CURRICULUM



MASTERS IN UROLOGY (M.S) DEPARTMENT OF UROLOGY / NEPHROLOGY & LITHOTRIPSY

Peoples University of Medical & Health Sciences, Nawabshah, Sindh.





Five years M.S urology structure training of residency & table of specification

Associate professor& head of department Urology, lithotripsy & Dialysis PUMHS nawabshah

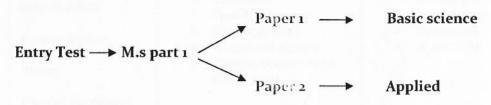




PEOPLES UNIVERSITY OF MEDICAL & HEALTH SCIENCES FOR WOMEN

THE TABLE OF SPECIFICATIOM, SYLLABI & STRUCTURED PROGRAMME FOR POSTGRADUATE STUDIES

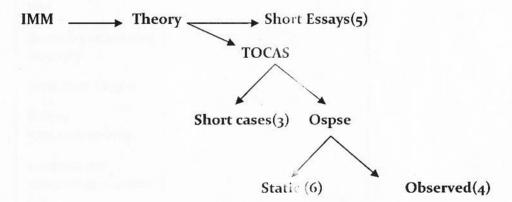
Total years of training → 5 years residency



Residency priod 5 years

After R₃ → IMM → R₄-5→ last six months rotation to SIUT

R₃ has to clear IMM



M.S Final

PAPER-I	100 singale best MCQs
PAPER-II	04 Long Essays Questions
PAPER-III	10 Short Essays Questions





PEOPLES UNIVERSITY OF MEDICAL & HEALTH SCIENCES FOR WOMEN FIVE YEARS SYLLABI & STRUCTURED TRAINING PROGRAMME FOR M.S UROLOGY

year	Topics	Open procedures	Endoscopic procedures	L'og book
R1	1)Urological examination	 ➤ Supra pubic cystostomy ➤ CVP line ➤ Cystolithotomy ➤ Abscess drainge 	> Assembling of instrument > Endourology > Cystoscopy	20%
	Initial evaluation	Assist renal surgery	> Assist TURP	
	History	Training of ultrasound KUB & TRUS		
	Physical examination			
	Urinalysis			
	Cystology of Urine, cystic fluid, prostate			
	Semen analysis (WHO standard)			
	Imaging of the urinary tract	*		
	Excretory (intravenous) urography			
	Ultrasound+ Doppler			
	Voiding cystourethrography			
	Antegrade and retrograde pyelography			
	Urethrography			
	Computed tomography		1-Mani-in	
	Megnetic resonance imaging			
	Angiography			
	Radionuclide studies (DTPA, DMSA, MAG3, Frusemide scan			
	2)urological & urogynea histrory			
	3)radio-daignosis of			





	urological diseases.	ERSITY OF MEDICAL & HEALTH SCIENCES FOR WOMEN	
	4) ABC of Heamodialysis.		
	5)Bio- chemical diagnosis of urological diseases.	•	
	6)ABC of diabetic & hypertensive nephropathy.		
	7) BPH		
	Epidemiology		
	Anatomy/ natural history		
	Clinical presentation/ scoring system		
	Radiological evaluation		
	Diagnostic tests UFM/ CYSTOMETRY		
	Medical treatment		
	Surgical treatment		
	Surgical treatment therapy		
	Open surgery		
R2	Stone diseases	 ➢ Open prostectomy ➢ Renal biopsy ➢ Renal stone surgery ➢ Bilateral retrogrado 	20%
	Epidemiology	open and close catheterization	
	Etiology and pathogenesis of Urolithiasis	➢ Urethral dilatation➢ PCN	
	Risk factors in formation of stone disease		
	Calcium/ oxalate		





	metabolism		
	Infectious/uric acid		•
	stone		
	Clinical presentation/	,	
	examination		w s li
	Laboratory investigation		
	/ metabolic Evaluation		
	Radiological		
	investigations		
	Treatment		
	Medical treatment		
	ESWL		
	Minimal invasive/		
	Endourological		
	treatment		
	Principle of stone		
	fragmentation		
	Open surgery		
	Follow up/ dietary		
	advise		
	Stone analysis		
	Basic principles of		
	chemo-		
	Radiotherapy in		
	urinary tract		
	tumours		
4	Uro-oncology		
	Renal cell carcinoma		
	Adernal tumours		
	Bladder TCC		
	CA prostate		
	Testicular tumour		





	Penile carcinoma Training to perform ESWL			
R3	Female urology Scope / Needs Urinary Incontinence Over Active Bladder Interstitial Cystitis Medical Treatment Surgical Treatment Urethral Stenosis / Bladder Outlet Obstruction Urological Issues in pregnancy Urological Fistulae Diagnostic Procedures Vesico-Vaginal Fistulae Uretero- Vaginal Fistulae Cystocele UFM + cystometry To deal the sticture clinic	 Assist uro-genital trauma Orchidectomy Hydrocel Varicocele low and high liagation Testicular biopsy Sextant prostatic biopsy Surgery of urolithiasis Assist AVF 	> Optical urethrotomy > Cystolitholapaxy > Supra pubic litholapaxy	20%
R4	Uro-Genital trauma Urinary fistulea Nepho cutaneous fistula	> Renalsurgery(tumour ,calculus,Nephrectomy) > AVF > Ochiopexy	> TURP > TURBT > All lower tract endourological procedures	20%



DEPARTMENT OF UROLOGY/NEPHROLOGY &



Uretio vag Androlo Peadiati Tumour followu	inal fistula gy ric urology clinic & p	>	Urethral sticture surgery VVF (assist) UVF (assist)		,	
I Nimber	diversions					
R5 Rules o percuta surgery Infertili To run clinic n Transp Immur Erectili Curren Issues pelvic syndro	faneous renal ity infertility nale/female lantation & nology e dysfunction at urological of chronic pain ome nary tract		Repair of all fistulea Urethral End to End anastomosis	A AAAAA	Upper tract endoscopy URS L/C Endopylotomy RIRS PCNL	20%





PEOPLES UNIVERSITY OF MEDICAL & HEALTH SCIENCES FOR WOMEN Table of specification for MS Urology

S,No	Topic	Percentage
01	Stone disease and Endo – Urology	
1.1	Epidemiology	15
1.2	Etiology and pathogenesis of Urolithiasis	
1.3	Risk factors in formation of stone disease	
1.4	Calcium/ oxalate metabolism	
1.5	Infectious/uric acid stone	
1.6	Clinical presentation/ examination	
1.6.1	Laboratory investigation / metabolic Evaluation	
1.6.2	Radiological investigations	
1.6.3	Treatment	
1.6.4	Medical treatment	
1.6.5	ESWL	
1.7	Minimal invasive/ Endourological treatment	
1.8	Principle of stone fragmentation	
1.9	Open surgery	
1.10	Follow up/ dietary advise	
1.11	Stone analysis	
02	Uro-Oncology	
2.1	Adrenal carcinomal adenoma	
2.2	Clinical Presentation	
2.3	Diagnostic Evaluation	15
2.4	Medical Treatment	
2.5	Surgical Treatment	
2.6	Follow up	





	PEOPLES UNIVERSITY OF MEDICAL & HEALTH SCIENCES FOR W	OIVICIV
2.7	Renal cell carcinoma	
2.8	Epidemiology/ Genetics / Classification	
2.9	Etiology / Natural History	
2.10	Clinical Presentation	
2.11	Clinical Examination	
2.12	Diagnostic Evaluation	
2.13	Laboratory Investigation	
2.14	Radiological Investigations	
2.15	Paraneoplastic syndrome	
2.16	Treatment	
2.17	Surgical treatment	
2.18	lmmunotherapy	
2.19	Angiogenesis inhibitor	
2.20	Palliative treatment	
2.21	Follow up	
03	Benign prostatic Hyperplasia	10
3.1	Epidemiology	
32	Anatomy/ natural history	
3.3	Clinical presentation/ scoring system	
3.4	Radiological evaluation	
3.5	Diagnostic tests UFM/ CYSTOMETRY	
3.6	Medical treatment	
3.7	Surgical treatment	
3.8	Surgical treatment therapy	
3.9	Open surgery	
04	Upper tract transitional cell carcinoma	
4.1	Epidemiology/ incidence	





4.3	Clinical presentation	
4.4	Laboratory radiology /investigation	
4.5	Management	
4.6	Endoscopic / minimal invasive treatment	
4.7	Open Surgery	
	Follow up	
05	Bladder cancer	
5.1	Epidemiology/ genetics	
5.2	Classification / types	
5.3	Clinical presentation	
5,4	Examination	
5.5	Diagnostic evaluation	
5.6	Laboratory investigation	
5.7	Radiological investigation	
5.8	Staging of disease	
5.9	Management	
5.10	Management of superficial disease	
5.11	Management of muscle invasive disease	
5.12	Management of locally advance disease	
5.13	Management of metastatic disease	
5.14	Surgical treatment	
5.15	Chemotherapy/ immunotherapy	
5.16	Radio therapy	
5.17	Bladder re-construction / urinary / diversion	
5.18	Follow up	
5.19		
06	Female Urology	10
6.1		





	PEOPLES UNIVERSITY OF MEDICAL & HEALTH SCIENCES FO	OK WOMEN
6.2	Scope / Needs	
6.3	Urinary Incontinence	
6.4	Over Active Bladder	
6.5	Interstitial Cystitis	•
6.6	Medical Treatment	
6.7	Surgical Treatment	
6.8	Urethral Stenosis / Bladder Outlet Obstruction	
6.9	Urological Issues in pregnancy	
6.10	Urological Fistulae	
6.11	Diagnostic Procedures	
6.12	Vesico-Vaginal Fistulae	
6.13	Uretero- Vaginal Fistulae	
6.14	Cystocele	
07	Prostate Cancer	
6.1	Epidemiology/ Genetics	
6.2	PSA	
6.3	Clinical Presentation	
6.4	Clinical Examination including DRE	
6.5	Diagnostic Evaluation	
6.6	Laboratory investigation	
6.7	Radiological investigations	
6.8	Radionucleide Studies	
6.9	Prostatic Biopsy and Staging of disease	
6.10	TNM classification	
6.11	Management of Locally confined disease	
6,12	Surgical Treatment	
6.13	Hormonal Treatment	
6.14		€





6.15	PEOPLES UNIVERSITY OF MEDICAL & HEALTH SCIENCES FOR WOI Radiotherapy	VILIV
6.16	Bracy Therapy	
6.17	Management of Metastatic disease	
6.18	Radiotherapy	
6.19	Chemotherapy	
6.20	Hormonal therapy	
6.21	Surgical Castraion	
6.22	Supportive Treatment	
08	Testicular Cancer	
8.1	Epidemiology and Genetics	
8.2	Tumor markers	
8.3	Radiological investigations	
8.4	Staging and grading of disease	
8.5	Germ cell tumors in children and adults including seminoma and non-	
8.6	seminoma	
	Non- Germ cell tumor	
8.7	Sex cord stromal tumor of the testis and other testicular adnexal structures and seminal vesicles	
8.8	Surgical Treatment	
8.9	Chemotherapy	
8.10	Radiotherapy	
8.11		
09	Penile Cancer	
9.1	Classification	
9.2	Management of primary tumor	
9.3	Management of regional disease	
9.4	Management of recurrent disease	
9.5	Chemotherapy	
9.6		





	Radiotherapy	
10	Trauma of Genito urinary tract	10
10.1	Trauma of the Kidney and renal vessels	
10.2	Ureteric Trauma	
10.3	Bladder and Urethral injuries	
10.4	Trauma of the external genitalia	
10.5	Thermal chemical and electrical injuries of the external genitalia and uretha	
11	Andrology	02
11.1	Pathophysiology of male reproduction	
11.2	Aetiology and evolution of male infertility	
11.3	Medical Management of testicular dysfunction	
11.4	Surgical Treatment and investigation in infertility	
11.5	Management of ejaculatory disorders	
11.5	Pathophysiology of male sexual dysfunction	
11.7	Actiology and Evaluation of the impotent male	
11.3	Medical and Surgical Management of impotence	
11.9	Priapism	
11.10	Payronie's disease	
11.1 1	Fournier's gangrene	
11.12	Hydrocole	
15.13	Validodele	
	Gysts of festicular adnexa	
	Paechatric uncludy	35





12.4	Renal vascular anomalies
12.5	Caliceal, indundibular and pelvic anomalies
12.6	Pelvic -ureteric junction obstruction
12.7	Vesicoureteric reflux
12.8	Aetiology, Classification, Pathology, Pathophysiology
12.9	Diagnostic Procedures
12.10	Surgical vs conservative treatment
12.11	Reflux nephropathy
	Megaureter
12.12	Classification
12.13	Diagnostic Procedures
12.14	Treatment modalities
12.15	Ureterocele
12.16	Ectopic Ureter
12.17	Anomalies of the bladder
12.18	Bladder exstrophy, cloacal exstrophy, Epispias
12.19	Urachal anomalies
12.20	Imperforate anus, persistent cloaca, urogenital sinus, outlet obstruction
12.21	Bladder duplication and congenital diverticula
12.22	Anomalies of the Urethra and penis
12.23	Bladder neck obstruction
12.24	Posterior urethral valves
12.25	Megalourethra
12.26	Distal urethral stenosis in girls
12.27	Urethral duplication and congenital diverticula
12.28	Cystic Anomalies of Cowper's glands
12.29	Hypospadias
12.30	Epispadias





12.31	Congenital curvature of the penis/ shor urethra	
12.32	Concealed penis/ webbed penis	
12.33	Phimosis	
12.34	Anomalies of the testes	3
12.35	Anorchidism, cryptorchidism and ectopy	*
12.36	Hydrocele in the infant, inguinal hernia	2
12.37	Testicular torsion / spermatic cord torsion	
12.38	Disorders of sexual differentiation	
12.39	Differential diagnosis and evaluation of sexual ambiguity	
12.40	Management of intersexuality	
12.41	Anomalies of epididymis, vas and seminal vesicles	
12.42	Prune – Belly syndrome	
12.43	Spina bifida management of urinary problems	
12.44	Oncology see 16	
13	History Anatomy Physiology of urogenital system	02
13 13.1	History Anatomy Physiology of urogenital system	02
		02
13.1	History of Urology	02
13.1 13.2	History of Urology Anatomy of and surgical approach to the urogenital system	02
13.1 13.2 13.3	History of Urology Anatomy of and surgical approach to the urogenital system Retroperitoneum	02
13.1 13.2 13.3 13.4	History of Urology Anatomy of and surgical approach to the urogenital system Retroperitoneum Adrenal glands	02
13.1 13.2 13.3 13.4 13.5	History of Urology Anatomy of and surgical approach to the urogenital system Retroperitoneum Adrenal glands Renal Vessels	02
13.1 13.2 13.3 13.4 13.5 13.6	History of Urology Anatomy of and surgical approach to the urogenital system Retroperitoneum Adrenal glands Renal Vessels Kidney and Ureter	02
13.1 13.2 13.3 13.4 13.5 13.6 13.7	History of Urology Anatomy of and surgical approach to the urogenital system Retroperitoneum Adrenal glands Renal Vessels Kidney and Ureter Bladder and Urethra	02





13.11	PEOPLES UNIVERSITY OF MEDICAL & HEALTH SCIENCES FOR W Perineum	OMEN
13.12	Scrotum, testes, epididymis, and spermatic cord	
13.13	Physiology of adrenal glands and/ kidneys/ male reproductive system	
13.14	Endocrinology of the adrenal glands	
	Normal renal Physiology (including rennin-angiostensin-aldosterone	**
13.15	system	
13.16	Physiology and Pharmacology of renal pelvis and ureter	
13.17	Physiology of urinary Bladder and urethra (micturition and continence)	
13.18	Physiology of male reproduction	
13.19	Hypothalamic – pituitary function	
	Spermatogensis and endocrine function of the testes	
13.20	Epididymis , vas deferens, prostate and seminal vesicles	
13.21	Erection and ejucalation	
14	Clinical Examination and diagnostic procedure	04
14.1	Initial evaluation	
14.2	History	
14.3	Physical examination	
14.4	Urinalysis	
14.5	Cystology of Urine, cystic fluid, prostate	
14.6	Semen analysis (WHO standard)	
14.7	Imaging of the urinary tract	
14.8	Excretory (intravenous) urography	
14.9	Ultrasound+ Doppler	
14.10	Voiding cystourethrography	
14.11	Antegrade and retrograde pyelography	
14.12	Urethrography	
14.13	Computed tomography	
14.14	Megnetic resonance imaging	





	PEOPLES UNIVERSITY OF MEDICAL & HEALTH SCIENCES FOR WE	DIVIEIA
14.15	Angiography	
14.16	Radionuclide studies (DTPA, DMSA, MAG3, Frusemide scan	
14.17	Diognostic urological instrumention	
14.18	Catheterisation and urethral calibration	,
14.19	Endoscopic procedures	
14.20	Urethrocystocopy	
14.21	Ureterorenoscopy	
14.22	Pyeloscopy	
14.23	Biospy of Kidney, Prostate, bladder, Testis, Lymph nodes etc	
14.24	Urodynamic studies of upper and lower urinary tract	
15	Transplantation and immunotherapy	07
15.1	Classification, Pathology and Pathophysiology, diagnosis and principles	
15.2	of treatment of renal vascular lesions and renovascular hypertension	
15.3	Renal Transplantation, immunology, surgery and management of complications	
16	Urological Infections	03
16.1	Microbiology of genitourinary infections, including the role of bacterial adherence in urinary tract infections	
16,2	Pathogenesis and predisposing factors	
16.3	Pathology and pathophysiology, including immunobiological response	
16.4	Localization of the site of urinary tract infection, including imaging techniques in UTI	
	Diagnostic procedures and treatment in:	
16.5	Nosocomial and catheter acquired infections	
16.7	Urinary Tract infection in infants and childrens	
16.8	Urinary Tract infection in (pregnant) women	
16.9	Asymptomatic bacteriuria	
16.9 16.10	Asymptomatic bacteriuria Septicaemia and Septic shock	





	Surgery of Retroperitoneal fibrosis	
18.6	Retroperitoneum	
18.5	Indication and contra indication, complications, follow up and evaluation in the following surgical procedures:	
18.4	Principles of urological surgical procedures including laparoscopy	
18.3	Principles of surgical urological instruments and their technology	
18.2	Principles of anesthesia in urology	
18.1	Pre-peri and post-operative care	
18	Urological Surgeries	00
	Problems and complications related to urinary diversion and undiversion	08
17.5	Continent / incontinent diversion	
17.4	Undiversion	
17.3	Permanent diversion	
17.2	Methods, indication and contra indication of temporary diversion	
17.1	Urinary Diversion	
17		05
16.21		
16.20	Fungal Infection	
16.19	Parasitic disease	
16.18	Sexually transmitted disease	
16.17	Seminal vesiculitis	
16.16	Epididymitis and orchitis	
16.15	Urephritis	
16.14	Nonbacterial Prostatis and Prostatodynia	
16.13	Prostatis (acute and chronic)	





18.7	Surgery of Retroperitoneal tumours	LIV
18.8	(Nerve spring) Retroperitoneal lymph node dissection	
18.9	Adrenals	
18.10	Surgery of adrenal tumours	
18.11	Renal vessels and transplantation	
18.12	Surgery of renal vessels(arteries, veins and lymphatics)	
18.13	and for renovascular hypertension	
	Renal transplantation	
18.14	Kidney	
18.15	Principles of surgical procedures	
18.16	Nephrectomy(simple, partial, radical)	
18.17	Nephroureterectomy	
18.18	Operations of renal cysts	
18.19	Open Nephrectomy	
18.20	Surgery for renal calculous disease	
18.21	Surgical management of pelvi-ureteric junction obstruction (pyeloplasty and calicoplasty)	
18.22	Surgery for renal trauma	
18.23	Proutaneous and endoscopic procedures (for drainage, treatment of renal cysts, urolithiasis, caliceal or pelvi-ureteric junction obstruction and calicopelvic tumours)	
18.24	Ureter	
	Implantation of ureter in bladder	
	Implantation with psoas hitch, bladder flap (boari)	
18.25	Surgical management of megaureter, reflux and ureterocele	
18.26	Surgery for extrinsic and intrinsic ureteric stenosis	
18.27		
18.28	Surgery for ureteric lithiasis	
18.29	Surgery for ureteric trauma	
18.30	Ureterostomy cutaneous Ureterostomy and transurepero Ureterostomy	





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18.31	Ureteroplasty and ureteric substation	
18.32	Ureterectomy	
18.33	Ureterointestinal diversion	
18.34	Ureterosigmoidostomy	۵
18.35	Ureterocutaneous diversion	
18.36	Continent urinary diversion	
18.37	Undiversion	
18.38	Endoscopic and Proutaneous procedures (for drainage, treatment ureteric	
18.39	lithiasis ureteric stenosis and obstructions, reflux and ureterocele as well as ureteric tumours)	
18.40	Bladder	
	Cystostomy, cutaneous vesicostomy	
	Surgery for rupture of bladder	
18.41	Partial, total and radical cystectomy	
18.42	Surgery for bladder diverticula	
18.43	Surgery for bladder fistulae	
18.44	Pelvic lymph nodes dissection	
18.45	Use of intestinal segments	
18.46	Augmentation cystoplasty	
18.47	Continent urinary diversion	
18.48	urinary undiversion	
18.49	Surgery for bladder exstrophy	
18.50	Endoscopic and Proutaneous procedures (for drainage, treatment of	
18.51	bladder tumours, stones and diverticula)	
18.52	Female bladder neck and urethra	
18.53	Urethrotomy and urethroplasty	
	Surgical treatment of urethral diverticulum	
18.54	Surgical treatment of urethrovaginal fistulae	
18.55	treatment of cystocele	





40 CC	Camiles weather leads:	
18.56	Cervico- urethroplasty	,
18.57	Urethral reconstruction	
18.58	Suspension and sling type procedures for incontinence	
18.59	Artificial spthincter prosthesis	
18.60	Urethrectomy	
18.61	Endoscopic procedure treatment of obstruction incontinence, tumours, male bladder neck and prostate	
18.62	Open Surgery of bladder neck, including Y-V plasty	
18.63	Treatment of fistulae	
18.64	Open prostatectomy for BPH	
18.65	Radical prostatectomy + lymph node dissection	
18.66	Perineal prostatectomy	
18.67	Surgery for male incontinence	
18.68	Endoscopic procedure	
18.69	Male Urethra	
18.70	Surgery for meatal stenosis	
18.71	Urethrotomy, Urethrostomy	
18.72	Surgery for urethral fistula	
18.73	Surgery for urethral rupure	
18.74	Surgery for urethral strictures	
18.75	Diverticulectomy	
18.76	Surgery for hypospadias and Epispadias	
18.77	Incontinence in male and female	
18.78	Suspension type procedures	
18.79	Sling procedures	
18.80	Artificial spthincter prosthesis	
18.81	Bladder neck surgery	
18.82	Transurethral surgery	





18.83	TURP	
18.84	TURBT	
18.85	Optical urethrotomy	
18.86	Cystolitholapaxy, Cystolithotripsy	
18.87	Transurethral management of ureteric calculi	
18.88	Intravesical chemotherapy	
18.89	Transurethral ureteroscopy	
18.90	Testis	
18.91	Radical orchidectomy	
18.92	Subcapsular orchidectomy	
18.93	Orchidopexy	
18.94	Surgical management of intra-abdominal testis	
18.95	Surgery of hydrocele	
18.96	Surgery for testicular trauma	
18.97	Testicular prosthesis	
18.98	Surgery for varicocele	
18.99	Epididymis and vas deferens	
18.100	Epididymectomy	
18.10 1	Surgery for epididymal cyst	
18.102	Vesico-epididymostomy	
18.103	Vasectomy and Vasectomy reversal	
18.104	Penis	
18.105	Circumcision	
18.106	Surgery for penile trauma	
18.107	Management of priapism	
18.108	Management of penile chordea	
18,109	Surgery for peyronie's disease	
18.110	Management of BXO	





18.111	Penile prothesis	VVOIVIEIV
18.112	Penile Reconstruction	
18.113	Intersex and transsexual surgery	
18.114	Treatment of surgical complications	3
18.115		*
18.116		
18.117		
19	Special non-Surgical Technique	02
19.1	Catheterisation dilataition	1
19.2	Fulgration and electrocoagulation	
19.3	Laser (specific use in urology)	
19.4	Hyperthermia thermotherapy	
19.5	Cryo procedures/ HIFU	
19.6	ESWL	
20	Laparoscopy in urology	02
21	Pathophysiology Genitourinary tract	02
21.1	Pathophysiology of obstractive uropathy	
21.2	Effects of complete obstruction on renal function	
21.3	Effects of partial obstruction on renal function	
21.4	Renal metabolic changes in hydronephrosis	
21.5	Compensatory renal growth	
21.6	Supravesical obstructive disorders	
21.7	Pathophysiology of chronic pyelonephritis/ reflux_nephropathy	
21.8	Pathophysiology of ureter	
21.9	Lower urinary tract dysfunction	
21.10	Aetiology, classification, Pathophysiology, diagnostic procedures,	





		100
21.16		
21.15	Dysfunctional voiding	
21.14	Neuropathic bladder	,
21.13	Nocturnal enuresis	
21.12	Urinary incontinence	
21.11	management and treatment of :	<u> </u>