

9. Miscellaneous Pediatric Surgical Disorders

- Spina bifida
- Hydrocephalus
- Congenital heart disease

- Congenital orthopaedic deformities
- Amputation, bone and joint infections
- Conjoined twins
- Hemangiomas & vascular malformations.

5. TEACHING AND LEARNING METHODS

Teaching programs will need to be held on all working days (at least one hour per day)

Activities
Journal Club
Didactic lectures
Seminars/ Webinars
Hospital (Grand Rounds/Clinical meeting/Audit meet)
Clinical Case Presentation/ presentation to multidisciplinary tumour boards

5.1 TEACHING AND LEARNING METHODS

General principles - Acquisition of practical competencies being the cornerstone of post graduate medical education, PG training should be skills oriented. Learning in PG program should be essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort. The post graduate student should be given the responsibility of managing and caring for patients in a gradual manner under supervision.

Formal teaching sessions: This should include regular bedside case presentations and demonstrations, didactic lectures, seminars/Webinars, journal clubs, clinical meetings, and combined conferences with allied departments, Audit meet, clinical case presentation etc. as per sample schedule given below:

Didactic Lectures by faculty: In addition, lectures covering recent advances in all aspects of pediatric surgical conditions would be taken by faculty. All post graduate students will be required to attend these lectures.

Short term courses on the following basic and clinical aspects must be included:

- Research methodology and bio-statistics
- Laboratory medicine techniques/courses relevant to Pediatric Surgery
- Use of computers/ data science management in medicine,
- Bioethics, ethical issues involved in pediatric surgery
- Hospital waste management,
- Health economics.

5.1. The M.Ch. Pediatric Surgery training program will include two main arms:

5.1.1. Formal training and learning

5.1.2. Experiential learning

5.1.1. Formal training and learning will include the topics listed in the syllabus: The **modalities for formal training** will be as follows:

- 1. Seminars/Webinars:** To be held once a week and presented by the trainee under supervision of teaching faculty.
- 2. Journal Review:** To be held once a week under supervision of teaching faculty. It should include discussion on recent articles, which relate to various topics in Pediatric Surgery and allied disciplines.
- 3. Clinical Case presentation:** Representative clinical cases shall be presented and discussed in detail in presence of faculty.
- 4. Operative procedures:** This session, recommended once a month, aims at discussing common operative procedures and practical details.
- 5. Treatment Planning:** The trainee must discuss the planning of a given patient who is being worked up for surgery. The idea of this academic exercise is to familiarize the trainee with the objectives of planning in a given patient through group discussion/ multidisciplinary tumour boards based on evidence-based medicine.
- 6. Pediatric Radiology/Nuclear Medicine conferences** should be held once a week in which the radiological and nuclear medicine investigations of various cases are discussed in consultation with the faculty of Radiology and Nuclear Medicine.

7. **Clinical grand rounds:** A clinical grand round, involving presentation of unusual and difficult cases, is to be done by a post graduate student, once a week, in the presence of all the clinical staff belonging to the department of Pediatric surgery. The exercise is to develop the clinical acumen of the trainee.
8. **Clinico-pathological conference:** Special emphasis is made on the surgical pathology, histology review and autopsy discussions.
9. **Lecture/discussion:** Lectures on newer topics by faculty, in place of seminar, is to be arranged as per need.
10. **Teaching and training responsibilities (Pedagogy skills):** A final year M.Ch. trainee should be entrusted with the responsibilities of teaching post graduate students of General Surgery and allied disciplines.
11. **Training in research methodology:** The purpose of the exercise is to impart proficiency in research methodology to the trainee. This would be a mandatory component of training. All M.Ch. trainees must complete research projects as per requirement of concerned Universities, under the supervision of a principal supervisor and appropriate number of co-supervisors which would enable the trainee to attain proficiency in collecting clinical / experimental data and analyze them in a scientific way using appropriate statistical methods.
12. **Attendance and presentation at academic meets:** The student must attend accredited scientific meetings (CME, symposia, and conferences) once or twice a year. He should present at least one poster or read one paper at a national/state conference in Pediatric Surgery or sub-speciality (Pediatric Urology, Pediatric Surgical Oncology etc.) during the second and third year of the training period.
13. **Research Publication (Research skills):** A student has to present one paper which is published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination. The research has to be done under the direct supervision of the supervisor or his associate(s). Through this exercise, the trainee would learn how to collect and analyze data, make observations in a scientific manner, and use appropriate statistical methodology. The trainee would learn the

art of putting the outcome of observations and results in an appropriate format of a scientific paper that is relevant to a particular journal.

14. **Use of Skills lab stations:** The skills lab must facilitate training and acquisition of both common (e.g. endotracheal intubation, ICT drainage, Central line insertion) skills in real life situations and uncommon skills (laparoscopic suturing, cricothyroidotomy etc.) that the student may not encounter often.
15. **Mortality and morbidity (Audit) meetings:** Departmental and interdepartmental / institutional

5.1.2. Experiential learning

Apart from routine postings in ward, OPD, operation theatre and speciality clinics, the M,Ch (Pediatric Surgery) trainee will be posted in the following allied specialities. The total duration of these postings shall not exceed three months. There is no specified compulsory posting in Emergency Medicine/Casualty; however, the student will attend the emergency cases pertaining to/referred to their department at the Emergency/ Casualty in the course of the routine clinical duties.

1. **Pediatric Intensive Care Unit: Duration- 2-4 weeks.** This is intended to familiarize the student to the principles of pediatric medical intensive care and its applications to pediatric surgical care.
2. **Neonatology Intensive Care Unit: Duration- 2-4 weeks.** During this posting, the candidate will receive training on care of the sick neonates, particularly premature and small for date.
3. **Optional External Posting:** Other postings may be scheduled as deemed necessary for the fulfilment of curricular demands, e.g. Pediatric Oncology, etc. in the third year, in the same or in another tertiary teaching Centre/Institute. The posting in another institute may be for a special training that is currently not available at the home institute. It may be for 4-8 weeks with the prior approval of the Head of the Institution. Prescribed institutional regulations will be adhered to for such an external posting.
4. **Administrative experience:** The final year post graduate student should be entrusted with administrative responsibilities including preparation of academic

programme, patient management, functioning of the ward and outpatient department. These may include:

- Admission of patients,
- Preparing the operation theatre lists,
- Improving the functioning in the ward through the supervisor,
- Preparing list of topics for teaching of junior trainees posted in the department,
- Organizing the posting of trainees in various work stations of the department as per the demand of the situation.

5. Log Book

The trainees must maintain a log book of the work carried out by them and the training program undergone during the period of training including details of the surgical operations assisted or done independently. The log book should be checked and assessed periodically by the faculty members imparting the training.

During the training programme, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently. For this purpose, provision of skills laboratories in medical colleges is mandatory.

6. ASSESSMENT

A. FORMATIVE ASSESSMENT during the training includes:

- | | |
|-----------------------------------|--------------------------------------|
| • Personal attributes | Ongoing after each clinical posting |
| • Clinical skills and performance | -do- |
| • Academic activities | -do- |
| • Theory assessment | End of 1-, 2- and at 2years 9 months |
| • Practical assessment | -do- |

Clinical skills and performance, academic performance and personal attributes shall be graded on a scale of 1 to 5 (5 being the highest). The academic presentations shall be graded at the time of presentation by the faculty in-charge. Evaluation on clinical skills and personal

attributes etc. shall be done by the unit/department in-charge at the end of every semester. The student to be assessed periodically as per categories listed in post graduate student appraisal form (Annexure I).

B. SUMMATIVE ASSESSMENT at the end of the training will be as follows:

The **M.Ch. examination** shall be in two parts:

1. **Theory:** There shall be four theory papers as follows:

Paper I: Basic Sciences in Pediatric Surgery, Trauma, Transplantation

Paper II: Regional Pediatric Surgery (Head and Neck, Thorax),
Pediatric Oncosurgery

Paper III: Regional Pediatric Surgery (Abdomen, Genitourinary)

Paper IV: Recent advances in Pediatric surgery

The theory examination shall be held in advance before the clinical and practical examination, so that the answer books can be assessed and evaluated before the commencement of the clinical/practical/oral examination. The post graduate students for M.Ch in Pediatric surgery will be examined also in surgical procedures.

2. **Practical:** The practical examination should consist of the following and should be spread over two days, if the number of candidates appearing is more than one:

- a. Four cases from various sections of Pediatric surgery/subspecialities:
History taking, physical examination, interpretation of clinical findings, differential diagnosis, investigations, prognosis and management.
- b. Ward rounds comprising of discussion of practical problems in the management of pediatric patients undergoing surgery.
- c. Viva-voce examination
 - Instruments and operative procedures
 - Radiology and imaging
 - Surgical Pathology

- Thesis and logbook evaluation

3. Theory and Practical examination will be conducted as per University guidelines.

Other recommendations: Systematic and periodic formative assessment should be done every 6 months and feedback should be given to trainee.

Recommended Reading:

Books (latest edition)

1. Coran AG, Adzick NS, Krummel TM, Laberge JM, Shamberger RC, Caldamone AA. Pediatric Surgery, 7Ed: Elsevier - Health Sciences Division; 2012.
2. Holcomb GW, Murphy JP, Peter SD. Holcomb and Ashcraft's Pediatric Surgery, 7Ed: Elsevier; 2019.
3. Hutson JM, Brien MO, Woodward AA, Beasley SW. Jones Clinical Pediatric Surgery: Diagnosis and Management, 6Ed: Wiley-Blackwell;2008.
4. Docimo SG, Canning D, Khoury A, Salle JLP. The Kelalis-King-Belman Textbook of Clinical Pediatric Urology, 6Ed: CRC Press; 2018.
5. Pizzo PA, Poplack DG, Adamson PC, Blaney SM, Helman L. Principles and Practice of Pediatric Oncology, 7Ed: Wolters Kluwer; 2016.
6. Davenport M, Spitz L, Coran A. Operative Pediatric Surgery, 7 Ed: CRC Press;2013
7. Holcomb GW, Rothenberg SS. Atlas of Pediatric Laparoscopy and Thoracoscopy, 2 Ed: Elsevier;2021.
8. Eichenwald EC, Hansen AR, Stark AR, Martin C. ClohertyandStark's Manual of Neonatal Care, 8Ed: Wolters Kluwer; 2017.
9. Kliegman RM, Stanton BMD, Geme JS, Schor NF. Nelson Textbook of Pediatrics: Elsevier Health Sciences, 21 Ed; 2019.
10. Farquharson M, Hollingshead J, Moran B. Farquharson's textbook of Operative General Surgery, 10 ed: CRC Press;2015.
11. Gray SW, Skandalakis JE. Embryology for surgeons: the embryological basis for the treatment of congenital defects, 2 ed: Lipincott Williams and Wilkins; 1994.
12. Glover T, Mitchell K. An Introduction to Biostatistics, 3 ed: Waveland Press;2015.

13. David L. Katz, Joann G. Elmore, Wild D, Sean C Lucan. Jekel's Epidemiology, Biostatistics, Preventive Medicine, and Public Health: Elsevier Health Sciences; 2013.
14. Coley BD. Caffey's Pediatric Diagnostic Imaging, 13 ed: Elsevier; 2018.
15. Husain AN, Dehner LP. Stocker and Dehner's Pediatric Pathology, 5 ed: LWW; 2021.
16. Holschneider AM, Hutson JM. Anorectal Malformations in Children: Embryology, Diagnostics, Surgical Treatment and Follow up: Springer, 2006.
17. Puri P. Newborn Surgery, 4 ed: CRC Press;2019.
18. Hadidi A, David MA. Hypospadias Surgery: An Illustrated Guide: Springer;2013.
19. Barry P, Morris K. Pediatric Intensive Care (Oxford Specialist Handbooks in Pediatrics), 1 ed: Oxford University Press; 2017.
20. Papandria DJ, Besner GE, Moss RL, Diefenbach KA. Operative Dictations in Pediatric Surgery, 1 ed: Springer; 2019.

Journals

3-5 international and two national journals (all indexed).

Essential

- Journal of Indian Association of Pediatric Surgeons
- Journal of Pediatric Surgery
- Pediatric Surgery International
- European Journal of Pediatric Surgery
- Journal of Pediatric Urology
- Seminars in Pediatric Surgery
- British Journal of Urology International Indian Pediatrics
- Indian Journal of Pediatrics

Optional

- The Journal of Pediatrics
- Pediatrics
- Pediatrics Clinics of North America
- Any other relevant journal pertaining to pediatric surgery

Postgraduate Students Appraisal Form
Clinical discipline

Name of the Department/Unit :

Name of the PG Student :

Period of Training : FROM.....TO.....

Sr. No.	PARTICULARS	Not Satisfactory			Satisfactory			More Than Satisfactory			Remarks
		1	2	3	4	5	6	7	8	9	
1.	Journal based / recent advances learning										
2.	Patient based /Laboratory or Skill based learning										
3.	Self directed learning and teaching										
4.	Departmental and interdepartmental learning activity										
5.	External and Outreach activities / CMEs										
6.	Thesis / Research work										
7.	Log Book maintenance										

Publications

Yes/ No

Remarks* _____

*REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.

SIGNATURE OF ASSESSEE

SIGNATURE OF CONSULTANT

SIGNATURE OF HOD

Curriculum MCh Urology Index

1. Goals
2. Objectives
3. Syllabus
4. Teaching Programme
5. Schedule of Posting
6. Research projects
7. Assessment
8. Job Responsibilities
9. Suggested Books & Journals
10. Model Test Papers

PG Curriculum MCh Urology

The infrastructure and faculty of the department of Urology will be as per MCI guidelines

1. Goals

The goal of M Ch course is to produce a competent physician who:

- ❖ Recognizes the health needs of adults and carries out professional obligations in keeping with principles of National Health Policy and professional ethics;
- ❖ Has acquired the competencies pertaining to Urology that are required to be practiced in the community and at all levels of health care system;
- ❖ Has acquired skills in effectively communicating with the patients, family and the community;
- ❖ Is aware of the contemporary advances and developments in medical sciences.
- ❖ Acquires a spirit of scientific enquiry and is oriented to principles of research methodology; and
- ❖ Has acquired skills in educating medical and paramedical professionals.

2. Objectives

At the end of the MCh course in Urology, the student should be able to:

- ❖ Recognize the key importance of medical problems in the context of the health priority of the country;
- ❖ Practice the specialty of Urology in keeping with the principles of professional ethics;
- ❖ Identify social, economic, environmental, biological and emotional determinants of adult Urology and know the therapeutic, rehabilitative, preventive and promotion measures to provide holistic care to all patients;
- ❖ Take detailed history, perform full physical examination and make a clinical diagnosis;
- ❖ Perform and interpret relevant investigations (Imaging and Laboratory);
- ❖ Perform and interpret important diagnostic procedures;
- ❖ Diagnose Urological illnesses in adults based on the analysis of history, physical examination and investigative work up;
- ❖ Plan and deliver comprehensive treatment for illness in adults using principles of rational drug therapy;
- ❖ Plan and advise measures for the prevention of Urological diseases;
- ❖ Plan rehabilitation of adults suffering from chronic illness, and those with special needs;
- ❖ Manage Urological emergencies efficiently;

- ❖ Demonstrate skills in documentation of case details, and of morbidity and mortality data relevant to the assigned situation;
- ❖ Demonstrate empathy and humane approach towards patients and their families and respect their sensibilities;
- ❖ Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities.
- ❖ Develop skills as a self-directed learner, recognize continuing educational needs; use appropriate learning resources, and critically analyze relevant published literature in order to practice evidence-based medicine;
- ❖ Demonstrate competence in basic concepts of research methodology and epidemiology;
- ❖ Facilitate learning of medical/nursing students, practicing physicians, para-medical health workers and other providers as a teacher-trainer;
- ❖ Play the assigned role in the implementation of national health programs, effectively and responsibly;
- ❖ Organize and supervise the desired managerial and leadership skills;
- ❖ Function as a productive member of a team engaged in health care, research and education.

3. Syllabus

3.1 Theory

❖ Anatomy

Surgical Anatomy of the Retroperitoneum, Kidneys and Ureters
Anatomy of the Lower Urinary Tract and Male Genitalia

❖ Clinical Decision Making

Evaluation of the Urologic Patient: History, Physical Examination, and Urinalysis
Urinary Tract Imaging : Basic Principles
Outcomes Research

❖ Basics of Urologic Surgery

Basic Instrumentation and Cystoscopy
Basic of Laparoscopic Urologic Surgery

❖ Infections and Inflammation

Infections of the Urinary Tract A. Schaeffer
Inflammatory Conditions of the Male Genitourinary Tract
Interstitial Cystitis and Related Disorders
Sexually Transmitted and Associated Diseases
Urological Implications of AIDS and Related Conditions
Cutaneous Diseases of the External Genitalia
Tuberculosis and Other Opportunistic Infections of the Genitourinary System

❖ Molecular and Cellular Biology

Basic Principles of Immunology

Molecular Genetics and Cancer Biopsy

Tissue Engineering Perspectives for Reconstructive Surgery

❖ Reproductive and Sexual Function

Male Reproductive Physiology

Male Infertility

Surgical Management of Male Infertility

Physiology of Erectile Dysfunction : Pathophysiology, Evaluation, Nonsurgical Management

Epidemiology, Evaluation, and Nonsurgical Management of Erectile Dysfunction

Prosthetic Surgery for Erectile Dysfunction

Vascular Surgery for Erectile Dysfunction

Peyronie's Disease

Priapism

Androgen Deficiency in the Aging Male

Female Sexual Function and Dysfunction

❖ Male Genitalia

Neoplasms of the Testis

Surgery of Testicular Tumors

Tumors of the Penis

Surgery of Penile and Urethral Carcinoma

Surgery of the Penis and Urethra

Surgery of the Scrotum and Seminal Vesicles

❖ Renal Physiology and Pathophysiology

Renal Physiology and Pathophysiology

Renovascular Hypertension

❖ Upper Urinary Tract Obstruction and Trauma

Pathophysiology of Obstruction

Management of Upper Urinary Tract Obstruction

Upper Urinary Tract Trauma

❖ Renal Failure and Transplantation

Renal Transplantation

Etiology, Pathogenesis, and Management of Renal Failure

❖ **Urinary Lithiasis and Endourology**

Urinary Lithiasis : Etiology, Epidemiology, and Pathophysiology
 Evaluation and Medical Management of Urinary Lithiasis
 Surgical Management of Upper Urinary Tract Calculi
 Ureteroscopy and Retrograde Ureteral Access
 Percutaneous Approaches to the Upper Urinary Tract

❖ **Neoplasms of the Upper Urinary Tract**

Renal Tumors
 Urothelial Tumors of the Upper Urinary Tract
 Urothelial Tumors of the Renal Pelvis and Ureter
 Open surgery of the Kidney
 Laparoscopic Surgery of the Kidney
 Ablative Therapy for Renal Tumors

❖ **The Adrenals**

Pathophysiology, Evaluation, and Medical Management of Adrenal Disorders
 Surgery of the Adrenals

❖ **Urine Transport, Storage, and Emptying**

Physiology and Pharmacology of the Renal Pelvis and Ureter
 Physiology and Pharmacology of the Bladder and Urethra
 Pathophysiology, Categorization, and Management of Voiding Dysfunction
 Urodynamic and Video dynamic Evaluation of Voiding Dysfunction
 Neuromuscular Dysfunction of the Lower Urinary Tract
 Urinary Incontinence : Epidemiology, Pathophysiology, Evaluation, and Overview of Management
 The Overactive Bladder
 Pharmacologic Management of 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
 Retropudic Suspension Surgery for Incontinence in Women
 Vaginal Reconstructive Surgery for Sphincteric Incontinence
 Pubovaginal Slings
 Tension-Free Vaginal Tape Procedures
 Injection Therapy for Urinary Incontinence
 Additional Treatment for Storage and Emptying Failure
 Geriatric Voiding Dysfunction and Urinary Incontinence
 Urinary Tract Fistulae
 Bladder and Urethral Diverticula
 Surgical Procedures for Sphincteric Incontinence in the Male : The Artificial Genitourinary

Sphincter; Perineal Sling Procedures

❖ **Bladder ; Lower Genitourinary Calculi and Trauma**

Urothelial Tumors of the Bladder
 Management of Superficial Bladder Cancer
 Management of Metastatic and Invasive Bladder Cancer
 Surgery of Bladder Cancer
 Laparoscopic Bladder Surgery
 Use of Intestinal Segments in Urinary Diversion
 Cutaneous Continent Urinary Diversion
 Orthotopic Urinary Diversion
 Genital and Lower Urinary Tract Trauma
 Lower Urinary Tract Calculi

❖ **Prostate**

Molecular Biology, Endocrinology, and Physiology of the Prostate and Seminal Vesicles
 Etiology, Pathophysiology, and Epidemiology of Benign Prostatic Hyperplasia
 Natural History, Evaluation, and Nonsurgical Management of Benign Prostatic Hyperplasia
 Minimally Invasive and Endoscopic Management of Benign Prostatic Hyperplasia
 Retropubic and Suprapubic Open Radical Prostatectomy
 Epidemiology, Etiology, and Prevention of Prostate Cancer
 Pathology of Prostatic Neoplasms
 Ultrasonography and Biopsy of the Prostate
 Tumor Markers in Prostate Cancer
 Early Detection, Diagnosis, and Staging of Prostate Cancer
 Definitive Therapy of Localized Prostate Cancer : Outcomes
 Expectant Management of Prostate Cancer
 Anatomic Retrograde Retropubic Prostatectomy
 Radical Perineal Prostatectomy
 Laparoscopic and Robotic Radical Prostatectomy and Pelvic Lymphadenectomy
 Radiation Therapy for Prostate Cancer
 Cryotherapy of Prostate Cancer
 Treatment of Locally Advanced Prostate Cancer
 Management of Rising Prostate-Specific Antigen after Definitive Therapy
 Hormonal Therapy for Prostate Cancer
 Management of Hormone-Resistant Prostate Cancer

❖ **Pediatric Urology**

Normal and Anomalous Development of the Urinary Tract
 Renal Function in the Fetus
 Congenital Obstructive Uropathy
 Perinatal Urology
 Evaluation of Pediatric Urologic Patient

Renal Disease in Childhood
 Urinary Tract Infections in Infants and Children
 Anomalies of the Kidney
 Renal Dysplasia and Cystic Disease of Kidney
 Anomalies and Surgery of the Ureteropelvic Junction
 Ectopic Ureter
 Vesicoureteral Reflux
 Prune-Belly Syndrome
 Exstrophy and Epispadias Complex
 Surgical Technique for One-Stage Exstrophy Reconstruction
 Bladder Anomalies in Children
 Posterior Urethral Valves and Other Urethral Anomalies
 Voiding Dysfunction in Children : Neurogenic and Non-neurogenic
 Urinary Tract Reconstruction
 Hypospadias
 Abnormalities of External Genitalia in Boys
 Abnormalities of Testis and Scrotum : Surgical Management
 Sexual Differentiation : Normal and Abnormal
 Surgical Management of Intersex
 Pediatric Oncology
 Pediatric Endourology and Laparoscopy
 Pediatric Genitourinary Trauma

3.2. Practical:

History, examination and writing of records:

- ❖ History taking should include the background information, presenting complaints and the history of present illness, history of previous illness, family history, social and occupational history and treatment history.
- ❖ Detailed physical examination should include general physical and CVS examination
- ❖ Skills in writing up notes, maintaining problem-oriented medical records (POMR), progress notes, and presentation of cases during ward rounds, planning investigation and making a treatment plan should be taught.
- ❖ Other Urology procedures- investigative Urological Procedures like uroflowmetry, CNG, Doppler, Ultrasound & Ultrasound guided procedures.

3.3. Clinical Teaching

General, Physical and specific examinations of Genitourinary should be mastered. The resident should be able to analyse history and correlate it with Clinical findings. He should be well versed with all radiological procedures like IVU, Nephrostogram and RGP, Ascending uroeltherogram. He should present his daily admissions in morning report and try to improve management skills, fluid balance, choice of drugs. He should clinically analyse the patient & decide for pertinent Investigations required for specific patient.

4. Teaching Programme

4.1 General Principals

Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training is skills oriented.

Learning in postgraduate program is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

4.2 Teaching Sessions

The teaching methodology consists of bedside discussions, ward rounds, case presentations, clinical grand rounds, statistical meetings, journal club, lectures and seminars.

Along with these activities, trainees should take part in inter-departmental meetings i.e clinico-pathological and clinico-radiological meetings that are organized regularly.

Trainees are expected to be fully conversant with the use of computers and be able to use databases like the Medline, Pubmed etc.

They should be familiar with concept of evidence based medicine and the use of guidelines available for managing various diseases.

4.3 Teaching Schedule

Following is the suggested weekly teaching programme in the Department of Urology:

Sr. No.	Description	Frequency
1.	Case Presentation & Discussion	Once a week
2.	Seminar	Once in two weeks
3.	Journal Club	Once in two weeks
4.	Grand Round presentations	Once a month
5.	Emergency case discussions	Once a week
6.	Statistical & Mortality Meet	Once a month
7.	Clinico-Pathological meet	Once a month
8.	Clinico-Radiological meet	Once a month
9.	Clinico-Surgical meet	Once a month
10.	Faculty lecture teaching	Once a month

❖ Each unit should have regular teaching rounds for residents posted in that unit. The rounds should include bedside case discussions, file rounds (documentation of case history and examination, progress notes, round discussions, investigations and management plan), interesting and difficult case unit discussions.

❖ Central hospital teaching sessions will be conducted regularly and DM residents would present interesting cases, seminars and take part in clinico-pathological case discussions.

4.4 Conferences and Papers

- ❖ A resident must attend at least one conference per year.
- ❖ One paper must be presented in at least 3 years.

5. Schedule of Postings

- ❖ OPD : Twice a week
- ❖ OT : Thrice a week
- ❖ Investigative urology : All Days
- ❖ The MCh resident is expected to do daily ward rounds at 8 AM in the morning and evening between 5 Pm to 7 PM along with PG resident.
- ❖ The MCh resident should do the dressing of the patient that have been operated/assisted by them.
- ❖ The MCh resident should note down the history and examination of admitted patients and should daily put progress note in files.
- ❖ The normal working hours will be from 8 AM to 8 PM. When on emergency duty, the resident is supposed to stay overnight in the resident room.
- ❖ **LOG BOOK**
 - The student will maintain a log book of all the procedures.
 - The student will be graded as per his clinical & technical skill performance.
 - The student has observed the procedures as an assistant.
 - The part of the procedures performed under direct supervision.
 - The procedure performed with assistance.
 - The purpose of training is to grade the skills and evaluate the ability to take decisions.

The resident will be assessed once every year in the form of theory test at the end of each academic year.

6. Research Projects

- ❖ Every candidate shall carry out work on an assigned research project under the guidance of a recognized postgraduate teacher, the project shall be written and submitted in the form of a Project.
- ❖ Every candidate shall submit project plan to university within time frame set by university

- ❖ Thesis shall be submitted to the University within 9 months of joining the course.
- ❖ The student will (i) identify a relevant research problem, (ii) conduct a critical review of literature, (iii) formulate a hypothesis, (iv) determine the most suitable study design, (v) state the objectives of the study, (vi) prepare a study protocol, (vii) undertake a study according to the protocol, (viii) analyze and interpret research data, and draw conclusion, (ix) write a research paper.

7. Assessment

All the MCh residents are assessed daily for their academic activities and also periodically.

7.1. General Principles

- ❖ The assessment is valid, objective and reliable
- ❖ It covers cognitive, psychomotor and affective domains.
- ❖ Formative, continuing and summative (final) assessment is also conducted in theory as well as practical. In addition, research project is also assessed separately.

7.2. Formative Assessment

The formative assessment is continuous as well as end of term.

The former is based on the feedback from the consultants concerned.

Formative assessment will provide feedback to the candidate about his/her performance and help to improve in the areas they lack.

Record of internal assessment should be presented to the board of examiners for consideration at the time of final examination.

7.3. Internal Assessment

The performance of the resident during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student. Marks should be allotted out of 100 as followed.

Sr. No.	Items	Marks
1.	Personal Attributes	20
2.	Clinical Work	20
3.	Academic activities	20
4.	End of term theory examination	20
5.	End of term practical examination	20

1. Personal attributes:

- ❖ **Behavior and Emotional Stability:** Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.

- ❖ **Motivation and Initiative:** Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
- ❖ **Honesty and Integrity:** Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.
- ❖ **Interpersonal Skills and Leadership Quality:** Has compassionate attitude towards patients and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

2. Clinical Work:

- ❖ **Availability:** Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
- ❖ **Diligence:** Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
- ❖ **Academic ability:** Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests.
- ❖ **Clinical Performance:** Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

3. Academic Activity: Performance during presentation at Journal club/ Seminar/ Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

4. End of term theory examination conducted at end of 1st, 2nd year and after 2 years 9 months

5. End of term practical/oral examinations after 2 years 9 months.

Marks for **personal attributes** and **clinical work** should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20.

Marks for **academic activity** should be given by the all consultants who have attended the session presented by the resident.

The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.

7.4. Summative Assessment

Ratio of marks in theory and practical will be equal.

The pass percentage will be 50%.

Candidate will have to pass theory and practical examinations separately.

A. Theory examination

Sr. No.	Title	Marks
Paper –I	Basic Sciences as related to Urology	100
Paper-II	Clinical Urology	100
Paper-III	Operative Urology	100
Paper-IV	Recent advances in Urology	100
Total		400

B. Practical & Viva-Voce Examination

Sr. no		Marks
1.	Long Case (1)	100
2.	Short Cases (2) 75 marks each	150
3.	Procedure	50
4.	Grand Viva including Instruments/Radiology/Pathology	100
Total		400

8. Job Responsibilities

❖ Outdoor Patient (OPD) Responsibilities

- The working of the residents in the OPD should be fully supervised.
- They should evaluate each patient and write the observations on the OPD card with date and signature.
- Investigations should be ordered as and when necessary using prescribed forms.
- Residents should discuss all the cases with the consultant and formulate a management plan.

- Patient requiring admission according to resident's assessment should be shown to the consultant on duty.
- Patient requiring immediate medical attention should be sent to the casualty services with details of the clinical problem clearly written on the card.
- Patient should be clearly explained as to the nature of the illness, the treatment advice and the investigations to be done.
- Resident should specify the date and time when the patient has to return for follow up.

❖ **In-Patient Responsibilities**

Each resident should be responsible and accountable for all the patients admitted under his care. The following are the general guidelines for the functioning of the residents in the ward:

- Detailed work up of the case and case sheet maintenance:
- He/She should record a proper history and document the various symptoms. Perform a proper patient examination using standard methodology. He should develop skills to ensure patient comfort/consent for examination. Based on the above evaluation he/she should be able to formulate a differential diagnosis and prepare a management plan. Should develop skills for recording of medical notes, investigations and be able to properly document the consultant round notes.
- To organize his/her investigations and ensure collection of reports.
- Bedside procedures for therapeutic or diagnostic purpose.
- Presentation of a precise and comprehensive overview of the patient in clinical rounds to facilitate discussion with senior residents and consultants.
- To evaluate the patient twice daily (and more frequently if necessary) and maintain a progress report in the case file.
- To establish rapport with the patient for communication regarding the nature of illness and further plan management.
- To write instructions about patient's treatment clearly in the instruction book along with time, date and the bed number with legible signature of the resident.
- All treatment alterations should be done by the residents with the advice of the concerned consultants and senior residents of the unit.

❖ **Admission day**

Following guidelines should be observed by the resident during admission day.

- Resident should work up the patient in detail and be ready with the preliminary necessary investigations reports for the evening discussion with the consultant on duty.
- After the evening round the resident should make changes in the treatment and plan out the investigations for the next day in advance.

❖ **Doctor on Duty**

- Duty days for each Resident should be allotted according to the duty roster.
- The resident on duty for the day should know about all sick patients in the wards and relevant problems of all other patients, so that he could face an emergency situation effectively.
- In the morning, detailed over (written and verbal) should be given to the next resident on duty. This practice should be rigidly observed.
- If a patient is critically ill, discussion about management should be done with the consultant at any time.
- The doctor on duty should be available in the ward through out the duty hours.

❖ **Care of Sick Patients**

- Care of sick patients in the ward should have precedence over all other routine work for the doctor on duty.
- Patients in critical condition should be meticulously monitored and records maintained.
- If patient merits ICU care then it must be discussed with the senior residents and consultants for transfer to ICU.

❖ **Resuscitation skills**

At the time of joining the residency programme, the resuscitation skills should be demonstrated to the residents and practical training provided at various work stations.

- Residents should be fully competent in providing basic and advanced cardiac life support.
- They should be fully aware of all advanced cardiac support algorithms and be aware of the use of common resuscitative drugs and equipment like defibrillators and external cardiac pacemakers.
- The resident should be able to lead a cardiac arrest management team.

❖ **Discharge of the Patient**

- Patient should be informed about his/her discharge one day in advance and discharge cards should be prepared 1 day prior to the planned discharge.
- The discharge card should include the salient points in history and examination, complete diagnosis, important management decisions, hospital course and procedures done during hospital stay and the final advice to the patient.
- Consultants and DM Residents should check the particulars of the discharge card and counter sign it.
- Patient should be briefed regarding the date, time and location of OPD for the follow up visit.

❖ **In Case of Death**

- In case it is anticipated that a particular patient is in a serious condition, relatives should be informed about the critical condition of the patient beforehand.
- Residents should be expected to develop appropriate skills for breaking bad news and bereavements.
- Follow up death summary should be written in the file and face sheet notes must be filled up and the sister in charge should be requested to send the body to the mortuary with respect and dignity from where the patient's relatives can be handed over the body.
- In case of a medico legal case, death certificate has to be prepared in triplicate and the body handed over to the mortuary and the local police authorities should be informed.
- Autopsy should be attempted for all patients who have died in the hospital especially if the patient died of an undiagnosed illness.

❖ **Bedside Procedures**

The following guidelines should be observed strictly:

- Be aware of the indications and contraindications for the procedure and record it in the case sheet. Rule out contraindications like low platelet count, prolonged prothrombin time, etc.
- Plan the procedure during routine working hours, unless it is an emergency. Explain the procedure with its complications to the patient and his/her relative and obtain written informed consent on a proper form. Perform the procedure under strict aseptic precautions using standard techniques. Emergency tray should be ready during the procedure.
- Make a brief note on the case sheet with the date, time, nature of the procedure and immediate complications, if any.
- Monitor the patient and watch for complications(s).

❖ **OT responsibilities**

- The 1st year resident observes the general layout and working of the OT, understands the importance of maintaining sanctity of the OT, scrubbing, working and sterilization of all the OT Instrument, know how of endoscopes. He/ She is responsible shifting of OT patients, for participating in surgery as 2nd assistant and for post operative management of patient in recovery and in ward. The 2nd year resident is responsible for pre op work up of the patient, surgical planning and understanding the rationale of surgery. He/she is the first assistant in surgery and is responsible for anticipating intra op and post op complications and managing them. The final year resident should be able to perform minor/medium/major surgeries independently and assist in medium/major/extra major surgeries. He/she should be able to handle all emergencies and post op complications independently and is responsible for supervision and guidance of his/her juniors.

❖ **Medico-Legal Responsibilities of the Residents**

- All the residents are given education regarding medico-legal responsibilities at the time of admission in a short workshop.
- They must be aware of the formalities and steps involved in making the correct death certificates, mortuary slips, medico-legal entries, requisition for autopsy etc.
- They should be fully aware of the ethical angle of their responsibilities and should learn how to take legally valid consent for different hospital procedures & therapies.
- They should ensure confidentiality at every stage.

9. Suggested Books

9.1. Books

- ❖ Campbells Urology
- ❖ Glenns Urology
- ❖ Year book of Urology
- ❖ Recent advances in Urology
- ❖ Emmetts Clinical Uroradiology
- ❖ Mc Anirich Trauma of Genitourinary Tracts
- ❖ Libertino-Pediatric And Adult Reconstructive Urologic Surgery
- ❖ Richie & Damico-Urologic Oncology
- ❖ Strocky-Handbook of urology diagnosis and therapy
- ❖ Allen D Seftel-male and female sexual dysfunction.

9.2. Journals

- ❖ Urological clinics of North America
- ❖ British Journal of Urology
- ❖ Journal of endourology
- ❖ Journal of Urology

10. MODEL TEST PAPERS

MODEL TEST PAPERS MCh Urology

Paper - I

BASIC SCIENCES AS RELATED TO UROLOGY

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
 - Answer each question and its parts in **SEQUENTIAL ORDER**.
 - **ALL** questions carry equal marks.
 - Illustrate your answer with **SUITABLE DIAGRAMS**.
-

Q1:-Write a note on Genitourinary Tuberculosis and its management ?

Q2:-Write a note on pathophysiology of erectile dysfunction and its mangement?

Q3:-Write are the urological implications of AIDS on genitourinary system and its management?

Q4:-Write a note on evaluation & management of upper urinary tract calculi?

Q5:-Write a note on Neurogenic & Non neurogenic urinary bladder?

Q6:-Write a note on evaluation & management of BPH?

Q7:- Write a note on Testicular cancer & its management?

Q8:-Write note on evaluation & management of male erectile dysfunction?

Q9:- Write not an-Etiology,Pathophysiology & epidemiology of urinary calculi?

Q10:- Note on Peyronies Disease?

MODEL TEST PAPERS

MCh Urology

Paper - II

Clinical Urology

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
 - Answer each question and its parts in **SEQUENTIAL ORDER**.
 - **ALL** questions carry equal marks.
 - Illustrate your answer with **SUITABLE DIAGRAMS**.
-

Q1:- Write about complications of PCNL ?

Q2:-Write about vascular surgeries for erectile dysfunction?

Q3:-Write about surgery for penile & urethral carcinoma?

Q4:-Surgical management of upper urinary tract calculi?

Q5:-Write about Laparoscopic surgery of renal tumors?

Q6:-Write about injection therapy for urinary incontinence?

Q7:-Complications of TURP?

Q8:-Note on anterior urethoplasty?

Q9:-Note on Radical Perineal Prostatectomy?

Q10:-Surgical Technique of exstrophy reconstruction?

MODEL TEST PAPERS

MCh Urology

Paper - III

Operative Urology

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
 - Answer each question and its parts in **SEQUENTIAL ORDER**.
 - **ALL** questions carry equal marks.
 - Illustrate your answer with **SUITABLE DIAGRAMS**.
-

Q1:-Role of Diagnostic laparoscopy in urology?

Q2:-Newer contrast media pertaining to urology?

Q3:-Evaluation of patient of Interstitial cystitis?

Q4:-Urodynamic evaluation in voiding dysfunction?

Q5:-Ureteroscopy & its uses?

Q6:-Percutaneous approaches to upper urinary tract?

Q7:-Evaluation of Adrenal mass?

Q8:-Electrical stimulation & Neuromodulation in emptying & storage factor of Urinary Bladder?

Q9:-Uses of TRUS in urology?

Q10:-Tumor markers in Prostate cancer?

MODEL TEST PAPERS
MCh Urology
Paper - IV
Recent Advances in Urology

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
 - Answer each question and its parts in **SEQUENTIAL ORDER**.
 - **ALL** questions carry equal marks.
 - Illustrate your answer with **SUITABLE DIAGRAMS**.
-

Q1:-Newer management techniques of Interstitial cystitis?

Q2:-Note on ablative therapies of renal tumours?

Q3:-Cryotherapy of prostate cancer?

Q4:-Molecular genetics & cancer biology of renal cell carcinoma?

Q5:-Tissue engineering perspectives for reconstructive surgery in urology?

Q6:-Role of immune modulators in renal cell carcinoma?

Q7:-Newer techniques in management of male infertility?

Q8:-Note on orthotopic urinary diversion?

Q9:-Tumor markers in urology?

Q10:-Recent advances in treatment of interstitial cystitis?

STANDARD ASSESSMENT FORM FOR PG COURSES**SUBJECT - Urology/Genitourinary Surgery*****INSTRUCTIONS TO DEANS & ASSESSORS***

1. Please read the SAF carefully before filling it up. Retrospective changes in Data will not be allowed.
2. **Do not use Annexures. All information should be provided in SAF at appropriate place earmarked. No Annexures will be considered.**
3. Experience details should be supported by experience certificate from competent authority (from the place of work) without which it will not be considered.
4. Don't add, alter or delete any column of SAF.
5. In case of DNB qualification name of the hospital/institution from where DNB training was done and year of passing must be provided. Simply saying National Board of Examination, New Delhi is not enough. Without these details DNB qualification holder will be summarily rejected.
6. Experience of defence service must be supported by certificate from the competent authority of the office of DGAFMS without which it will not be considered.
7. Dean will be responsible for filling all columns and signing at appropriate places.
8. If promotion is after cut-off date (i.e. after 21/07/2013 for Professor & 21/07/2014 for Associate Professor) or benefit of publications is given in promotion before cut-off date, give the list of publications immediately below the name of faculty in this format: Title of Paper, Authors, Citation of Journal, details of Indexing. Photocopies of published articles should also be submitted without which they will not be considered. Give details of **only** original research articles; Case reports, Review articles and Abstracts will not be considered and should not be included.
9. No abbreviations of the name of Medical College in the Faculty List and Declaration Forms are acceptable

INSTRUCTIONS TO ASSESSORS: Please ensure that only original research papers published in indexed print journals are included in the list. Remaining entries, if included, should be struck off.

10. Assessor may give any relevant remarks not shown in the assessment report on the page marked "Remarks of Assessor". No separate confidential letter should be sent.
11. Count only those faculty & Residents who have signed in attendance sheet before 11:00 a.m. and are present for subsequent verification and are found eligible on verification and also those who are on MCI permitted leave and MCI or Court duty. Do not forget to obtain signature of faculty and residents/senior residents in faculty table in appropriate column.

Urology/Genitourinary Surgery

1. Name of Institution: _____

MCI Reference No.: _____

2. Particulars of the Assessor:- **Assessment Date** _____

Name
Designation.....
Specialty.....
Name & Address of Institute/College
.....
.....
.....

Residential Address (with Pin Code)
.....
.....
Phone .(Off)(Resi.)
(Fax).....
Mobile No.
E-mail:

3. Institutional Information

a). Particulars of college

Item	College	Chairman/ Health Secretary	Director/ Dean/ Principal	Medical Superintendent
Name				
Address				
State				
Pin Code				
Phone (Off) (Res) (Fax)				
Mobile No.				
E.mail:				

b). Particulars of Affiliated University

Item	University	Vice Chancellor	Registrar
Name			
Address			
State			
Pin Code			
Phone (Off) (Res) (Fax)			
Mobile No.			
E.mail:			

SUMMARY

Date of Assessment: _____

Name of Assessor: _____

1. Name of Institution (Private / Government)	<i>Director / Dean / Principal</i> (Who so ever is Head of Institution)	
	Name	
	Age & Date of Birth	
	Teaching experience	
	PG Degree (Recognized/Non-R)	
	Subject	

2. Department inspected	Head of Department	
	Name	
	Age & Date of Birth	
	Teaching experience	
	PG Degree /subjects (Recognized/Non-R)	

3. (a). Number of UG seats	Recognised (Year:)	Permitted (Year:)		First LOP date when MBBS course was first permitted
(b). Date of last inspection for	UG	PG	Super specialty	
	Purpose:	Purpose:	Purpose:	
	Result:	Result:	Result:	

4. Total Teachers available in the Department: (Count only those who have Super-speciality degree in Urology/Genitourinary Surgery or 2 years special training in Urology/Genitourinary Surgery before joining the department)

Designation	Number	Name	Total Teaching Experience	Benefit of Publications in Promotion
Professor				
Addl./Assoc Professor				
Asstt. Professor				
Senior Resident				

Note: Count only those who are physically present.

5. Number of Units with beds in each unit:

6. Clinical workload of the Institution and Department concerned:

S.no.	Parameter	Department of Urology/Genitourinary Surgery	
		On the Day of Assessment	Average of 3 Days Random
1.	OPD attendance upto 2 p.m.		
2.	New admissions		
3.	Total Required Beds		
4.	Total Beds available 2 occupied at 10 a.m.		
5.	Bed Occupancy at 10 a.m. (%)		
6.	Total number of surgeries		
	a) Total no of major operations		
	b) Total number of minor operations		
7.	Types of Surgeries :		
	Endourology		
	a. TURP		
	b. TURBT		
	c. OIU		
	d. URSL		
	e. PCNL		
	Open Surgeries		
	a. Pyelolithotomy		
	b. Ureterolithotomy		
	c. Cystectomy		
	d. Simple Nephrectomy		
	e. Radical Nephrectomy		
	f. Radical Cystectomy with Urinary diversion		
	g. Total / partial Penectomy		
	h. Hypospadias Corrective Surgery		
	i. Urethroplasty		
	j. Emergency Genitourinary Trauma Surgery		
8.	Laparoscopic Surgery		
9.	Lithotripsy (ESWL)		
10.	Genital and Pelvic Reconstruction		
11.	Kidney transplant		
12.	USG guided Prostate biopsy		
13.	USG guided kidney biopsy		
14.	Emergency Genitourinary Trauma Surgery		

Put N.A. whichever is not applicable to the Department.

Note:

- OPD attendance is to be considered only upto 2 p.m. Bed occupancy is to be considered at 10 a.m. only.
- Investigative Data to be verified with Physical Registers in Radiodiagnosis & Central Clinical Laboratory.
- Data to be verified with Physical Registers in Blood Bank.

7. Investigative Workload of entire hospital and Department Concerned.

Parameter		Entire Hospital	Department of Urology/Genitourinary Surgery	
			On the Day of Assessment	Average of 3 Random Days
Radio-diagnosis	MRI			
	CT			
	USG			
	Plain X-rays			
	IVP/Barium etc			
	Mammography			
	DSA			
	CT guided FNAC			
	USG guided FNAC			
	Any other			
Pathology	Histopath			
	FNAC			
	Hematology			
	Others			
Bio-Chemistry				
Microbiology				
Blood Units Consumed				

8. Year-wise available clinical materials (during previous 3 years) for department of Urology/Genitourinary Surgery

S.No.	Parameters	Year 1	Year 2	Year 3 (Last Year)
1.	Total number of patients in OPD			
2.	Total number of patients admitted (IPD)			
3.	Total number of surgeries c) Total no of major operations d) Total number of minor operations			
4.	Types of Surgeries : Endourology			
	a. TURP			
	b. TURBT			
	c. OIU			
	d. URSL			
	e. PCNL			
5.	Open Surgeries			
	a. Pyelolithotomy			
	b. Ureterolithotomy			
	c. Cystectomy			
	d. Simple Nephrectomy			
	e. Radical Nephrectomy			
	f. Radical Cystectomy with Urinary diversion			
	g. Total / partial Penectomy			

	h.	Hypospadias Corrective Surgery			
	i.	Urethroplasty			
	j.	Emergency Genitourinary Trauma Surgery			
6.		Laparoscopic Surgery			
7.		Lithotripsy (ESWL)			
8.		Genital and Pelvic Reconstruction			
9.		Kidney transplant			
10.		USG guided Prostate biopsy			
11.		USG guided kidney biopsy			
12.		Emergency Genitourinary Trauma Surgery			

Note : Put N.A. for those coloumns not applicable to the department

9. Publications from the department during last 3 years:

(Give only full articles published in indexed journals. No case reports or review articles be given)

--

10	Blood Bank	License valid	Yes / No (enclose copy)
		Blood component facility available	Yes / No (enclose copy)
		Number of blood units stored on the inspection day	
		Average units consumed daily (entire hospital)	

- 11.** Specialized services provided by the department: Adequate / not adequate
12. Specialized Intensive care services provided by the Dept: Adequate / not adequate
13. Specialized equipment available in the department: Adequate / Inadequate
14. Space (OPD, IPD, Offices, Teaching areas) Adequate / Inadequate

15	Library		Central	Departmental
		Number of Books pertaining to Urology/Genitourinary Surgery		
		Number of Journals		
		Latest journals available upto		

16. Casualty Number of Beds _____ Available equipment ____ Adequate / Inadequate

17. Common Facilities

- Central supply of Oxygen / Suction: Available / Not available
- Central Sterilization Department Adequate / Not adequate
- Laundry: Manual/Mechanical/Outsourced:
- Kitchen Gas / Fire
- Incinerator: Functional / Non functional Capacity: Outsourced
- Bio-waste disposal Outsourced / any other method
- Generator facility Available / Not available
- Medical Record Section: Computerized / Non computerized
- ICD10 classification Used / Not used

18. Total number of OPD, IPD and Deaths in the Institution and department concerned during the last one year:

In the entire hospital		In the department of Urology/Genitourinary Surgery.	
OPD		OPD	
IPD (Total Number of Patients admitted)		IPD (Total Number of Patients admitted)	
Deaths		Deaths	

19. Number of Births in the Hospital during the last one year:

<i>Note</i>	:1) The data be verified by checking the death/birth registration forms sent by the college/hospital to the Registrar, Deaths & Births (Photocopy of all such forms be provided.) 2) Year means calendar year (1 st January to 31 st December)
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20. Accommodation for staff Available / Not available

21. Hostel Accommodation

S. No	Number	UG		PG		Interns	
		Boys	Girls	Boys	Girls	Boys	Girls
1	No. of Students						
2	No. of Rooms						
3	Status of Cleanliness						

22	Total number of PG seats in the concerned subject		Recognized seats	Date of recognition	Permitted seats	Date of permission
		Degree				
		Diploma				

23. Year wise PG students admitted (in the department inspected) during the last 5 years and available PG teachers.

Year	No. of PG students admitted		No. of PG Teachers available in the dept. (give names)
	Degree	Diploma	
2016			
2015			
2014			
2013			
2012			

24	Other PG courses run by the institution	Course Name	No. of seats	Department
		DNB		
		M.Sc.		
		Others (Superspecialities)		

25. Whether other medical superspecialty like Paediatric Surgery / Nephrology department exists in the institution Yes/No
(If yes give details)

Name of department	Beds/Units	When LOP for DM& M.Ch. seats granted & Number of seats	Available faculty (Names & Designation)

I have physically verified the beds, faculty and patients of above Super specialty departments and they have not been counted in Urology/Genitourinary Surgery. department inspection.

26. **Stipend paid to the PG students, year-wise:**

Year	Stipend paid in Govt. colleges by State Govt.	Stipend paid by the Institution*
Ist Year		
IInd Year		
IIIrd Year		

* **Stipend shall be paid by the institution as per Govt. rate shown above.**

27. **List of Departmental Faculty joining and leaving after last inspection:**

Designations	Number	Names	
		Joining faculty	Leaving faculty
Professor			
Associate Prof.			
Assistant Prof.			
SR/Tutor/Demons.			
Others			

28. **Faculty deficiency, if any**

Designation	Faculty available (number only)	Faculty required	Deficiency, if any
Professor			
Assoc Professor			
Asstt. Professor			
Sr. Residents			
Jr. Residents			
Tutor/ Demonstrator			
Any Other			

* **Faculty Attendance Sheet duly signed by concerned faculty must be enclosed.**

29. REMARKS OF ASSESSOR

- | |
|--|
| <ol style="list-style-type: none"> 1. please do not repeat information already provided 2. please do not make any recommendation regarding granting permission/recognition 3. if you have noticed or come across any irregularity during your assessment like fake or dummy faculty, fake or dummy patients, fudging of data of clinical material etc., please mention them here) |
|--|

PART – I
(Institutional Information)

1 Particulars of Director / Dean / Principal:

(Who so ever is Head of Institution)

Name: _____ Age: _____ (Date of Birth) _____

PG Degree	Subject	Year	Institution	University
<i>Recognised / Not Recognized</i>				

Teaching Experience

Designation	Institution	From	To	Total experience
Asstt Professor				
Assoc Professor/Reader				
Professor				
Any Other		Grand Total		

2. Central Library

- Total number of Books in library: _____
- Books pertaining to Urology/Genitourinary Surgery: _____
- Purchase of latest editions of books in last 3 years: - Urology/Genitourinary Surgery books
Total _____

- Journals:

Journals	Total	Urology/Genitourinary Surgery
Indian		
Foreign		

- Year / Month up to which latest Indian Journals available: _____
- Year / Month up to which latest Foreign Journals available: _____
- Internet / Med pub / Photocopy facility: available / not available
- Library opening times: _____
- Reading facility out of routine library hours: available / not available
(obtain list of books & journals duly signed by Dean)

3. Casualty:/ Emergency Department

Space	
Number of Beds	
No. of cases (Average daily OPD and Admissions):	
Emergency Lab in Casualty (round the clock):	available / not available
Emergency OT and Dressing Room	
Staff (Medical/Paramedical)	
Equipment available	

4 Blood Bank

(i)	Valid License(copy of certificate be annexed)	Yes / No	
(ii)	Blood component facility available	Yes / No	
(iii)	All Blood Units tested for Hepatitis C,B, HIV	Yes / No	
(iv)	Nature of Blood Storage facilities (as per specifications)	Yes / No	
(v)	Number of Blood Units available on inspection day		
(vi)	Average blood units consumed daily and on inspection day in the entire Hospital (give distribution in various specialties)	Average daily	On Inspection day

5. Central Research Lab:

- Whether it exists? Yes No
- Administrative control:
- Staff:
- Equipment:
- Workload:

6. Central Laboratory:

- Controlling Department:
- Working Hours:

Radiotherapy (Optional)	
Radiotherapy	
Teletherapy	
Brachy therapy	

- 7** Central supply of Oxygen / Suction: Available / Not available
- 8.** Central Sterilization Department Adequate / Not adequate
- 9.** Laundry: Manual/Mechanical/Outsourced:
- 10.** Kitchen Gas / Fire
- 11.** Incinerator: Functional / Non functional Capacity: Outsourced
- 12.** Bio-waste disposal Outsources / any other method
- 13.** Generator facility Available / Not available
- 14.** Medical Record Section: Computerized / Non computerized
 - ICD10 classification Used / Not used

15. Total number of OPD, IPD and Deaths in the Institution and concerned department during the last one year:

In the entire hospital		In the department of Urology/Genitourinary Surgery	
OPD		OPD	
IPD (Total No. of Patients admitted)		IPD (Total No. of Patients admitted)	
Deaths		Deaths	

16. Total Number of Births in the Hospital during the last one year:

Note: (1) The data be verified by checking the death/birth registration forms sent by the college/hospital to the Registrar, Deaths & Births (Photocopy of all such forms be provided.)

17. Recreational facilities: Available / Not available

Play grounds	Gymnasium
--------------	-----------

18	Hostel Accommodation	UG		PG		Interns	
		Boys	Girls	Boys	Girls	Boys	Girls
	No. of Rooms						
	No. of Students						
	Status of Cleanliness						

19. Residential accommodation for Staff / Paramedical staff Adequate / Inadequate

20. Ethical Committee (Constitution):

21. Medical Education Unit (Constitution)
(Specify number of meetings held annually & minutes thereof)

**PART – II
(DEPARTMENTAL INFORMATION)**

- 1 Department inspected :** Urology/Genitourinary Surgery
- 2 Date on which independent department of Urology/Genitourinary Surgery was created and started functioning**
(Attach copy of order from Govt/Competent Authorities)
- 3 Faculty details (From start of department till date)**

Name	Designation	PG/ Superspeciality Qualification in concerned subject (Year of Passing, University and College)	Appointment/Promotion orders (No.../Date... attach photocopy)	Salary Details including TDS deducted

4 Particulars of present HOD

Name: _____ Age: _____ (Date of Birth) _____

PG Degree and Superspecialty degree	Year of passing	Institution	University	Recognized/ Not Recognized
MD/Ms				
DM/M.Ch.				
Two years Special Training				

Teaching Experience (Give Experience in Urology/Genitourinary Surgery– not in General Surgery)

Designation	Institution	From	To	Total experience
Asstt Professor				
Assoc Professor/Reader				
Professor				
Any Other		Grand Total		

- 5 Whether Independent department of Urology/Genitourinary Surgery exists in the institution:**
Yes/No.....
(If yes.....Since When.....)
- 6 (a) Purpose of Present inspection:**
Grant of Permission/ Recognition/ Increase of seats /Renewal of recognition/Compliance Verification
- b) Date of last MCI inspection of the department:** _____
(Write Not Applicable for first MCI inspection)
- c) Purpose of Last Inspection:** _____
- d) Result of last Inspection:** _____
(Copy of MCI letter be attached)
- 7 Mode of selection** (actual/proposed) of PG students.

8 If course already started, yearwise number of PG students admitted and available PG teachers during the last 5 years:

Year	No. of PG students admitted		No. of PG Teachers available in the dept. (give names)
	Degree	Diploma	
2016			
2015			
2014			
2013			
2012			

9 General Departmental facilities:

- Total number of beds in the department :.....
- Number of Units in the department :.....
- Unit wise Teaching and Resident Staff (Annexed).....

Unit wise Teaching and Resident Staff:

Unit _____

Bed Strength _____ :

S. No.	Designation	Name with Date of Birth	Nature of employment Full time/part time/Hon.	PAN Number TDS deducted	PG AND SUPERSPECIALITY QUALIFICATION			Experience Date wise teaching experience with designation & Institution						Signature of Faculty Member
					Subject with Year of passing	Institution	University	Designation Mentioning subject	Institution	From	To	Total Period	* Benefit of publications given in promotion Yes/No, if yes List publications here (no annexures)	

- Note:**
- 1. Unit wise teaching / Resident staff should be shown separately for each Unit in the Proforma.**
 - 2. Use only the Format provided. DO NOT devise your own format otherwise the information will not be considered. Fill up all columns**
 - 3. *Publications: Give only full articles in indexed Journals published during the period of promotion and list them here only. No Annexure will be seen.**
 - 4. Incase of DNB qualification name of the institution/hospital from where DNB training was done and year of passing must be provided. Simply saying National Board of Examinations, New Delhi is not enough. Without these details DNB qualification holder will be summarily rejected.**
 - 5. Experience of Defence services must be supported by certificate from competent authority of the office of DGAFM without which it will not be considered.**

I have verified the eligibility of all faculty members for the post they are holding (**based on experience certificates issued by competent authority of the place of working**). Their experience details in different Designations and unitwise distribution is given the faculty table above.

10 Has any of these faculty members including senior residents been considered in PG/UG inspection at any other college or any other subject in this college in the present academic session. If yes, give details..

Date of Inspection	Institution	Subject

11 List of Faculty joining and leaving after last inspection:

DESIGNATIONS	NUMBER	NAMES	
		JOINING FACULTY	LEAVING FACULTY
Professor			
Associate Prof.			
Assistant Prof.			
SR/Tutor/Demons.			
Others			

12 List of Non-teaching Staff in the department: -

S.No.	Name	Designation

13 Available Clinical Material: **(Give the data only for the department of Urology/Genitourinary Surgery)**

	On inspection day	Average of 3 random day
OPD attendance upto 2 p.m.
New admissions
Total Required Beds
Total Beds available 2 occupied at 10 a.m.
Bed Occupancy at 10 a.m. (%)
• Total number of surgeries.....
a) Total no of major operations
b) Total number of minor operations
• Types of Surgeries :		
Endourology		
• TURP.....
• TURBT.....
• OIU.....
• URSL.....
• PCNL.....
Open Surgeries
• Pyelolithotomy.....
• Ureterolithotomy
• Cystectomy
• Simple Nephrectomy.....
• Radical Nephrectomy.....
• Radical Cystectomy with Urinary diversion.....
• Total / partial Penectomy.....
• Hypospadias Corrective Surgery.....
• Urethroplasty.....
• Emergency Genitourinary Trauma Surgery.....
• Laparoscopic Surgery.....
• Lithotripsy (ESWL).....
• Genital and Pelvic Reconstruction.....

Signature of Dean

Signature of Assessor

- Kidney transplant.....
- USG guided Prostate biopsy.....
- USG guided kidney biopsy.....
- Emergency Genitourinary Trauma Surgery.....

14 List of equipment available in the department of Urology/Genitourinary Surgery
Equipments: List of important equipments available and their functional status

(list here only – No annexure to be attached)

a.	Cystoscope - Pediatric Adult					
b.	Nephroscope - Pediatric Adult					
c.	Ureteroscope - Pediatric Adult					
d.	C-arm					
e.	OIU Instruments					
f.	ESWL Machine					
g.	Urodynamic machine					
h.	Urethral sound – Pediatric Adult					
i.	Ureteric Ballon catheter – Pediatric Adult					
j.	Vasectomy instruments					
k.	Circumcision instruments- Pediatric Adult					
l.	Urethrotomes- Pediatric Adult					
m.	Kidney biopsy instruments					
n.	Kidney transplant instruments					
o.	Urodynamic Machine					

15 Year-wise available clinical materials (during previous 3 years) for department of Urology/Genitourinary Surgery

Parameters	Year 1	Year 2	Year 3
Total number of patients in OPD			
Total number of patients admitted (IPD)			
Investigative workload of the Department and its distribution <ul style="list-style-type: none"> • CT • MRI • IVP • USG • Cystoscopy • R.G.U. • Cystography • MCU • Urodynamic study 			
Average monthly number of special investigations in Urology/Genitourinary Surgery department			

Signature of Dean

Signature of Assessor

16 Any Intensive care service provided by the department:

17 Specialty clinics being run by the department and number of patients in each clinic

S.No.	Name of the Clinic	Days on which held	Timings	Average No. of cases attended	Name of Clinic In-charge
1	Female Urology				
2	Neurology Urology				
3	Pediatric Urology				
4	Uro-Oncology				
5.	Andrology				
6.	Renal Transplantation				
7.	Others				

18. Services provided by the Department.

S.No.	Services provided	Yes/No	If Yes – Weekly Workload
1.	Types of Surgeries : Endourology		
	a. TURP		
	b. TURBT		
	c. OIU		
	d. URSL		
	e. PCNL		
2.	Open Surgeries		
	a. Pyelolithotomy		
	b. Ureterolithotomy		
	c. Cystectomy		
	d. Simple Nephrectomy		
	e. Radical Nephrectomy		
	f. Radical Cystectomy with Urinary diversion		
	g. Total / partial Penectomy		
	h. Hypospadias Corrective Surgery		
	i. Urethroplasty		
	j. Emergency Genitourinary Trauma Surgery		
3.	Laparoscopic Surgery		
4.	Lithotripsy (ESWL)		
5.	Genital and Pelvic Reconstruction		
6.	Kidney transplant		
7.	USG guided Prostate biopsy		
8.	USG guided kidney biopsy		
9.	Emergency Genitourinary Trauma Surgery		
10.	Andrologic Surgery		
11.	Rehabilitation		
12.	Counseling		
13.	Others		

19 Space

S.No	Details	In OPD	In IPD
1	Patient		
2	Equipments		
3	Teaching Space		
4	Waiting area for patients		

Signature of Dean

Signature of Assessor

20 Office space:

Department Office		Office Space for Teaching Faculty	
Spacefor Clerk	Yes/No	HOD	
Staff (Steno /Clerk)	Yes/No	Professors	
Computer/ Typewriter	Yes/No	Associate Professors	
Storage space for files	Yes/No	Assistant Professor	
		Residents	

21. Clinico- Pathological conference
 Clinico-rediological meetings
 a) Urology/Genitourinary Surgery meetings(combined clinic)

Note : Verify from the maintained register of above said meetings.

22. Submission of data to national authorities if any -

23. Academic outcome based parameters

- a. Departmental Statistical meetings
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- b. Death Review
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- c. Clinical Seminars in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- d. Journal Clubs held in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- e. Case presentations held in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- f. Group discussions held in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- g. Guest lectures held in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- h. Workshops / Symposium
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available

24. Any other information.

Signature of Dean

Signature of Assessor

PART III**POSTGRADUATE EXAMINATION**
(Only at the time of recognition inspection)

1. Minimum prescribed period of training.
(Date of admission of the Regular Batch appearing in examination)
2. Minimum prescribed essential attendance.
3. Periodic performance appraisal done or not?
4. Whether the candidates appearing in the examination have submitted their thesis six months before appearing in examination as per PG Regulations.2000?
5. Whether the thesis submitted by the candidates appearing in the examination been accepted or not?
6. Whether the candidates appearing in the examination have (i) presented one poster (ii) read one paper at National/State conference and presented one research paper which has been published/accepted for publication/sent for publication during period of their postgraduate study period.
7. Details of examiners appointed by Examining University (Give details here, No Annexures).
8. Whether appointment of examiners, their eligibility & conduct of examination is as per prescribed MCI norms or not ?
9. Standard of Theory papers and that of Clinical / Practical Examination:
10. Year of 1st batch pass out (mention name of previous/existing University)

Degree Course -----

- Note: (i) Please do not appoint retired faculty as External Examiner
(ii) There should be two internal and two external examiners. If there are no two internal examiners available in the department then only appoint three external examiners.
(iii) Put NA for those columns not applicable.

Signature of Dean

Signature of Assessor



**BHARATI VIDYAPEETH
(DEEMED TO BE UNIVERSITY), PUNE**

**Faculty of Medical Sciences
M.Ch. - Pediatric Surgery
Old Syllabus**

Curriculum MCh Urology Index

1. Goals
2. Objectives
3. Syllabus
4. Teaching Programme
5. Schedule of Posting
6. Research projects
7. Assessment
8. Job Responsibilities
9. Suggested Books & Journals
10. Model Test Papers

PG Curriculum MCh Urology

The infrastructure and faculty of the department of Urology will be as per MCI guidelines

1. Goals

The goal of M Ch course is to produce a competent physician who:

- ❖ Recognizes the health needs of adults and carries out professional obligations in keeping with principles of National Health Policy and professional ethics;
- ❖ Has acquired the competencies pertaining to Urology that are required to be practiced in the community and at all levels of health care system;
- ❖ Has acquired skills in effectively communicating with the patients, family and the community;
- ❖ Is aware of the contemporary advances and developments in medical sciences.
- ❖ Acquires a spirit of scientific enquiry and is oriented to principles of research methodology; and
- ❖ Has acquired skills in educating medical and paramedical professionals.

2. Objectives

At the end of the MCh course in Urology, the student should be able to:

- ❖ Recognize the key importance of medical problems in the context of the health priority of the country;
- ❖ Practice the specialty of Urology in keeping with the principles of professional ethics;
- ❖ Identify social, economic, environmental, biological and emotional determinants of adult Urology and know the therapeutic, rehabilitative, preventive and promotion measures to provide holistic care to all patients;
- ❖ Take detailed history, perform full physical examination and make a clinical diagnosis;
- ❖ Perform and interpret relevant investigations (Imaging and Laboratory);
- ❖ Perform and interpret important diagnostic procedures;
- ❖ Diagnose Urological illnesses in adults based on the analysis of history, physical examination and investigative work up;
- ❖ Plan and deliver comprehensive treatment for illness in adults using principles of rational drug therapy;
- ❖ Plan and advise measures for the prevention of Urological diseases;
- ❖ Plan rehabilitation of adults suffering from chronic illness, and those with special needs;
- ❖ Manage Urological emergencies efficiently;

- ❖ Demonstrate skills in documentation of case details, and of morbidity and mortality data relevant to the assigned situation;
- ❖ Demonstrate empathy and humane approach towards patients and their families and respect their sensibilities;
- ❖ Demonstrate communication skills of a high order in explaining management and prognosis, providing counseling and giving health education messages to patients, families and communities.
- ❖ Develop skills as a self-directed learner, recognize continuing educational needs; use appropriate learning resources, and critically analyze relevant published literature in order to practice evidence-based medicine;
- ❖ Demonstrate competence in basic concepts of research methodology and epidemiology;
- ❖ Facilitate learning of medical/nursing students, practicing physicians, para-medical health workers and other providers as a teacher-trainer;
- ❖ Play the assigned role in the implementation of national health programs, effectively and responsibly;
- ❖ Organize and supervise the desired managerial and leadership skills;
- ❖ Function as a productive member of a team engaged in health care, research and education.

3. Syllabus

3.1 Theory

❖ Anatomy

Surgical Anatomy of the Retroperitoneum, Kidneys and Ureters
Anatomy of the Lower Urinary Tract and Male Genitalia

❖ Clinical Decision Making

Evaluation of the Urologic Patient: History, Physical Examination, and Urinalysis
Urinary Tract Imaging : Basic Principles
Outcomes Research

❖ Basics of Urologic Surgery

Basic Instrumentation and Cystoscopy
Basic of Laparoscopic Urologic Surgery

❖ Infections and Inflammation

Infections of the Urinary Tract A. Schaeffer
Inflammatory Conditions of the Male Genitourinary Tract
Interstitial Cystitis and Related Disorders
Sexually Transmitted and Associated Diseases
Urological Implications of AIDS and Related Conditions
Cutaneous Diseases of the External Genitalia
Tuberculosis and Other Opportunistic Infections of the Genitourinary System

❖ Molecular and Cellular Biology

Basic Principles of Immunology

Molecular Genetics and Cancer Biopsy

Tissue Engineering Perspectives for Reconstructive Surgery

❖ Reproductive and Sexual Function

Male Reproductive Physiology

Male Infertility

Surgical Management of Male Infertility

Physiology of Erectile Dysfunction : Pathophysiology, Evaluation, Nonsurgical Management

Epidemiology, Evaluation, and Nonsurgical Management of Erectile Dysfunction

Prosthetic Surgery for Erectile Dysfunction

Vascular Surgery for Erectile Dysfunction

Peyronie's Disease

Priapism

Androgen Deficiency in the Aging Male

Female Sexual Function and Dysfunction

❖ Male Genitalia

Neoplasms of the Testis

Surgery of Testicular Tumors

Tumors of the Penis

Surgery of Penile and Urethral Carcinoma

Surgery of the Penis and Urethra

Surgery of the Scrotum and Seminal Vesicles

❖ Renal Physiology and Pathophysiology

Renal Physiology and Pathophysiology

Renovascular Hypertension

❖ Upper Urinary Tract Obstruction and Trauma

Pathophysiology of Obstruction

Management of Upper Urinary Tract Obstruction

Upper Urinary Tract Trauma

❖ Renal Failure and Transplantation

Renal Transplantation

Etiology, Pathogenesis, and Management of Renal Failure

❖ **Urinary Lithiasis and Endourology**

Urinary Lithiasis : Etiology, Epidemiology, and Pathophysiology
 Evaluation and Medical Management of Urinary Lithiasis
 Surgical Management of Upper Urinary Tract Calculi
 Ureteroscopy and Retrograde Ureteral Access
 Percutaneous Approaches to the Upper Urinary Tract

❖ **Neoplasms of the Upper Urinary Tract**

Renal Tumors
 Urothelial Tumors of the Upper Urinary Tract
 Urothelial Tumors of the Renal Pelvis and Ureter
 Open surgery of the Kidney
 Laparoscopic Surgery of the Kidney
 Ablative Therapy for Renal Tumors

❖ **The Adrenals**

Pathophysiology, Evaluation, and Medical Management of Adrenal Disorders
 Surgery of the Adrenals

❖ **Urine Transport, Storage, and Emptying**

Physiology and Pharmacology of the Renal Pelvis and Ureter
 Physiology and Pharmacology of the Bladder and Urethra
 Pathophysiology, Categorization, and Management of Voiding Dysfunction
 Urodynamic and Video dynamic Evaluation of Voiding Dysfunction
 Neuromuscular Dysfunction of the Lower Urinary Tract
 Urinary Incontinence : Epidemiology, Pathophysiology, Evaluation, and Overview of Management
 The Overactive Bladder
 Pharmacologic Management of 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
 Retropubic Suspension Surgery for Incontinence in Women
 Vaginal Reconstructive Surgery for Sphincteric Incontinence
 Pubovaginal Slings
 Tension-Free Vaginal Tape Procedures
 Injection Therapy for Urinary Incontinence
 Additional Treatment for Storage and Emptying Failure
 Geriatric Voiding Dysfunction and Urinary Incontinence
 Urinary Tract Fistulae
 Bladder and Urethral Diverticula
 Surgical Procedures for Sphincteric Incontinence in the Male : The Artificial Genitourinary

Sphincter; Perineal Sling Procedures

❖ **Bladder ; Lower Genitourinary Calculi and Trauma**

Urothelial Tumors of the Bladder
 Management of Superficial Bladder Cancer
 Management of Metastatic and Invasive Bladder Cancer
 Surgery of Bladder Cancer
 Laparoscopic Bladder Surgery
 Use of Intestinal Segments in Urinary Diversion
 Cutaneous Continent Urinary Diversion
 Orthotopic Urinary Diversion
 Genital and Lower Urinary Tract Trauma
 Lower Urinary Tract Calculi

❖ **Prostate**

Molecular Biology, Endocrinology, and Physiology of the Prostate and Seminal Vesicles
 Etiology, Pathophysiology, and Epidemiology of Benign Prostatic Hyperplasia
 Natural History, Evaluation, and Nonsurgical Management of Benign Prostatic Hyperplasia
 Minimally Invasive and Endoscopic Management of Benign Prostatic Hyperplasia
 Retropubic and Suprapubic Open Radical Prostatectomy
 Epidemiology, Etiology, and Prevention of Prostate Cancer
 Pathology of Prostatic Neoplasms
 Ultrasonography and Biopsy of the Prostate
 Tumor Markers in Prostate Cancer
 Early Detection, Diagnosis, and Staging of Prostate Cancer
 Definitive Therapy of Localized Prostate Cancer : Outcomes
 Expectant Management of Prostate Cancer
 Anatomic Retrograde Retropubic Prostatectomy
 Radical Perineal Prostatectomy
 Laparoscopic and Robotic Radical Prostatectomy and Pelvic Lymphadenectomy
 Radiation Therapy for Prostate Cancer
 Cryotherapy of Prostate Cancer
 Treatment of Locally Advanced Prostate Cancer
 Management of Rising Prostate-Specific Antigen after Definitive Therapy
 Hormonal Therapy for Prostate Cancer
 Management of Hormone-Resistant Prostate Cancer

❖ **Pediatric Urology**

Normal and Anomalous Development of the Urinary Tract
 Renal Function in the Fetus
 Congenital Obstructive Uropathy
 Perinatal Urology
 Evaluation of Pediatric Urologic Patient

Renal Disease in Childhood
 Urinary Tract Infections in Infants and Children
 Anomalies of the Kidney
 Renal Dysplasia and Cystic Disease of Kidney
 Anomalies and Surgery of the Ureteropelvic Junction
 Ectopic Ureter
 Vesicoureteral Reflux
 Prune-Belly Syndrome
 Exstrophy and Epispadias Complex
 Surgical Technique for One-Stage Exstrophy Reconstruction
 Bladder Anomalies in Children
 Posterior Urethral Valves and Other Urethral Anomalies
 Voiding Dysfunction in Children : Neurogenic and Non-neurogenic
 Urinary Tract Reconstruction
 Hypospadias
 Abnormalities of External Genitalia in Boys
 Abnormalities of Testis and Scrotum : Surgical Management
 Sexual Differentiation : Normal and Abnormal
 Surgical Management of Intersex
 Pediatric Oncology
 Pediatric Endourology and Laparoscopy
 Pediatric Genitourinary Trauma

3.2. Practical:

History, examination and writing of records:

- ❖ History taking should include the background information, presenting complaints and the history of present illness, history of previous illness, family history, social and occupational history and treatment history.
- ❖ Detailed physical examination should include general physical and CVS examination
- ❖ Skills in writing up notes, maintaining problem-oriented medical records (POMR), progress notes, and presentation of cases during ward rounds, planning investigation and making a treatment plan should be taught.
- ❖ Other Urology procedures- investigative Urological Procedures like uroflowmetry, CNG, Doppler, Ultrasound & Ultrasound guided procedures.

3.3. Clinical Teaching

General, Physical and specific examinations of Genitourinary should be mastered. The resident should be able to analyse history and correlate it with Clinical findings. He should be well versed with all radiological procedures like IVU, Nephrostogram and RGP, Ascending uroeltherogram. He should present his daily admissions in morning report and try to improve management skills, fluid balance, choice of drugs. He should clinically analyse the patient & decide for pertinent Investigations required for specific patient.

4. Teaching Programme

4.1 General Principals

Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training is skills oriented.

Learning in postgraduate program is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

4.2 Teaching Sessions

The teaching methodology consists of bedside discussions, ward rounds, case presentations, clinical grand rounds, statistical meetings, journal club, lectures and seminars.

Along with these activities, trainees should take part in inter-departmental meetings i.e clinico-pathological and clinico-radiological meetings that are organized regularly.

Trainees are expected to be fully conversant with the use of computers and be able to use databases like the Medline, Pubmed etc.

They should be familiar with concept of evidence based medicine and the use of guidelines available for managing various diseases.

4.3 Teaching Schedule

Following is the suggested weekly teaching programme in the Department of Urology:

Sr. No.	Description	Frequency
1.	Case Presentation & Discussion	Once a week
2.	Seminar	Once in two weeks
3.	Journal Club	Once in two weeks
4.	Grand Round presentations	Once a month
5.	Emergency case discussions	Once a week
6.	Statistical & Mortality Meet	Once a month
7.	Clinico-Pathological meet	Once a month
8.	Clinico-Radiological meet	Once a month
9.	Clinico-Surgical meet	Once a month
10.	Faculty lecture teaching	Once a month

❖ Each unit should have regular teaching rounds for residents posted in that unit. The rounds should include bedside case discussions, file rounds (documentation of case history and examination, progress notes, round discussions, investigations and management plan), interesting and difficult case unit discussions.

❖ Central hospital teaching sessions will be conducted regularly and DM residents would present interesting cases, seminars and take part in clinico-pathological case discussions.

4.4 Conferences and Papers

- ❖ A resident must attend at least one conference per year.
- ❖ One paper must be presented in at least 3 years.

5. Schedule of Postings

- ❖ OPD : Twice a week
- ❖ OT : Thrice a week
- ❖ Investigative urology : All Days
- ❖ The MCh resident is expected to do daily ward rounds at 8 AM in the morning and evening between 5 Pm to 7 PM along with PG resident.
- ❖ The MCh resident should do the dressing of the patient that have been operated/assisted by them.
- ❖ The MCh resident should note down the history and examination of admitted patients and should daily put progress note in files.
- ❖ The normal working hours will be from 8 AM to 8 PM. When on emergency duty, the resident is supposed to stay overnight in the resident room.
- ❖ **LOG BOOK**
 - The student will maintain a log book of all the procedures.
 - The student will be graded as per his clinical & technical skill performance.
 - The student has observed the procedures as an assistant.
 - The part of the procedures performed under direct supervision.
 - The procedure performed with assistance.
 - The purpose of training is to grade the skills and evaluate the ability to take decisions.

The resident will be assessed once every year in the form of theory test at the end of each academic year.

6. Research Projects

- ❖ Every candidate shall carry out work on an assigned research project under the guidance of a recognized postgraduate teacher, the project shall be written and submitted in the form of a Project.
- ❖ Every candidate shall submit project plan to university within time frame set by university

- ❖ Thesis shall be submitted to the University within 9 months of joining the course.
- ❖ The student will (i) identify a relevant research problem, (ii) conduct a critical review of literature, (iii) formulate a hypothesis, (iv) determine the most suitable study design, (v) state the objectives of the study, (vi) prepare a study protocol, (vii) undertake a study according to the protocol, (viii) analyze and interpret research data, and draw conclusion, (ix) write a research paper.

7. Assessment

All the MCh residents are assessed daily for their academic activities and also periodically.

7.1. General Principles

- ❖ The assessment is valid, objective and reliable
- ❖ It covers cognitive, psychomotor and affective domains.
- ❖ Formative, continuing and summative (final) assessment is also conducted in theory as well as practical. In addition, research project is also assessed separately.

7.2. Formative Assessment

The formative assessment is continuous as well as end of term.

The former is based on the feedback from the consultants concerned.

Formative assessment will provide feedback to the candidate about his/her performance and help to improve in the areas they lack.

Record of internal assessment should be presented to the board of examiners for consideration at the time of final examination.

7.3. Internal Assessment

The performance of the resident during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student. Marks should be allotted out of 100 as followed.

Sr. No.	Items	Marks
1.	Personal Attributes	20
2.	Clinical Work	20
3.	Academic activities	20
4.	End of term theory examination	20
5.	End of term practical examination	20

1. Personal attributes:

- ❖ **Behavior and Emotional Stability:** Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.

- ❖ **Motivation and Initiative:** Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
- ❖ **Honesty and Integrity:** Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.
- ❖ **Interpersonal Skills and Leadership Quality:** Has compassionate attitude towards patients and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

2. Clinical Work:

- ❖ **Availability:** Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
- ❖ **Diligence:** Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
- ❖ **Academic ability:** Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests.
- ❖ **Clinical Performance:** Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

3. Academic Activity: Performance during presentation at Journal club/ Seminar/ Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

4. End of term theory examination conducted at end of 1st, 2nd year and after 2 years 9 months

5. End of term practical/oral examinations after 2 years 9 months.

Marks for **personal attributes** and **clinical work** should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20.

Marks for **academic activity** should be given by the all consultants who have attended the session presented by the resident.

The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.

7.4. Summative Assessment

Ratio of marks in theory and practical will be equal.

The pass percentage will be 50%.

Candidate will have to pass theory and practical examinations separately.

A. Theory examination

Sr. No.	Title	Marks
Paper –I	Basic Sciences as related to Urology	100
Paper-II	Clinical Urology	100
Paper-III	Operative Urology	100
Paper-IV	Recent advances in Urology	100
Total		400

B. Practical & Viva-Voce Examination

Sr. no		Marks
1.	Long Case (1)	100
2.	Short Cases (2) 75 marks each	150
3.	Procedure	50
4.	Grand Viva including Instruments/Radiology/Pathology	100
Total		400

8. Job Responsibilities

❖ Outdoor Patient (OPD) Responsibilities

- The working of the residents in the OPD should be fully supervised.
- They should evaluate each patient and write the observations on the OPD card with date and signature.
- Investigations should be ordered as and when necessary using prescribed forms.
- Residents should discuss all the cases with the consultant and formulate a management plan.

- Patient requiring admission according to resident's assessment should be shown to the consultant on duty.
- Patient requiring immediate medical attention should be sent to the casualty services with details of the clinical problem clearly written on the card.
- Patient should be clearly explained as to the nature of the illness, the treatment advice and the investigations to be done.
- Resident should specify the date and time when the patient has to return for follow up.

❖ **In-Patient Responsibilities**

Each resident should be responsible and accountable for all the patients admitted under his care. The following are the general guidelines for the functioning of the residents in the ward:

- Detailed work up of the case and case sheet maintenance:
- He/She should record a proper history and document the various symptoms. Perform a proper patient examination using standard methodology. He should develop skills to ensure patient comfort/consent for examination. Based on the above evaluation he/she should be able to formulate a differential diagnosis and prepare a management plan. Should develop skills for recording of medical notes, investigations and be able to properly document the consultant round notes.
- To organize his/her investigations and ensure collection of reports.
- Bedside procedures for therapeutic or diagnostic purpose.
- Presentation of a precise and comprehensive overview of the patient in clinical rounds to facilitate discussion with senior residents and consultants.
- To evaluate the patient twice daily (and more frequently if necessary) and maintain a progress report in the case file.
- To establish rapport with the patient for communication regarding the nature of illness and further plan management.
- To write instructions about patient's treatment clearly in the instruction book along with time, date and the bed number with legible signature of the resident.
- All treatment alterations should be done by the residents with the advice of the concerned consultants and senior residents of the unit.

❖ **Admission day**

Following guidelines should be observed by the resident during admission day.

- Resident should work up the patient in detail and be ready with the preliminary necessary investigations reports for the evening discussion with the consultant on duty.
- After the evening round the resident should make changes in the treatment and plan out the investigations for the next day in advance.

❖ **Doctor on Duty**

- Duty days for each Resident should be allotted according to the duty roster.
- The resident on duty for the day should know about all sick patients in the wards and relevant problems of all other patients, so that he could face an emergency situation effectively.
- In the morning, detailed over (written and verbal) should be given to the next resident on duty. This practice should be rigidly observed.
- If a patient is critically ill, discussion about management should be done with the consultant at any time.
- The doctor on duty should be available in the ward through out the duty hours.

❖ **Care of Sick Patients**

- Care of sick patients in the ward should have precedence over all other routine work for the doctor on duty.
- Patients in critical condition should be meticulously monitored and records maintained.
- If patient merits ICU care then it must be discussed with the senior residents and consultants for transfer to ICU.

❖ **Resuscitation skills**

At the time of joining the residency programme, the resuscitation skills should be demonstrated to the residents and practical training provided at various work stations.

- Residents should be fully competent in providing basic and advanced cardiac life support.
- They should be fully aware of all advanced cardiac support algorithms and be aware of the use of common resuscitative drugs and equipment like defibrillators and external cardiac pacemakers.
- The resident should be able to lead a cardiac arrest management team.

❖ **Discharge of the Patient**

- Patient should be informed about his/her discharge one day in advance and discharge cards should be prepared 1 day prior to the planned discharge.
- The discharge card should include the salient points in history and examination, complete diagnosis, important management decisions, hospital course and procedures done during hospital stay and the final advice to the patient.
- Consultants and DM Residents should check the particulars of the discharge card and counter sign it.
- Patient should be briefed regarding the date, time and location of OPD for the follow up visit.

❖ **In Case of Death**

- In case it is anticipated that a particular patient is in a serious condition, relatives should be informed about the critical condition of the patient beforehand.
- Residents should be expected to develop appropriate skills for breaking bad news and bereavements.
- Follow up death summary should be written in the file and face sheet notes must be filled up and the sister in charge should be requested to send the body to the mortuary with respect and dignity from where the patient's relatives can be handed over the body.
- In case of a medico legal case, death certificate has to be prepared in triplicate and the body handed over to the mortuary and the local police authorities should be informed.
- Autopsy should be attempted for all patients who have died in the hospital especially if the patient died of an undiagnosed illness.

❖ **Bedside Procedures**

The following guidelines should be observed strictly:

- Be aware of the indications and contraindications for the procedure and record it in the case sheet. Rule out contraindications like low platelet count, prolonged prothrombin time, etc.
- Plan the procedure during routine working hours, unless it is an emergency. Explain the procedure with its complications to the patient and his/her relative and obtain written informed consent on a proper form. Perform the procedure under strict aseptic precautions using standard techniques. Emergency tray should be ready during the procedure.
- Make a brief note on the case sheet with the date, time, nature of the procedure and immediate complications, if any.
- Monitor the patient and watch for complications(s).

❖ **OT responsibilities**

- The 1st year resident observes the general layout and working of the OT, understands the importance of maintaining sanctity of the OT, scrubbing, working and sterilization of all the OT Instrument, know how of endoscopes. He/ She is responsible shifting of OT patients, for participating in surgery as 2nd assistant and for post operative management of patient in recovery and in ward. The 2nd year resident is responsible for pre op work up of the patient, surgical planning and understanding the rationale of surgery. He/she is the first assistant in surgery and is responsible for anticipating intra op and post op complications and managing them. The final year resident should be able to perform minor/medium/major surgeries independently and assist in medium/major/extra major surgeries. He/she should be able to handle all emergencies and post op complications independently and is responsible for supervision and guidance of his/her juniors.

❖ **Medico-Legal Responsibilities of the Residents**

- All the residents are given education regarding medico-legal responsibilities at the time of admission in a short workshop.
- They must be aware of the formalities and steps involved in making the correct death certificates, mortuary slips, medico-legal entries, requisition for autopsy etc.
- They should be fully aware of the ethical angle of their responsibilities and should learn how to take legally valid consent for different hospital procedures & therapies.
- They should ensure confidentiality at every stage.

9. Suggested Books

9.1. Books

- ❖ Campbells Urology
- ❖ Glenns Urology
- ❖ Year book of Urology
- ❖ Recent advances in Urology
- ❖ Emmetts Clinical Uroradiology
- ❖ Mc Anirich Trauma of Genitourinary Tracts
- ❖ Libertino-Pediatric And Adult Reconstructive Urologic Surgery
- ❖ Richie & Damico-Urologic Oncology
- ❖ Strocky-Handbook of urology diagnosis and therapy
- ❖ Allen D Seftel-male and female sexual dysfunction.

9.2. Journals

- ❖ Urological clinics of North America
- ❖ British Journal of Urology
- ❖ Journal of endourology
- ❖ Journal of Urology

10. MODEL TEST PAPERS

MODEL TEST PAPERS MCh Urology

Paper - I

BASIC SCIENCES AS RELATED TO UROLOGY

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
 - Answer each question and its parts in **SEQUENTIAL ORDER**.
 - **ALL** questions carry equal marks.
 - Illustrate your answer with **SUITABLE DIAGRAMS**.
-

Q1:-Write a note on Genitourinary Tuberculosis and its management ?

Q2:-Write a note on pathophysiology of erectile dysfunction and its management?

Q3:-Write are the urological implications of AIDS on genitourinary system and its management?

Q4:-Write a note on evaluation & management of upper urinary tract calculi?

Q5:-Write a note on Neurogenic & Non neurogenic urinary bladder?

Q6:-Write a note on evaluation & management of BPH?

Q7:- Write a note on Testicular cancer & its management?

Q8:-Write note on evaluation & management of male erectile dysfunction?

Q9:- Write not an-Etiology,Pathophysiology & epidemiology of urinary calculi?

Q10:- Note on Peyronies Disease?

MODEL TEST PAPERS

MCh Urology

Paper - II

Clinical Urology

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
 - Answer each question and its parts in **SEQUENTIAL ORDER**.
 - **ALL** questions carry equal marks.
 - Illustrate your answer with **SUITABLE DIAGRAMS**.
-

Q1:- Write about complications of PCNL ?

Q2:-Write about vascular surgeries for erectile dysfunction?

Q3:-Write about surgery for penile & urethral carcinoma?

Q4:-Surgical management of upper urinary tract calculi?

Q5:-Write about Laparoscopic surgery of renal tumors?

Q6:-Write about injection therapy for urinary incontinence?

Q7:-Complications of TURP?

Q8:-Note on anterior urethoplasty?

Q9:-Note on Radical Perineal Prostatectomy?

Q10:-Surgical Technique of exstrophy reconstruction?

MODEL TEST PAPERS

MCh Urology

Paper - III

Operative Urology

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
 - Answer each question and its parts in **SEQUENTIAL ORDER**.
 - **ALL** questions carry equal marks.
 - Illustrate your answer with **SUITABLE DIAGRAMS**.
-

Q1:-Role of Diagnostic laparoscopy in urology?

Q2:-Newer contrast media pertaining to urology?

Q3:-Evaluation of patient of Interstitial cystitis?

Q4:-Urodynamic evaluation in voiding dysfunction?

Q5:-Ureteroscopy & its uses?

Q6:-Percutaneous approaches to upper urinary tract?

Q7:-Evaluation of Adrenal mass?

Q8:-Electrical stimulation & Neuromodulation in emptying & storage factor of Urinary Bladder?

Q9:-Uses of TRUS in urology?

Q10:-Tumor markers in Prostate cancer?

MODEL TEST PAPERS
MCh Urology
Paper - IV
Recent Advances in Urology

Maximum Marks : 100

Time : 3 Hours

- Attempt **ALL** questions.
 - Answer each question and its parts in **SEQUENTIAL ORDER**.
 - **ALL** questions carry equal marks.
 - Illustrate your answer with **SUITABLE DIAGRAMS**.
-

Q1:-Newer management techniques of Interstitial cystitis?

Q2:-Note on ablative therapies of renal tumours?

Q3:-Cryotherapy of prostate cancer?

Q4:-Molecular genetics & cancer biology of renal cell carcinoma?

Q5:-Tissue engineering perspectives for reconstructive surgery in urology?

Q6:-Role of immune modulators in renal cell carcinoma?

Q7:-Newer techniques in management of male infertility?

Q8:-Note on orthotopic urinary diversion?

Q9:-Tumor markers in urology?

Q10:-Recent advances in treatment of interstitial cystitis?

STANDARD ASSESSMENT FORM FOR PG COURSES**SUBJECT - Urology/Genitourinary Surgery*****INSTRUCTIONS TO DEANS & ASSESSORS***

1. Please read the SAF carefully before filling it up. Retrospective changes in Data will not be allowed.
2. **Do not use Annexures. All information should be provided in SAF at appropriate place earmarked. No Annexures will be considered.**
3. Experience details should be supported by experience certificate from competent authority (from the place of work) without which it will not be considered.
4. Don't add, alter or delete any column of SAF.
5. In case of DNB qualification name of the hospital/institution from where DNB training was done and year of passing must be provided. Simply saying National Board of Examination, New Delhi is not enough. Without these details DNB qualification holder will be summarily rejected.
6. Experience of defence service must be supported by certificate from the competent authority of the office of DGAFMS without which it will not be considered.
7. Dean will be responsible for filling all columns and signing at appropriate places.
8. If promotion is after cut-off date (i.e. after 21/07/2013 for Professor & 21/07/2014 for Associate Professor) or benefit of publications is given in promotion before cut-off date, give the list of publications immediately below the name of faculty in this format: Title of Paper, Authors, Citation of Journal, details of Indexing. Photocopies of published articles should also be submitted without which they will not be considered. Give details of **only** original research articles; Case reports, Review articles and Abstracts will not be considered and should not be included.
9. No abbreviations of the name of Medical College in the Faculty List and Declaration Forms are acceptable

INSTRUCTIONS TO ASSESSORS: Please ensure that only original research papers published in indexed print journals are included in the list. Remaining entries, if included, should be struck off.

10. Assessor may give any relevant remarks not shown in the assessment report on the page marked "Remarks of Assessor". No separate confidential letter should be sent.
11. Count only those faculty & Residents who have signed in attendance sheet before 11:00 a.m. and are present for subsequent verification and are found eligible on verification and also those who are on MCI permitted leave and MCI or Court duty. Do not forget to obtain signature of faculty and residents/senior residents in faculty table in appropriate column.

Urology/Genitourinary Surgery

1. Name of Institution: _____

MCI Reference No.: _____

2. Particulars of the Assessor:- **Assessment Date** _____

Name
Designation.....
Specialty.....
Name & Address of Institute/College
.....
.....
.....

Residential Address (with Pin Code)
.....
.....
Phone .(Off)(Resi.)
(Fax).....
Mobile No.
E-mail:

3. Institutional Information

a). Particulars of college

Item	College	Chairman/ Health Secretary	Director/ Dean/ Principal	Medical Superintendent
Name				
Address				
State				
Pin Code				
Phone (Off) (Res) (Fax)				
Mobile No.				
E.mail:				

b). Particulars of Affiliated University

Item	University	Vice Chancellor	Registrar
Name			
Address			
State			
Pin Code			
Phone (Off) (Res) (Fax)			
Mobile No.			
E.mail:			

SUMMARY

Date of Assessment: _____

Name of Assessor: _____

1. Name of Institution (Private / Government)	Director / Dean / Principal (Who so ever is Head of Institution)	
	Name	
	Age & Date of Birth	
	Teaching experience	
	PG Degree (Recognized/Non-R)	
	Subject	

2. Department inspected	Head of Department	
	Name	
	Age & Date of Birth	
	Teaching experience	
	PG Degree /subjects (Recognized/Non-R)	

3. (a). Number of UG seats	Recognised (Year:)	Permitted (Year:)		First LOP date when MBBS course was first permitted
(b). Date of last inspection for	UG	PG	Super specialty	
	Purpose:	Purpose:	Purpose:	
	Result:	Result:	Result:	

4. Total Teachers available in the Department: (Count only those who have Super-speciality degree in Urology/Genitourinary Surgery or 2 years special training in Urology/Genitourinary Surgery before joining the department)

Designation	Number	Name	Total Teaching Experience	Benefit of Publications in Promotion
Professor				
Addl./Assoc Professor				
Asstt. Professor				
Senior Resident				

Note: Count only those who are physically present.

5. Number of Units with beds in each unit:

6. Clinical workload of the Institution and Department concerned:

S.no.	Parameter	Department of Urology/Genitourinary Surgery	
		On the Day of Assessment	Average of 3 Days Random
1.	OPD attendance upto 2 p.m.		
2.	New admissions		
3.	Total Required Beds		
4.	Total Beds available 2 occupied at 10 a.m.		
5.	Bed Occupancy at 10 a.m. (%)		
6.	Total number of surgeries		
	a) Total no of major operations		
	b) Total number of minor operations		
7.	Types of Surgeries :		
	Endourology		
	a. TURP		
	b. TURBT		
	c. OIU		
	d. URSL		
	e. PCNL		
	Open Surgeries		
	a. Pyelolithotomy		
	b. Ureterolithotomy		
	c. Cystectomy		
	d. Simple Nephrectomy		
	e. Radical Nephrectomy		
	f. Radical Cystectomy with Urinary diversion		
	g. Total / partial Penectomy		
	h. Hypospadias Corrective Surgery		
	i. Urethroplasty		
	j. Emergency Genitourinary Trauma Surgery		
8.	Laparoscopic Surgery		
9.	Lithotripsy (ESWL)		
10.	Genital and Pelvic Reconstruction		
11.	Kidney transplant		
12.	USG guided Prostate biopsy		
13.	USG guided kidney biopsy		
14.	Emergency Genitourinary Trauma Surgery		

Put N.A. whichever is not applicable to the Department.

Note:

- OPD attendance is to be considered only upto 2 p.m. Bed occupancy is to be considered at 10 a.m. only.
- Investigative Data to be verified with Physical Registers in Radiodiagnosis & Central Clinical Laboratory.
- Data to be verified with Physical Registers in Blood Bank.

7. Investigative Workload of entire hospital and Department Concerned.

Parameter		Entire Hospital	Department of Urology/Genitourinary Surgery	
		On the Day of Assessment	On the Day of Inspection	Average of 3 Random Days
Radio-diagnosis	MRI			
	CT			
	USG			
	Plain X-rays			
	IVP/Barium etc			
	Mammography			
	DSA			
	CT guided FNAC			
	USG guided FNAC			
	Any other			
	Pathology	Histopath		
FNAC				
Hematology				
Others				
Bio-Chemistry				
Microbiology				
Blood Units Consumed				

8. Year-wise available clinical materials (during previous 3 years) for department of Urology/Genitourinary Surgery

S.No.	Parameters	Year 1	Year 2	Year 3 (Last Year)
1.	Total number of patients in OPD			
2.	Total number of patients admitted (IPD)			
3.	Total number of surgeries c) Total no of major operations d) Total number of minor operations			
4.	Types of Surgeries : Endourology			
	a. TURP			
	b. TURBT			
	c. OIU			
	d. URSL			
	e. PCNL			
5.	Open Surgeries			
	a. Pyelolithotomy			
	b. Ureterolithotomy			
	c. Cystectomy			
	d. Simple Nephrectomy			
	e. Radical Nephrectomy			
	f. Radical Cystectomy with Urinary diversion			
	g. Total / partial Penectomy			

	h.	Hypospadias Corrective Surgery			
	i.	Urethroplasty			
	j.	Emergency Genitourinary Trauma Surgery			
6.		Laparoscopic Surgery			
7.		Lithotripsy (ESWL)			
8.		Genital and Pelvic Reconstruction			
9.		Kidney transplant			
10.		USG guided Prostate biopsy			
11.		USG guided kidney biopsy			
12.		Emergency Genitourinary Trauma Surgery			

Note : Put N.A. for those coloumns not applicable to the department

9. Publications from the department during last 3 years:

(Give only full articles published in indexed journals. No case reports or review articles be given)

--

10	Blood Bank	License valid	Yes / No (enclose copy)
		Blood component facility available	Yes / No (enclose copy)
		Number of blood units stored on the inspection day	
		Average units consumed daily (entire hospital)	

- 11.** Specialized services provided by the department: Adequate / not adequate
12. Specialized Intensive care services provided by the Dept: Adequate / not adequate
13. Specialized equipment available in the department: Adequate / Inadequate
14. Space (OPD, IPD, Offices, Teaching areas) Adequate / Inadequate

15	Library		Central	Departmental
		Number of Books pertaining to Urology/Genitourinary Surgery		
		Number of Journals		
		Latest journals available upto		

16. Casualty Number of Beds _____ Available equipment ____ Adequate / Inadequate

17. Common Facilities

- Central supply of Oxygen / Suction: Available / Not available
- Central Sterilization Department Adequate / Not adequate
- Laundry: Manual/Mechanical/Outsourced:
- Kitchen Gas / Fire
- Incinerator: Functional / Non functional Capacity: Outsourced
- Bio-waste disposal Outsourced / any other method
- Generator facility Available / Not available
- Medical Record Section: Computerized / Non computerized
- ICD10 classification Used / Not used

18. Total number of OPD, IPD and Deaths in the Institution and department concerned during the last one year:

In the entire hospital		In the department of Urology/Genitourinary Surgery.	
OPD		OPD	
IPD (Total Number of Patients admitted)		IPD (Total Number of Patients admitted)	
Deaths		Deaths	

19. Number of Births in the Hospital during the last one year:

<i>Note</i>	:1) The data be verified by checking the death/birth registration forms sent by the college/hospital to the Registrar, Deaths & Births (Photocopy of all such forms be provided.) 2) Year means calendar year (1 st January to 31 st December)
-------------	--

20. Accommodation for staff Available / Not available

21. Hostel Accommodation

S. No	Number	UG		PG		Interns	
		Boys	Girls	Boys	Girls	Boys	Girls
1	No. of Students						
2	No. of Rooms						
3	Status of Cleanliness						

22	Total number of PG seats in the concerned subject		Recognized seats	Date of recognition	Permitted seats	Date of permission
		Degree				
		Diploma				

23. Year wise PG students admitted (in the department inspected) during the last 5 years and available PG teachers.

Year	No. of PG students admitted		No. of PG Teachers available in the dept. (give names)
	Degree	Diploma	
2016			
2015			
2014			
2013			
2012			

24	Other PG courses run by the institution	Course Name	No. of seats	Department
		DNB		
		M.Sc.		
		Others (Superspecialities)		

25. Whether other medical superspecialty like Paediatric Surgery / Nephrology department exists in the institution Yes/No
(If yes give details)

Name of department	Beds/Units	When LOP for DM& M.Ch. seats granted & Number of seats	Available faculty (Names & Designation)

I have physically verified the beds, faculty and patients of above Super specialty departments and they have not been counted in Urology/Genitourinary Surgery. department inspection.

26. **Stipend paid to the PG students, year-wise:**

Year	Stipend paid in Govt. colleges by State Govt.	Stipend paid by the Institution*
Ist Year		
IInd Year		
IIIrd Year		

* **Stipend shall be paid by the institution as per Govt. rate shown above.**

27. **List of Departmental Faculty joining and leaving after last inspection:**

Designations	Number	Names	
		Joining faculty	Leaving faculty
Professor			
Associate Prof.			
Assistant Prof.			
SR/Tutor/Demons.			
Others			

28. **Faculty deficiency, if any**

Designation	Faculty available (number only)	Faculty required	Deficiency, if any
Professor			
Assoc Professor			
Asstt. Professor			
Sr. Residents			
Jr. Residents			
Tutor/ Demonstrator			
Any Other			

* **Faculty Attendance Sheet duly signed by concerned faculty must be enclosed.**

29. REMARKS OF ASSESSOR

- | |
|--|
| <ol style="list-style-type: none"> 1. please do not repeat information already provided 2. please do not make any recommendation regarding granting permission/recognition 3. if you have noticed or come across any irregularity during your assessment like fake or dummy faculty, fake or dummy patients, fudging of data of clinical material etc., please mention them here) |
|--|

PART – I
(Institutional Information)

1 Particulars of Director / Dean / Principal:

(Who so ever is Head of Institution)

Name: _____ Age: _____ (Date of Birth) _____

PG Degree	Subject	Year	Institution	University
<i>Recognised / Not Recognized</i>				

Teaching Experience

Designation	Institution	From	To	Total experience
Asstt Professor				
Assoc Professor/Reader				
Professor				
Any Other		Grand Total		

2. Central Library

- Total number of Books in library: _____
- Books pertaining to Urology/Genitourinary Surgery: _____
- Purchase of latest editions of books in last 3 years: - Urology/Genitourinary Surgery books
Total _____

- Journals:

Journals	Total	Urology/Genitourinary Surgery
Indian		
Foreign		

- Year / Month up to which latest Indian Journals available: _____
- Year / Month up to which latest Foreign Journals available: _____
- Internet / Med pub / Photocopy facility: available / not available
- Library opening times: _____
- Reading facility out of routine library hours: available / not available
(obtain list of books & journals duly signed by Dean)

3. Casualty:/ Emergency Department

Space	
Number of Beds	
No. of cases (Average daily OPD and Admissions):	
Emergency Lab in Casualty (round the clock):	available / not available
Emergency OT and Dressing Room	
Staff (Medical/Paramedical)	
Equipment available	

4 Blood Bank

(i)	Valid License(copy of certificate be annexed)	Yes / No	
(ii)	Blood component facility available	Yes / No	
(iii)	All Blood Units tested for Hepatitis C,B, HIV	Yes / No	
(iv)	Nature of Blood Storage facilities (as per specifications)	Yes / No	
(v)	Number of Blood Units available on inspection day		
(vi)	Average blood units consumed daily and on inspection day in the entire Hospital (give distribution in various specialties)	Average daily	On Inspection day

5. Central Research Lab:

- Whether it exists? Yes No
- Administrative control:
- Staff:
- Equipment:
- Workload:

6. Central Laboratory:

- Controlling Department:
- Working Hours:

Radiotherapy (Optional)	
Radiotherapy	
Teletherapy	
Brachy therapy	

- | | | |
|------------|---|---------------------------------|
| 7 | Central supply of Oxygen / Suction: | Available / Not available |
| 8. | Central Sterilization Department | Adequate / Not adequate |
| 9. | Laundry: | Manual/Mechanical/Outsourced: |
| 10. | Kitchen | Gas / Fire |
| 11. | Incinerator: Functional / Non functional | Capacity: Outsourced |
| 12. | Bio-waste disposal | Outsources / any other method |
| 13. | Generator facility | Available / Not available |
| 14. | Medical Record Section: | Computerized / Non computerized |
| | • ICD10 classification | Used / Not used |

15. Total number of OPD, IPD and Deaths in the Institution and concerned department during the last one year:

In the entire hospital		In the department of Urology/Genitourinary Surgery	
OPD		OPD	
IPD (Total No. of Patients admitted)		IPD (Total No. of Patients admitted)	
Deaths		Deaths	

16. Total Number of Births in the Hospital during the last one year:

Note: (1) The data be verified by checking the death/birth registration forms sent by the college/hospital to the Registrar, Deaths & Births (Photocopy of all such forms be provided.)

17. Recreational facilities: Available / Not available

Play grounds	Gymnasium
--------------	-----------

18	Hostel Accommodation	UG		PG		Interns	
		Boys	Girls	Boys	Girls	Boys	Girls
	No. of Rooms						
	No. of Students						
	Status of Cleanliness						

19. Residential accommodation for Staff / Paramedical staff Adequate / Inadequate

20. Ethical Committee (Constitution):

21. Medical Education Unit (Constitution)
(Specify number of meetings held annually & minutes thereof)

**PART – II
(DEPARTMENTAL INFORMATION)**

- 1 Department inspected :** Urology/Genitourinary Surgery
- 2 Date on which independent department of Urology/Genitourinary Surgery was created and started functioning**
(Attach copy of order from Govt/Competent Authorities)
- 3 Faculty details (From start of department till date)**

Name	Designation	PG/ Superspeciality Qualification in concerned subject (Year of Passing, University and College)	Appointment/Promotion orders (No.../Date... attach photocopy)	Salary Details including TDS deducted

4 Particulars of present HOD

Name: _____ Age: _____ (Date of Birth) _____

PG Degree and Superspecialty degree	Year of passing	Institution	University	Recognized/ Not Recognized
MD/Ms				
DM/M.Ch.				
Two years Special Training				

Teaching Experience (Give Experience in Urology/Genitourinary Surgery– not in General Surgery)

Designation	Institution	From	To	Total experience
Asstt Professor				
Assoc Professor/Reader				
Professor				
Any Other		Grand Total		

- 5 Whether Independent department of Urology/Genitourinary Surgery exists in the institution:**
Yes/No.....
(If yes.....Since When.....)
- 6 (a) Purpose of Present inspection:**
Grant of Permission/ Recognition/ Increase of seats /Renewal of recognition/Compliance Verification
- b) Date of last MCI inspection of the department:** _____
(Write Not Applicable for first MCI inspection)
- c) Purpose of Last Inspection:** _____
- d) Result of last Inspection:** _____
(Copy of MCI letter be attached)
- 7 Mode of selection (actual/proposed) of PG students.**

8 If course already started, yearwise number of PG students admitted and available PG teachers during the last 5 years:

Year	No. of PG students admitted		No. of PG Teachers available in the dept. (give names)
	Degree	Diploma	
2016			
2015			
2014			
2013			
2012			

9 General Departmental facilities:

- Total number of beds in the department :.....
- Number of Units in the department :.....
- Unit wise Teaching and Resident Staff (Annexed).....

Unit wise Teaching and Resident Staff:

Unit _____

Bed Strength _____ :

S. No.	Designation	Name with Date of Birth	Nature of employment Full time/part time/Hon.	PAN Number TDS deducted	PG AND SUPERSPECIALITY QUALIFICATION			Experience Date wise teaching experience with designation & Institution						Signature of Faculty Member
					Subject with Year of passing	Institution	University	Designation Mentioning subject	Institution	From	To	Total Period	* Benefit of publications given in promotion Yes/No, if yes List publications here (no annexures)	

- Note:**
- Unit wise teaching / Resident staff should be shown separately for each Unit in the Proforma.**
 - Use only the Format provided. DO NOT devise your own format otherwise the information will not be considered. Fill up all columns**
 - *Publications: Give only full articles in indexed Journals published during the period of promotion and list them here only. No Annexure will be seen.**
 - Incase of DNB qualification name of the institution/hospital from where DNB training was done and year of passing must be provided. Simply saying National Board of Examinations, New Delhi is not enough. Without these details DNB qualification holder will be summarily rejected.**
 - Experience of Defence services must be supported by certificate from competent authority of the office of DGAFM without which it will not be considered.**

I have verified the eligibility of all faculty members for the post they are holding (**based on experience certificates issued by competent authority of the place of working**). Their experience details in different Designations and unitwise distribution is given the faculty table above.

10 Has any of these faculty members including senior residents been considered in PG/UG inspection at any other college or any other subject in this college in the present academic session. If yes, give details..

Date of Inspection	Institution	Subject

11 List of Faculty joining and leaving after last inspection:

DESIGNATIONS	NUMBER	NAMES	
		JOINING FACULTY	LEAVING FACULTY
Professor			
Associate Prof.			
Assistant Prof.			
SR/Tutor/Demons.			
Others			

12 List of Non-teaching Staff in the department: -

S.No.	Name	Designation

13 Available Clinical Material: **(Give the data only for the department of Urology/Genitourinary Surgery)**

	On inspection day	Average of 3 random day
OPD attendance upto 2 p.m.
New admissions
Total Required Beds
Total Beds available 2 occupied at 10 a.m.
Bed Occupancy at 10 a.m. (%)
• Total number of surgeries.....
a) Total no of major operations
b) Total number of minor operations
• Types of Surgeries :		
Endourology		
• TURP.....
• TURBT.....
• OIU.....
• URSL.....
• PCNL.....
Open Surgeries
• Pyelolithotomy.....
• Ureterolithotomy
• Cystectomy
• Simple Nephrectomy.....
• Radical Nephrectomy.....
• Radical Cystectomy with Urinary diversion.....
• Total / partial Penectomy.....
• Hypospadias Corrective Surgery.....
• Urethroplasty.....
• Emergency Genitourinary Trauma Surgery.....
• Laparoscopic Surgery.....
• Lithotripsy (ESWL).....
• Genital and Pelvic Reconstruction.....

Signature of Dean

Signature of Assessor

- Kidney transplant.....
- USG guided Prostate biopsy.....
- USG guided kidney biopsy.....
- Emergency Genitourinary Trauma Surgery.....

14 List of equipment available in the department of Urology/Genitourinary Surgery
Equipments: List of important equipments available and their functional status

(list here only – No annexure to be attached)

a.	Cystoscope - Pediatric Adult					
b.	Nephroscope - Pediatric Adult					
c.	Ureteroscope - Pediatric Adult					
d.	C-arm					
e.	OIU Instruments					
f.	ESWL Machine					
g.	Urodynamic machine					
h.	Urethral sound – Pediatric Adult					
i.	Ureteric Ballon catheter – Pediatric Adult					
j.	Vasectomy instruments					
k.	Circumcision instruments- Pediatric Adult					
l.	Urethrotomes- Pediatric Adult					
m.	Kidney biopsy instruments					
n.	Kidney transplant instruments					
o.	Urodynamic Machine					

15 Year-wise available clinical materials (during previous 3 years) for department of Urology/Genitourinary Surgery

Parameters	Year 1	Year 2	Year 3
Total number of patients in OPD			
Total number of patients admitted (IPD)			
Investigative workload of the Department and its distribution <ul style="list-style-type: none"> • CT • MRI • IVP • USG • Cystoscopy • R.G.U. • Cystography • MCU • Urodynamic study 			
Average monthly number of special investigations in Urology/Genitourinary Surgery department			

Signature of Dean

Signature of Assessor

16 Any Intensive care service provided by the department:

17 Specialty clinics being run by the department and number of patients in each clinic

S.No.	Name of the Clinic	Days on which held	Timings	Average No. of cases attended	Name of Clinic In-charge
1	Female Urology				
2	Neurology Urology				
3	Pediatric Urology				
4	Uro-Oncology				
5.	Andrology				
6.	Renal Transplantation				
7.	Others				

18. Services provided by the Department.

S.No.	Services provided	Yes/No	If Yes – Weekly Workload
1.	Types of Surgeries : Endourology		
	a. TURP		
	b. TURBT		
	c. OIU		
	d. URSL		
	e. PCNL		
2.	Open Surgeries		
	a. Pyelolithotomy		
	b. Ureterolithotomy		
	c. Cystectomy		
	d. Simple Nephrectomy		
	e. Radical Nephrectomy		
	f. Radical Cystectomy with Urinary diversion		
	g. Total / partial Penectomy		
	h. Hypospadias Corrective Surgery		
	i. Urethroplasty		
	j. Emergency Genitourinary Trauma Surgery		
3.	Laparoscopic Surgery		
4.	Lithotripsy (ESWL)		
5.	Genital and Pelvic Reconstruction		
6.	Kidney transplant		
7.	USG guided Prostate biopsy		
8.	USG guided kidney biopsy		
9.	Emergency Genitourinary Trauma Surgery		
10.	Andrologic Surgery		
11.	Rehabilitation		
12.	Counseling		
13.	Others		

19 Space

S.No	Details	In OPD	In IPD
1	Patient		
2	Equipments		
3	Teaching Space		
4	Waiting area for patients		

Signature of Dean

Signature of Assessor

20 Office space:

Department Office		Office Space for Teaching Faculty	
Spacefor Clerk	Yes/No	HOD	
Staff (Steno /Clerk)	Yes/No	Professors	
Computer/ Typewriter	Yes/No	Associate Professors	
Storage space for files	Yes/No	Assistant Professor	
		Residents	

21. Clinico- Pathological conference
 Clinico-rediological meetings
 a) Urology/Genitourinary Surgery meetings(combined clinic)

Note : Verify from the maintained register of above said meetings.

22. Submission of data to national authorities if any -

23. Academic outcome based parameters

- a. Departmental Statistical meetings
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- b. Death Review
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- c. Clinical Seminars in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- d. Journal Clubs held in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- e. Case presentations held in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- f. Group discussions held in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- g. Guest lectures held in last 12 months
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available
- h. Workshops / Symposium
 (Dates, Subjects, Name & Designation of teachers, Attendance sheet) Number _____
 Available & Verified/
 Not available

24. Any other information.

Signature of Dean

Signature of Assessor

PART III**POSTGRADUATE EXAMINATION**
(Only at the time of recognition inspection)

1. Minimum prescribed period of training.
(Date of admission of the Regular Batch appearing in examination)
2. Minimum prescribed essential attendance.
3. Periodic performance appraisal done or not?
4. Whether the candidates appearing in the examination have submitted their thesis six months before appearing in examination as per PG Regulations.2000?
5. Whether the thesis submitted by the candidates appearing in the examination been accepted or not?
6. Whether the candidates appearing in the examination have (i) presented one poster (ii) read one paper at National/State conference and presented one research paper which has been published/accepted for publication/sent for publication during period of their postgraduate study period.
7. Details of examiners appointed by Examining University (Give details here, No Annexures).
8. Whether appointment of examiners, their eligibility & conduct of examination is as per prescribed MCI norms or not ?
9. Standard of Theory papers and that of Clinical / Practical Examination:
10. Year of 1st batch pass out (mention name of previous/existing University)

Degree Course -----

- Note: (i) Please do not appoint retired faculty as External Examiner
(ii) There should be two internal and two external examiners. If there are no two internal examiners available in the department then only appoint three external examiners.
(iii) Put NA for those columns not applicable.

Signature of Dean

Signature of Assessor