

## NAAC Criterion 4: Infrastructure and Learning Resources

### 4.2 Clinical, Equipment and Laboratory Learning Resources

#### 4.2.1: Teaching Hospital, equipment, clinical teaching-learning and laboratory facilities are as stipulated by the respective Regulatory Bodies





# PES Institute of Medical Sciences & Research

Kuppam- 517 425, Chittoor Dist., Andhra Pradesh

Tel: 08570 - 277999, 277799, 277666

Email: [principal@pesimsr.pes.edu](mailto:principal@pesimsr.pes.edu) Web: [www.pesimsr.pes.edu](http://www.pesimsr.pes.edu)

**The list of facilities available for patient care,  
teaching-learning and research**



4.2.1

**PESIMSR, KUPPAM****DEPARTMENT OF RADIO-DIAGNOSIS**

Machine	Strength	Fixed	Mobile
MRI	GE Signa explorer 1.5 T	1	-
Computed Tomography	GE 16 SLICE bright speed elite	1	-
Mammography	Allengers 100 mA MAM venus	1	-
USG - I	SAMSUNG HS 70 A	1	-
USG - II	VOLUSION S8 BT-18	1	-
USG - III	SAMSUNG HS 70 A	1	-
USG - IV	Philips HD – 11 Color Doppler & 3D/4D	1	-
USG - SONOSITE 6600 (Portable)	SONOSITE HFL38X Q3KIYOM	-	2
USG – GE (OBG)	GE LOGIQV5 Color Doppler	-	1
USG –Philips 15 (Cardiology)	Philips HD 15 UJ21320231 Color Doppler	1	-
USG –Samsung (Cardiology)	HM 70	-	1
X-ray - Fluoroscopy with Static units	Allengers 1000 mA IITV MARS 80 Allengers 800 mA IITV MARS 50+ Siemens – 500 mA IITV Heliphos D	1 1 1	-
X-ray - Static Units	Fuji 600mA FDR Smart F Simens – 600 mA polyskop 5/Heliophus D Siemens – 300mA Multiphos D	1 1 1	-
Portable X-ray	Siemens 100 mA	-	1
Portable X-ray	Picks 100 mA	-	1
Portable X-ray	ALLENGERS 100 mA	-	4
Portable X-ray	Siemens 120 mA	-	1
X-Ray C. Arm	Allengers HR 59R Allengers HR 49 Siemens Multi Mobile 5C	1 1 1	-
DSA	GE Innova-2100	1	-
Ortho Pantomography (OPG)	Soredex Cranex Novus e	1	-
Dental (Intraoral)	Ergon-X70 AC Evolution X 3000	1 1	- -

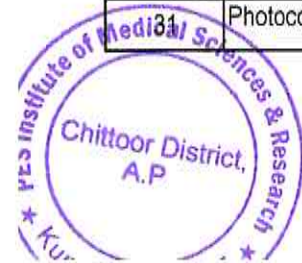


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BIOCHEMISTRY

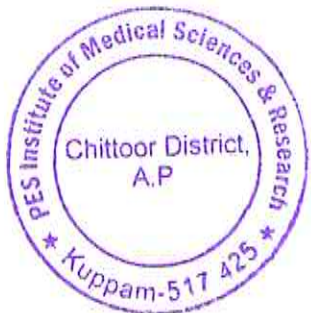
S.No.	NAME OF THE ITEMS	No. Required
1	Analytical Balance : upto 200g/1gm increment	2
2	Urinometers calibrated (Mercury based instruments to be replaced with other alternatives)	20
3	Hot air oven (More than 200 litres)	2
4	Digital Colorimeters	5
5	Student Microscopes	5
6	Glucometer with strips ( For POCT )	2
7	Thermometer 0 – 250 degree Celsius (Mercury based instruments to be replaced with suitable alternatives)	5
8	Semi autoanalyser	2
9	Boiling Water baths	2
10	Constant temperature water bath Tank Capacity: (Temperature range 5 to 80° Celsius)	1
11	Laboratory Reagent Refrigerators, capacity > 200 litres	3
12	Complete Chromatographic Unit for paper & TLC	2 each
13	Centrifuge clinical for ≥ 8 tubes	2
14	pH meters of wide range digital	5
15	Fixed volume pipettes -- 1ml,0.5ml,0.2ml,0.1ml and 0.02ml	5 (of each volume)
16	Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)	1 each
17	Densitometer with computer	1
18	Bottle dispensers	20
19	All glass distillation apparatus	1
20	Vortex mixers	2
21	Incubator 37°C	2
22	Variable and fixed volume micro auto pipettes	As required
23	Glass ware & accessories	As required
24	Fume cupboard	1
25	Digital Analytical Balance	1
26	Balance Micro	1
27	Spectrophotometer	1
28	ELISA (Demonstration)	1
29	Laptop	1
30	Desktop Computer, with Printer	2
	Photocopier and Scanner	1



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BIOCHEMISTRY

S.No.	NAME OF THE ITEMS	No. Required
32	Multimedia Projector with screen	2



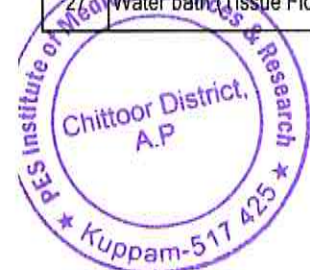
  
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PATHOLOGY

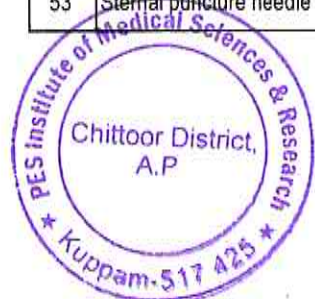
BASIC EQUIPMENTS

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>General</b>	
1	Desktop Computers with High Speed Internet, Laser Black & White Heavy duty Laser Printers, Color Inkjet Printers, Scanners, Photocopy (Xerox) Machines, Telephone with STD facility, Fax Machine etc. Every faculty & Resident must have separate Desktop/Laptop with high speed Internet facility. Office table small and big, office chairs; museum almirahs; study table, staff room, and library almirahs, stock almirahs, store room racks, lockers with coat hangers and drawers as required. Laboratory benches with cupboards and rack for reagent bottles, water, gas and electric points, operation tables etc. as necessary.	As required
(B)	<b>Morbid Histology and Morbid Anatomy</b>	
2	Specimen Identification Solutions	1
3	Weighing machine for cadavers (300 Kg.)	1
4	Weighing machine for cadavers (300 Kg.)	2
5	Automated Rotary Microtome	1
6	Cryostat	1
7	Hot plate	2
8	Paraffin embedding bath	2
9	Heated Paraffin Embedding Module	2
10	Cold Plate for Modular Tissue Embedding System	1
11	Automated Tissue Processor –Histokinette	2
12	Autoclave	2
13	Ultrapure water solutions - Distilled water plant	1
14	Water bath	1
15	Centrifuge machine	5
16	Cabinet for slides	As required
17	Autopsy tables	Common with Forensic Dept.
18	Digital SLR at least 20 megapixel with micro, macro, wide angle zoom lenses, Flash and other accessories	1
19	Digital Automatic camera > 5 megapixel	1
20	Fully Automated high throughput Multi-Stainer Workstation	1
21	Fully Automated Embedding System (Heated embedding module & cold plate)	1
22	Fully Automated Flexible Coverslipping Workstation	1
23	Standalone paraffin dispensing module cold plate holding more than 100 cassettes	1
24	Stand alone cold plate	1
25	Troughs for staining	As required
26	Coplin jars	As required
27	Water bath (Tissue Floatation)	As required



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PATHOLOGY		
BASIC EQUIPMENTS		
S.No.	NAME OF THE ITEMS	No. Required
28	Single Pan Digital Balance, Chemical	2
29	Balance, chemical with weights	2
	Microscopes	
30	For Students – LED Binocular with Scanner, 10X, 40X, & Oil immersion lenses and inbuilt Battery backup power source	60
31	<b>For Diagnostic &amp; Research Work</b> - Trinocular head Microscope with Bright field, Dark field, Fluorescent & Polarizing Facility, high end Apochromatic lenses with Camera with HDMI Multi output camera Minimum 5MP with Projector & Ultra HD TV > 52 inches & Screen including Software Capable of Brightfield& Immunofluorescence Photography with connectivity to projector & LED TV (At least 55 inches Ultra HD)	1
32	<b>For every Professor, Associate &amp; Assistant Professor</b> : Binocular Microscopes with High end Semiapochromatic Optics of International standard.	As required
33	<b>For every Tutor</b> – Binocular Microscope with suitable high end lenses.	As required
34	<b>Penta Head Microscope with High end Optics</b> with HDMI Multi output Photographic camera (> 5 MP) including Software	1
35	<b>Deca Head Microscope with High end Optics</b> with HDMI Multi output Photographic camera (> 5 MP) including Software	1
36	<b>Grossing Station</b> - Stainless steel, with Control panel, air filtration system, Track mounted adjustable computer arm with articulation, LED lights that are color and intensity, Dedicated USB ports for camera control and data transfer adjustable, Integrated pathology camera system, Instrument Set (High quality) Height Adjustable Stainless Steel Chairs With Split AC of appropriate capacity.	1
37	Fully Automated Immuno-histo-chemistry Setup with Continuous supply of Important Antibodies, Lymphoma Panel etc.	1
38	Automatic High Speed Slide Scanner for converting Slides in Digital Format with software and Database Management with backup for Data Storage	1
(C)	<b>Hematology Lab:</b>	
39	Five part Fully Automated Cell Counter	1
40	Three Part Fully Automated Cell Counter	1
41	Coagulometer (Fully automated)	1
42	Magnifying lens	3
43	Blood pressure instrument	5
44	Laboratory Counter	As required
45	Laboratory stirrer	As required
46	Automatic timer	5
47	Balance for weighing organs	1
48	Saws, wire for cutting bones	As required
49	Slide boxes for 100 slides for students	200
50	Drill for boring glass	As required
51	X-ray viewing box (LED)	2
52	Sternal puncture needle adult size	As required
53	Sternal puncture needle child size	As required



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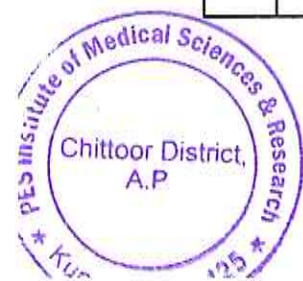
PATHOLOGY		
BASIC EQUIPMENTS		
S.No.	NAME OF THE ITEMS	No. Required
54	Liver Biopsy needle	As required
55	Stop watch reading at 1/5 second.	5
56	pH Meter electric	5
57	Electrophoresis Set Up	1
58	LED Wireless Projector	3
59	Museum jars.	As required
60	Surgical instruments.	5 Sets
61	Glassware, stains, chemicals reagents etc. for histological work.	As required
(D)	<b>Clinical Laboratory:</b>	
62	Five Part Hematology Analyzer	1
63	Three Part Hematology Analyzer	2
64	Automatic Urine Analyzer	2
65	Binocular Microscopes with high end optics including 100X & LED Fluorescence for each Faculty/ resident working in lab plus 2 microscopes for technicians.	As Mentioned
66	Sp. Gravity Measure	2
67	PH meter	2
68	Incubator	2
69	Haemacytometers with red and white pipettes	90
70	Syringes disposable	As required
71	Staining jars for slides.	As required
72	Automatic Hematology Slide Stainers.	As required
73	Urinometers(Mercury based instruments to be replaced with other alternatives)	As required
74	Centrifuge tubes graduated.	As required
75	Graduated cylinders for various capacities ranging from 100 cc to 1000 cc.	As required
76	Pipettes of various sizes with disposal tips.	As required
77	Reagent bottles	As required
78	Dropping bottles	As required
79	Reagents	As required
80	Balances –Digital Single Pan Sensitive Chemical balance	As required
(E)	<b>Specimens:</b>	
81	Mounted Specimens	300
82	Wet Specimens	150



  
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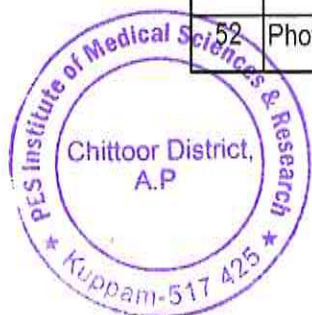
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MICROBIOLOGY		
S.No.	NAME OF THE ITEMS	No. Required
(A)	General	
1	Anaerobic apparatus	2
2	Autoclave	3
3	Balance Electronic Digital	2
4	Biosafety Cabinet Type - 2A	3
5	BOD Incubator	1
6	Centrifuge	4
7	CO2 Incubator/Candle Jar	2
8	Computer Unit	3
9	Deep Freeze -20° C & Deep Freezer	1 each
10	Distilled water Plant	1
11	Elisa Reader	2
12	Elisa Washer	2
13	Hot Air Oven	2
14	Incubator	3
15	Lab Refrigerator (minimum 400 litres)	4
16	Laminar flow	1
17	Micrometer eye pieces	2
18	Micrometer stage	2
19	Microscope Binocular (Students)	90
20	Microscope Binocular	Every Faculty
21	Microscope with universal condenser containing oil immersion, Bright field, Phase Contrast & Dark ground	1
22	Multimedia Projector	2
23	PH determination apparatus	2
24	Serum inspissators	1
25	VDRL shaker	2



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MICROBIOLOGY		
S.No.	NAME OF THE ITEMS	No. Required
26	Vortex Mixer	2
27	Water bath with variable temperature	2
28	Oil-immersion lens for student microscope	50
29	Automated Blood Culture System	1
30	Colony Counter	1
<b>(B)</b>	<b>Consumables for Culture and Serological Diagnosis</b>	
31	Antibiotic Discs for Antibiotic susceptibility testing	As required
32	Antibiotic zone scale	As required
33	Antisera-Salmonella	As required
34	Antisera-Shigelladysenteriae	As required
35	Antisera-Shigella flexneri	As required
36	Antisera-Shigella sonnei	As required
37	Antisera-Vibrio cholerae	As required
38	ATCC strain - Enterococcus faecalis 29213	As required
39	ATCC strain - E.coli 25922	As required
40	ATCC strain - E.coli 35218	As required
41	ATCC strain - Pseudomonas aeruginosa 27853	As required
42	ATCC strain - Staphylococcus aureus 25923	As required
43	ATCC strain - Staphylococcus aureus 29213	As required
44	Bottles for blood culture	As required
45	Micropipettes – Multi channel & Single channel	As required
46	Materials for preparation of various Culture Media	As required
47	Materials required for various Microbiological Stains	As required
48	Digital Thermometers of different temperatures	As required
49	Various Kits for Serological diagnostics	As required
50	Laptop	1
51	Desktop Computer, with Printer	2
52	Photocopier and Scanner	1



  
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MICROBIOLOGY		
S.No.	NAME OF THE ITEMS	No. Required
	<b>Note:</b> All equipment must be calibrated and maintained	



  
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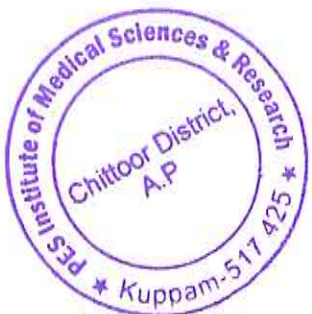
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**PHARMACOLOGY**

S.No.	NAME OF THE ITEM	No. Required
(A)	<b>I. Clinical Pharmacy</b>	
1	Special Drug Delivery systems like Metered Dose Inhalers, Spacers, Rotahalers, Nasal, sprays, Transdermal patches, Insulin infusion pumps, Insulin pen etc.	15 sets
2	Samples of dosage formulations of various types including rational and irrational FDC, Essential medicines	15 sets
3	Manikins for demonstration of intravenous injection, enema, local, intramuscular injections, intracardiac injection and other routes of drug administration	15 sets
(B)	<b>II. Computer Assisted Learning Laboratory</b>	
4	Minimum 1 computer per 10 students (Maybe shared with a similar facility in the institution) Must have computers with standard configuration and connected to the internet, (Preferably broadband) along with an AV aids (Multimedia Projector and Screen). The PC should be installed with CAL programmes and other software for teaching experimental pharmacology. The students must have access to the National Essential Drug Lists, Standard Treatment Guidelines, Banned Drugs List of the CDSCO, PVPI, WHO, Price Controlled Drugs List, Antibiotic Guidelines, Hospital formulary, adverse drug reactions, and other resource material which the student can use for learning the principles of rational prescribing.	Minimum 15 computers
(C)	<b>III. Experimental Pharmacology</b>	
5	For UG course, the facilities and equipment in the experimental lab can be shared with the Physiology department. The experiments included in the curriculum should be demonstrated through charts/photographs/models and videos.	
(D)	<b>IV. Clinical Pharmacology</b>	
6	Stop watch	As required
7	Digital Sphygmomanometer	As required
8	Critical Flicker Fusion Apparatus	As required
9	Pupillometer	As required
10	Chart, Models and videos to illustrate the pharmacodynamic and pharmacokinetic properties of drugs, adverse drug reactions, drug administration techniques	As required
(E)	<b>V. General:</b>	
11	Laptop	1
12	Desktop Computer, with Printer	2
13	Photocopier and Scanner	1



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14	Multimedia Projector with Screen	2
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**FORENSIC MEDICINE**

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>Teaching</b>	
1	Multimedia Projector , CPU & Projection Screen	2
2	Television, DVD Player	1
3	Digital SLR Camera With Accessories	1
4	Microscope Student Type	20
5	X-Ray View Box Two In One	6
6	Stop Watch	4
7	Anthropometric Set including	2
	A) Folding Metal Rod Upto 7 Ft	
	B) Osteometric Board	
	C) Craniometer	
	D) Mandibulometer	
	E) Goniometer	
	F) Vernier Calipers	
	G) Equipment for Reporting Height	
	H) Weighing Machine Dial Type Human	
8	Digital pH Meter	1
9	Digital Spectrophotometer	1
10	Chemical Balance	1
11	Distillation Plant	1
12	Refrigerator	2
13	Centrifuge	1
14	Slide Warming Table	2
15	Hot Plate	2
16	Glass Cutting Pencil	2
17	Spectroscopic Lens With Adjustable Slit	2
18	Dissection Set Complete	2
19	Digital BP Instrument	2
20	Stethoscope	2
21	Charts and Models	30 each
(B)	<b>Research</b>	
22	Binocular Research Type With Attachment For Camera	1
23	Deep Freezer For Keeping Tissue	1



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**FORENSIC MEDICINE**

S.No.	NAME OF THE ITEMS	No. Required
24	Automatic Tissue Processing Machine	1
	<b>Following can be shared with Central Research Lab:</b>	
25	Microtome With Knife	1
26	Paraffin Bath Embedding	1
27	Water Bath For Tissue Floatation	1
28	L Modes	1
29	Block Holder	1
30	Abrasive Powder	1
31	Thin Layer Chromatograph	1
32	Gas Chromatograph	1
33	Ultra Violet Spectroscope	1
34	Infra Red Spectroscope	1
35	Mass Spectrometer	1
<b>(C)</b>	<b>Medico legal work</b>	
36	Cold Storage For Dead Bodies	8
37	Weighing Machine For Dead Bodies	1
38	Autopsy Tables	4
39	Stryker Type Autopsy Saw With Accessories	4
40	Weighing Machine For Organs	3
41	Weighing Machine For Fetus	2
42	Dissection Set Complete	4
43	Brain Knife	6
44	Hack Saw	3
45	Rib Shear Left & Right	2 Each
46	Measuring Tape( Steel Tape Roll)	4
47	Magnifying Lens	4
48	X- Ray View Box (4 In 1)	3
49	Tooth Extractor Left & Right	2
50	Hand Set Heat Sealer	1
51	Instrument Trolley	3
52	Stretchers for shifting dead bodies	3
53	Rectal Thermometer	4
54	Portable X-ray Machine (can be shared with Radiology Department)	1
55	Cold Storage For Dead Bodies	2

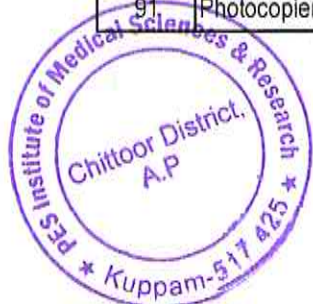


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**FORENSIC MEDICINE**

S.No.	NAME OF THE ITEMS	No. Required
56	Autopsy Tables	2
57	Stryker Type Autopsy Saw With Accessories	1
58	Weighing Machine For Organs	1
59	Weighing Machine For Fetus	1
60	Dissection Set Complete	1
61	Brain Knife	2
62	Hack Saw	2
63	Rib Shear Left & Right	1 Each
64	Measuring Tape( Steel Roll)	2
65	Magnifying Lens	2
66	X- Ray View Box	1
<b>(D)</b>	<b>Consumable for medico legal work</b>	
68	Disposable Cap-Mask-Gown, Gloves Etc.	As required
69	Cotton Rolls, Suture Materials Etc.	As required
70	Formalin, Rectified Spirit,Lugol's Iodine	As required
71	Swabs, Preservative Bulbs etc.	As required
72	Viscera Bottles etc.	As required
73	Syringe (5, 10, 50 ml)	As required
74	Preservative Salts	As required
75	Packing and Sealing materials	As required
<b>(E)</b>	<b>For Sexual Assault Examination [*]</b>	
76	Victim examination table (Gynecological Examination table with leg stirrups)	1
77	Screen	As required
78	OT light Shadowless adjustable	1
79	Hymenoscope	2
80	Colposcope	2
81	Sims Speculum	4
82	Cuscos Speculum	2
83	Sponge holding forceps	4
84	Toothed forceps	4
85	Ovum forceps	2
86	Proctoscope	4
87	Torch	1
	<b>[*] Mandatory for the colleges where sexual assault examination done in FMT Department but not applicable to colleges where sexual assault examination is not done in FMT</b>	
88	Desktop Computer	3
89	Laptop	1
90	Printer with Scanner	2 each
91	Photocopier machine	1

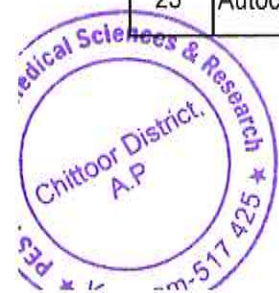


  
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**PESIMSR, KUPPAM  
COMMUNITY MEDICINE**

**BASIC EQUIPMENTS**

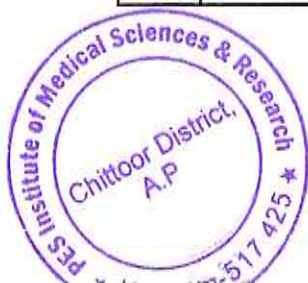
S.No.	NAME OF THE ITEMS	No. Required
1	Barometer (Mercury based instruments to be replaced with other alternatives)	1
2	Filter, Pasteur Chamberland, complete set	1
3	Filter, Berke fed	1
4	Hydrometres, Spirit	3
5	Hydrometres, milk	3
6	Hydrometers, wet and dry bulb	3
7	Incubator, electric (can be procured from Microbiology)	1
8	Museum jars	As per the number of specimens
9	Models, charts, diagrams, specimen	Min: Models 80, Charts 50
10	Balance Analytical 200 gm.	2
11	Balance for weighing food stuff(Capacity 2 Kg).	3
12	Centrifuge clinical	1
13	Weighing machine adult	8
14	Baby weighing machine	3
15	Salters Baby weighing machine	4
16	Harpender Calipers (for skinfold thickness)	4
17	Height measuring stand	4
18	Refrigerator 9 cu.ft.	3 + Additional one
19	Ice Lined Refrigerator (I.L.R.) (at Health Centre)	1
20	Dissecting microscope	40
21	Microscope oil immersion	3
22	T.V. and DVD player	4 each(2 at college and 2 at Centres)
23	Autoclave (Can be shared with Pathology/Microbiology department)	1



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**COMMUNITY MEDICINE****BASIC EQUIPMENTS**

S.No.	NAME OF THE ITEMS	No. Required
24	Computer with printer, scanner and photocopier and Internet facility	5
25	Vehicles for transport of students/interns/faculty/ paramedical staff to the RHTC and UHTC	2 Buses (32 capacity) and one SUV
26	Multimedia Projector with Screen	2
27	Public Address system (2 portable for field based activities and one each for RHTC & UHTC)	4 Sets
28	Chloroscope	10
29	Horrock's Apparatus	3
30	MUAC tapes	10
31	Haemoglobino meter	5
32	BP Apparatus (Digital)	10
33	Stethoscope	10
34	Kata Thermometer	3
35	Globe Thermometer	3
36	Anemometer	4
37	Sound level meter	4
38	Soil testing kit	1
39	Water sampling bottle from any depth	1
40	Needle Shredder	3
41	Vaccine carrier	5
42	Craft water testing kit	1
43	Protective devices for occupational safety	3 sets
44	Ear muffs	As required
45	Ear plugs	As required
46	Safety helmet	As required
47	Goggles	As required
48	Safety boots	As required

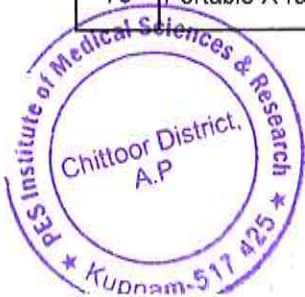


  
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**COMMUNITY MEDICINE**

**BASIC EQUIPMENTS**

S.No.	NAME OF THE ITEMS	No. Required
49	Swine flu kit	As required
50	Gloves	As required
51	Triple layer surgical mask	As required
52	High efficiency mask	As required
53	Long sleeved cuffed gown	As required
54	Protective eye wear	As required
55	Cap	As required
56	Disposable delivery kit	As required
57	Treatment kits as per national health programs	3 each
58	Iodine testing kit	10
59	Glucometer	10
60	Slide set for entomology	5
61	Mosquito catching kit	4
62	Clinical Thermometer	10
63	Sling psychrometer	3
64	Solar radiation thermometer	3
65	Treatment kits as per National Health Programs	4 each
66	Iodine testing kit	10
67	Glucometer	10
68	Slide set for entomology	5
69	First Aid Kit	1
70	Spirometer	3
71	Audiometry	1
72	Otoscope	1
73	Ophthalmoscope	1
74	Laptop	1
75	Portable X-ray (Maybe shared with other departments)	1

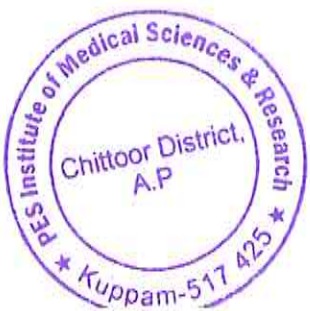


  
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COMMUNITY MEDICINE

BASIC EQUIPMENTS

S.No.	NAME OF THE ITEMS	No. Required
76	ECG(Maybe shared with other departments)	1



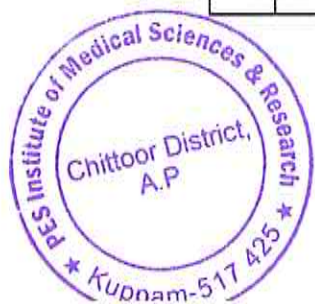
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LIST OF EQUIPMENTS : : DEPARTMENT OF GENERAL MEDICINE

S.No.	NAME OF THE ITEMS	No. Required
1	B.P. Apparatus (Mercury containing instruments should be replaced by digital or other suitable alternative)	40
2	Ophthalmoscope	10
3	Lumbar puncture needles (disposable)	As required
4	Pleural biopsy needles (disposable)	As required
5	Liver biopsy needles (disposable)	As required
6	Kidney biopsy needles (disposable)	As required
7	Bone marrow biopsy needles (disposable)	As required
8	Bone marrow aspiration needles (disposable)	As required
9	X-ray viewing box	18
10	Flexible Video End viewing Oesophago-Gastroduodenoscope (optional)	1
11	Flexible Video Colonoscope (optional)	1
12	Flexible Video Side viewing Gastroduodenoscope for ERCP (optional)	0
13	Proctoscope	8
14	Fiber optic bronchoscope (May be shared with TB&CD)	1
15	Spirometer	4
16	Bed side cardiac monitors	20
17	Central Cardiac monitor Console	1
18	Defibrillator	1 per unit + 1 each for MICU,ICCU and 1 for casualty ward
19	Non-invasive B.P. Apparatus	20
20	Pulse oximeter	24
21	Equipment for Cardiac pacing	1
22	Ambu bag	14
23	Laryngoscope	12
24	ECG machine	10
25	Echocardiography machine	1 portable unit
26	Tread mill test machine	1



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S.No.	NAME OF THE ITEMS	No. Required
27	Hemodialysis machine	4
28	Peritoneal dialysis catheters	As required
29	Arterial blood gas analyzer	1
30	Glucometer	14
31	EMG and nerve conduction velocity machine	1
32	Fine needle aspiration needle	As required
33	Aspiration needle	As required
34	Endotracheal tubes	As required
35	Invasive Mechanical Ventilator	8
36	Non Invasive mechanical ventilator (Maybe shared with TB and CD)	5
37	Nebulizer	14
38	Portable Suction Machine	2 with each ward, 1 for MICU, 1 for ICCU, 1 for casualty ward, 1 for OPD
39	Infusion pumps	1 with each bed of MICU and ICCU plus 4/unit
40	Weighing Scale	2/unit + 2 in OPD
41	Multimedia Projector with Screen	2
42	Patient Examination table	6
43	Rubber Hammer	12
44	Computer	1/unit 1/MICU, 1/ICCU, 1/OPD
45	Torch	16
46	Emergency Lights	6
47	Upper GI endoscope (Optional)	3
48	Sigmoidoscope (optional)	3
49	Colonoscope (optional)	3
*50	*Haemocytometer	5
*51	*Light Microscope	3
*52	*Haemoglobinometer	5
*53	*Urinometer	3
	* Required where ward side laboratories are available	



  
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PAEDIATRICS

BASIC EQUIPMENTS

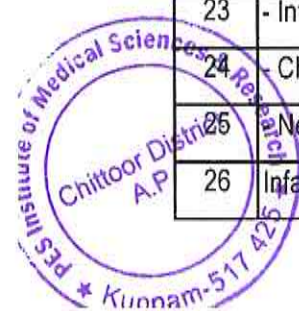
S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>Resuscitation equipment:</b>	
1	Ambu bag and Face mask - Neonate & infant	6
2	Ambu bag & Face mask – Children	4
3	Nasal prongs	As required
4	Nasal catheters	As required
5	Endotracheal tubes	As required
6	Suction apparatus	6
7	Suction catheters	As required
8	Laryngoscope - Infant	4
9	Laryngoscope - Children	4
(B)	<b>Oxygen Delivery System-</b>	
10	Oxygen Cylinder	6
11	Oxygen regulator	6
12	Oxygen Humidifiers	6
13	Oxygen head-box (of each size)	As required
14	Nebulizers	6
(C)	<b>Drug Delivery Equipment/ Catheter/tube-</b>	
15	Blood Transfusion Set	As required
16	Intra-venous (I.V.) Drip set	As required
17	Measure volume Set	As required
18	Intra-venous (I.V.) Cannula (Butterfly type)	As required
19	Intracath (different sizes)	As required
20	Umbilical vein Catheter	As required
21	Infant Feeding tubes	As required
22	Three way and four way valve	As required
(D)	<b>Measurement Equipment</b>	
	<b>Digital Weighing machine</b>	
23	- Infant	2
24	- Child	2
25	- Neonates	2
26	Infantometer	3

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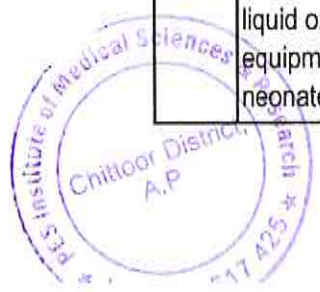
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PAEDIATRICS

BASIC EQUIPMENTS

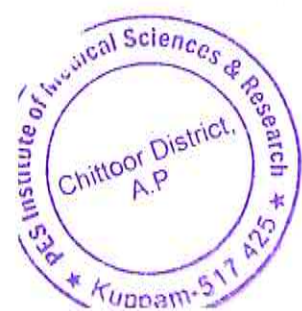
S.No.	NAME OF THE ITEMS	No. Required
27	Stadiometer	4
28	Measuring tape	As required
29	Shakir's tape	As required
30	Digital Thermometer-Oral *(Mercury based instruments to be replaced with other alternatives)	As required
31	BP measuring Instrument with various cuff sizes - Digital (Only Non mercury alternatives to be used)	6
(E)	<b>Work Lab and Investigations:</b>	
32	Bone marrow needle	4
33	Lumbar Puncture (L.P.) Needles	4
34	Pleural aspiration needle	4
35	Vim-Silverman liver biopsy needle	4
36	True Cut Renal biopsy needle	4
37	X-ray view box	8
(F)	<b>Miscellaneous</b>	
38	Glucometer	3
39	Pulse Oximeter	6
40	CPAP machine*	3
41	Mechanical Ventilator (neonatal and child)	2+2
42	Radiant Warmer	8
43	Phototherapy unit	6
44	Ophthalmoscope	3
45	Pleural Fluid Collection Bag	As required
46	Urine Collection Bag	As required
47	LED phototherapy unit	3
48	Multimedia Projector with Screen	1
49	Laptop	1
	Note: CPAP machine, Mechanical Ventilator, Radiant Warmer, Phototherapy unit, Pulse oximeters, Multipara monitors, are required in proportion to Neonatal and Pediatric ICU bed capacity. Phototherapy unit should preferably be double surface. NICU should preferably have Transcutaneous Bilirubinometer.	
	Oxygen supply should be from central pipeline through manifold gas supply system, liquid oxygen supply, suction should be through wall mount supply system. Essential equipment should be according to age of the children i.e. neonate/infant/toddler/children.	



  
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DERMATOLOGY, VENEROLOGY & LEPROSY		
BASIC EQUIPMENTS		
S.No.	NAME OF THE ITEMS	No. Required
1	Hyfrecator/ Electrosurgical instrument	1
2	Cryotherapy with liquid Nitrogen	1
3	Iontophoresis machine	1
	<b>Facilities for examining smears for bacteria, fungi, mycobacteria and acantholytic cells</b>	
4	(a) Light microscope	2
5	(b) Giemsa stain	As required
6	(c) KOH smear	As required
7	Wood's lamp	1
8	Multi media Projector with Screen	1



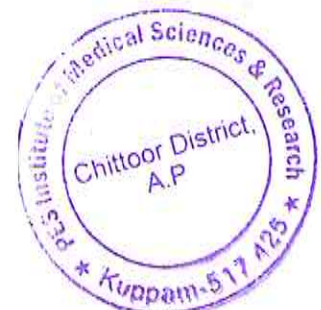
  
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PSYCHIATRY

BASIC EQUIPMENTS

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>General</b>	
1	Electro Convulsive Therapy (E.C.T.) machine preferably with ECG & EEG monitoring	1
2	EEG Machine (may be shared with medicine department)	1
3	ECT machine without monitor	2
4	EEG machine (may be shared with medicine/neurology department)	1
5	Lithium analyzer (may be shared with clinical pathology department)	1
6	Bio feed-back instruments (sets)	1
7	Thin layer chromatography (for drug dependence treatment) (may be shared with other departments or in Central Research lab)	1
8	Alcohol breath analyzer	1
(B)	<b>Psychological Tests equipment</b>	
9	a) Projective tests	3
10	b) Intelligence Tests	3
11	c) Personality Tests	3
12	d) Neuro psychological tests	3
13	Multi media Projector with Screen	1
	<b>Note:</b> ECT treatment room to be equipped with the basic anesthesia machine with ventilating circuit, monitors, ECG/ETCO <sub>2</sub> and paO <sub>2</sub> , noninvasive BP monitoring equipment for resuscitation, intubation, ventilation and suction.	

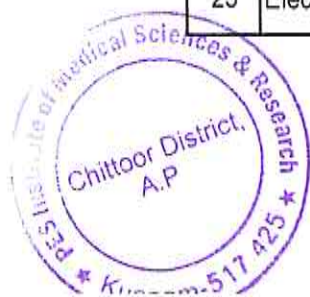


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<b>General Surgery</b>		
<b>S.No.</b>	<b>NAME OF THE ITEMS</b>	<b>No. Required</b>
<b>(A)</b>	<b>OPD</b>	
1	Digital/Electronic BP Apparatus, Weighing Machine, Stethoscope, Height scale	6 each
2	X ray viewing box 4 in 1	6
3	Proctoscope	10
<b>(B)</b>	<b>Minor O.T.</b>	2
4	Operation Theatre Table	2
5		2
6	Pedestal lights	4
7	Electro-surgical cautery unit	4
8	Suction	4
9	Pulse oximeter	2
10	Anesthesia Equipment	1 set
11	Resuscitation kit	1
12	Assorted surgical instrument for minor operation sets	12
13	Autoclave	1
<b>(C)</b>	<b>Wards</b>	
14	Digital/Electronic BP Apparatus, Stethoscope	20 each
15	Weighing Machine, Height scale	10 each
16	Proctoscope	10
17	Non invasive Multi Para Monitors	5
18	ECG machines	5
<b>(D)</b>	<b>Operation Theatre</b>	
19	CC Camera for Student demonstration for OT	9
20	Operation Theatre Table	9
21	Operation Theatre Ceiling light	9
22	Pedestal lights	9
23	Electro-surgical cautery unit	15



  
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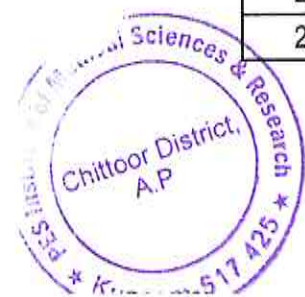
General Surgery		
S.No.	NAME OF THE ITEMS	No. Required
24	Suction machine	9
25	Pulse oximeter	9
26	Anesthesia Equipment(as per requirement of Dept)	9 sets
27	General Sets including open Urological surgery (4 for each Operation Theatre)	36
28	Pediatric surgical instrument set	2
29	Burr hole set with electric craniotome	2
30	Vascular set	2
31	Diagnostic and Operative laparoscope including one High Definition with all accessories and hand instruments.	2
32	Cystoscope&Resectoscope	1
33	Flexible Video Colonoscope	1
34	Flexible Video Side viewing Gastroduodenoscope for ERCP	1
35	Flexible Video End viewing Oesophago-Gastroduodenoscope	1
36	Flexible Video Sigmoidoscope	1
37	Flexible Video Bronchoscope	1
38	C-arm image intensifier	1
39	Operative ultrasound	1
40	Harmonic Scalpel	2
41	Assorted Open & Laparoscopic Stapling devices	2 sets
42	Multimedia Projector with Screen	2
	<b>Note:</b> All the surgical wards should have wall mounted suction lines along with piped wall mounted central O <sub>2</sub> lines on all beds. They should have resuscitation equipment	
	like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps , LMA / PLMA of all sizes, Electrical suction apparatus, AED -1.	



  
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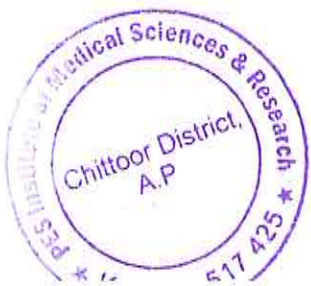
<b>ORTHOPAEDICS</b>		
<b>BASIC EQUIPMENTS</b>		
<b>S.No.</b>	<b>NAME OF THE ITEMS</b>	<b>No. Required</b>
1	General instrumentation set for fracture reduction	8 sets
2	Set for Hip Replacement	1
3	Set for knee replacement	1
4	Interlock nailing sets	1 each
5	Specific fixation sets (Proximal Humerus, Distal humerus, Intertrochanter, proximal and distal tibia, pelvic fixation, pedicle screw, lateral mass screw and ACDF for cervical spine)	1
6	Small Fragment and large fragment	4
7	External Fixator	8
8	Fracture reduction OT tables	1
9	Simple OT tables	2
10	Cautery machines	1
11	Pneumatic drill and reamer	1
12	Electrical drill and reamer set	1
13	Laminar airflow system in OT (for OT - where joint replacement surgeries are carried out)	As mentioned
14	C-Arm (Image Intensifier)	1
15	Portable X-ray Machine	1
16	Arthroscope	1
17	Multimedia Projector	1
18	Plaster room equipment (sets) with plastic table.	2
19	Physiotherapy and occupational Therapy equipment sets	As required
20	Movie Camera for demonstration of live operations	1
	<b>Note:</b> All the orthopaedic wards should have wall mounted suction lines along with piped wall mounted central O <sub>2</sub> lines on all beds. They should have resuscitation equipment like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps , LMA / PLMA of all sizes, Electrical suction apparatus, AED -1.	
	<b>The OPD should have –</b>	
21	Plaster tables	2
22	Electric plaster cutter	4
23	Reflex hammer	10
24	Measure tape	20



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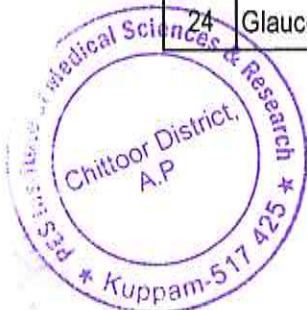
ORTHOPAEDICS		
BASIC EQUIPMENTS		
S.No.	NAME OF THE ITEMS	No. Required
25	Goniometer	10



  
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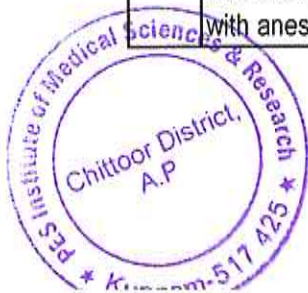
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OPHTHALMOLOGY		
BASIC EQUIPMENTS		
S.No.	NAME OF THE ITEMS	No. Required
(A)	O.P.D.	
1	Snellen Chart/Snellen drum with or without remote control	4
2	Trial set with trial frame both for adult and children	4
3	Automated Perimeter	1
4	Color vision chart –Original Ishihara	3
5	Near vision chart with different languages	4
6	Torch	As required
7	Ophthalmoscope (Direct)	4
8	Streak Retinoscope	4
9	Indirect Ophthalmoscope	3
10	Slit lamp	3
11	Applanation tonometer	3
12	Keratometer	1
13	Synoptophore	1
14	Maddox Rod	1
15	Maddox Wing	1
16	Diplopia goggles	1
17	Gonioscope	2
18	Placido disc	1
19	Prism Bar	1
20	Schiotz's tonometer	4
(B)	Major Operation Theatre	
21	Operating microscope with TV Unit with camera	2
22	Cryo Unit	1
23	Cataract set	6
24	Glaucoma set	3



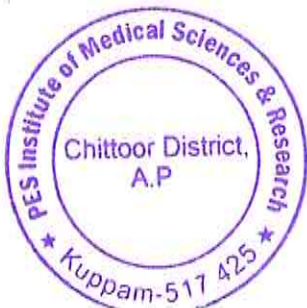
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OPHTHALMOLOGY		
BASIC EQUIPMENTS		
S.No.	NAME OF THE ITEMS	No. Required
25	DCT/ DCRR set	2
26	Entropion set	3
27	Enucleation set	5
28	Evisceration set	2
29	Squint set	3
(C)	<b>General Ophthalmic Equipment</b>	
30	Operation Theatre Table	2
31	Operation Theatre Light	2
(C)	<b>Minor Operation Theatre:</b> Minor O.T. should have the equipment for the removal of the foreign body, sutures, and chalazion or styte.	
(D)	<b>Wards:</b>	
32	Slit lamp	2
33	Snellen chart/Snellen drum with or without remote control	1
34	Trial set with trial frame both for adult and children	1
35	Near vision chart with different languages	1
36	Torch	As required
37	Ophthalmoscope	1
38	Indirect Ophthalmoscope	1
39	Multi media Projector with Screen	1
	<b>Note:</b>	
	Wards should have wall mounted suction lines along with piped wall mounted central O <sub>2</sub> lines on atleast 5 beds.	
	Wards should have resuscitation equipment like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps, LMA / PLMA of all sizes, Electrical suction apparatus, AED -1.	
	Operation theatres should have wall / dongle mounted suction lines along with piped wall / dongle mounted central gas ( O <sub>2</sub> , NO <sub>2</sub> lines.	
	Operation theatres should have resuscitation equipment like Anesthesia machine and accessories like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps ,Mechanical ventilator - separate or with anesthesia machine, LMA /	



  
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OPHTHALMOLOGY		
BASIC EQUIPMENTS		
S.No.	NAME OF THE ITEMS	No. Required
	PLMA of all sizes, Electrical suction apparatus	



  
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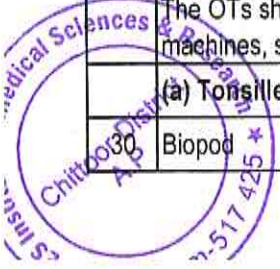
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OTORHINOLARYNGOLOGY

BASIC EQUIPMENTS

S.No	NAME OF THE ITEMS	No. Required
(A)	OPD	
1	Sterilizer	1
2	Cidex instrument sterilization tray	2
3	Digital /Electronic BP Apparatus	1
4	Stethoscope	2
	<b>X-ray view box in all OPD rooms 5 sets each consisting of :</b>	
5	Thudicum/St.Clair Thomson Nasal Speculum different sizes	4
6	Lac's Tongue depressor different sizes	4
7	Laryngeal mirrors different sizes	4
8	Nasopharyngeal mirrors different sizes	4
9	Aural speculum different sizes	4
10	Ear Suction different sizes	2
11	Nasal Suction different sizes	2
12	Suction apparatus	1
13	Siegel's speculum	1
14	Tuning fork (512 Hz)	1
15	Tuning fork (256 Hz)	1
16	Tuning fork (1024 Hz)	1
17	Otoscope with halogen bulb, rechargeable battery and Siegle attachment	1
18	Bayonet forceps	2
19	Bulls lamp	1
20	Head Mirror	1
21	Head Light With LED/Halogen lamp	1
22	Jobson Horne probe	2
23	Instrument tray	1
24	Kidney tray	2
25	The OPDs should have Otoendoscope, Nasalendoscope, Laryngeal telescope with camera, monitor and light source for teaching purposes (1 Unit of the above may be placed either in Minor OT or Endoscopy room or in the OPD in the Consultant Chamber)	As mentioned
26	Optional- One treatment unit may be placed in the Consultant Chamber in the OPD which will facilitate and replace the instruments required in that room for examination purposes and help in teaching clinical skills.	As mentioned
(B)	Ward	
27	Four sets consisting of the instruments required in the OPD should be kept in the ward for teaching purposes and for examination time.	As mentioned
28	One mobile spotlight, One Tracheostomy set should be placed in the ward.	As mentioned
29	The ward side room/emergency treatment room should have a mobile spotlight.	As mentioned
(C)	Major Operation Theatre.	
	The OTs should be equipped with the requisite equipment for anaesthesia, cautery machines, suction machines and general operative sets.	
	(a) Tonsillectomy and adenoidectomy set - 2 sets, each consisting of	
30	Biopod	1

  
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**OTORHINOLARYNGOLOGY**

**BASIC EQUIPMENTS**

S.No	NAME OF THE ITEMS	No. Required
31	Boyle-Davis mouth gag with difference size blades	1
32	Tonsil holding forceps	1
33	Tonsil dissector and pillar retractor	1
34	Waugh's tenaculum forceps: plain and tooth	2
35	Tonsil snare	1
36	Burkit artery forceps	1
37	Wilson's double curved artery forceps	1
38	Negus artery forceps	1
39	Tonsil scissors	1
40	Adenotome	1 (optional)
41	Adenoid curette with and without cage	2
42	Yankaueroropharyngeal suction (disposable)	1
	<b>(b) Set for nasal bone fracture</b>	
43	Asch forceps	1
44	Walsham forceps	1
45	St.Vlair Thompson Nasal Speculum	1
46	Killian Long bladed Nasal speculum	1
	<b>(c) Septoplasty set</b>	
47	Nasal dressing forceps	1
48	Knife handle	1
49	Killian's nasal speculum	1
50	Freer elevator	1
51	Howarth elevator	1
52	Cottle elevator	1
53	Sickle knife	1
54	Ballenger's swivel knife	1 (optional)
55	Luc tissue cutting forceps	1
56	Takahashi forceps	1
57	Fish tail (bayonet shape) gouge	2
58	Nasal mallet	1
	<b>(d) FESS set</b>	
59	Rigid nasal endoscope 0 degree, 4 mm and 2.7 mm size	1 each
60	Rigid nasal endoscope 30 degree, 4 mm and 2.7 mm size	1 each
61	Light source and light cable	1
62	Endoscopic Camera with suitable display with recording & archiving facility. (with High Definition Camera)	1



  
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**OTORHINOLARYNGOLOGY**

**BASIC EQUIPMENTS**

S.No	NAME OF THE ITEMS	No. Required
63	Sickle knife	1
64	Retrograde punch	1
65	Blakesley forceps – straight 1 and upturn	1
66	Nasal suction cannula different sizes	4
67	Double curved suction cannula different sizes	4
68	Sinus probe and curette	1
69	Lacrimal probes for endoscopic DCR (optional)	1
70	General Fess Instruments	1
	<b>(e) Direct laryngoscopy set</b>	
71	Anterior commissure laryngoscope for adult and pediatric sizes	2
72	Laryngoscope for adult and pediatric sizes	2
73	Negus laryngoscope	2 (optional)
74	Light source	1
75	Light cable	1
76	Biopsy forceps	2
77	Foreign body removal forceps	2
78	Laryngeal suction	2
	<b>(g) Microlaryngoscopy set</b>	
79	Kleinsasser's laryngoscope	2
80	Fibreoptic lighting system	2
81	Suspension system for Laryngoscope	2
82	Microlaryngeal cup forceps	2
83	Microlaryngeal Scissors	2
	<b>(h) Tympanoplasty set</b>	
84	Graft knife	1
85	Graft scissors	1
86	Graft press	1
87	Aural speculum	4
88	Rosen first incision knife	1
89	Curette	2
90	Drum elevator	1
91	Blunt elevator	1
92	Sickle knife	1
93	Ball probe	1
94	Micro suction Cannula with thumb adaptor	4
95	Ear granulation forceps straight, up turn and side turn	3

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**OTORHINOLARYNGOLOGY**

**BASIC EQUIPMENTS**

S.No	NAME OF THE ITEMS	No. Required
96	Graft forceps	1
	<b>(i) Mastoidectomy set</b>	
97	Mallet	2 (optional)
98	Gouge (different sizes)	4 (optional)
99	Knife handle	1
100	Mosquito artery forceps	4
101	Cat's paw retractor	2
102	Endaural retractor/post aural retractor for right and left ear	2
103	Electric drill (motor, hand piece and burrs)	2 sets
104	Mastoid seeker	2
105	Aditus seeker	2
106	Malleus head nipper	2
107	Suction cannula with adapter for thumb control	4
108	Ear granulation forceps straight, up turn and side turn	3
	<b>(j) Stapedectomy set</b>	
109	Pick-straight	2
110	70 Angled	2
111	Perforator	2
112	Measuring rod	2
113	Prosthesis crimper	2
	<b>(k) Oesophagoscopy set</b>	
114	Oesophoscopes sizes for different age group	3
115	Light source and cable	1
116	Biopsy forceps	3
117	Foreign body removal forceps	3
118	Suction cannula	3
119	Oesophageal dilators	1 set
	<b>(l) Bronchoscopy set</b>	
120	Bronchoscopes different sizes for different age groups	3
121	Light source and cable	1
122	Biopsy forceps	3
123	Foreign body removal forceps	3
124	Peanut forceps	3
125	Suction cannula	3
	<b>(m) Tracheostomy set</b>	

  
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**OTORHINOLARYNGOLOGY**

**BASIC EQUIPMENTS**

S.No	NAME OF THE ITEMS	No. Required
126	Needle holder	1
127	Bard Parker knife handle	1
128	Ribbon right angled retractors	2
129	Curved arteries	4
130	Straight arteries	1
131	Cricoid hook	1
132	Tracheal dilator	1
	<b>(n) Excision Biopsy Set</b>	
133	Doyen mouth gag	1
134	Jenin's mouth gag	1
135	Knife handle	2
136	Adson's tissue holding forceps toothed	2
137	Adson's tissue holding forceps plain	2
138	Mayo scissors different sizes	3
139	Mosquito curved artery forceps	6
140	Curved artery forceps	6
141	Ellis tissue forceps	4
142	Babcock tissue forceps	2
143	Cat's paw retractors	2
144	Right angle retractors	2
145	Skin hook single	2
146	Skin hooks double	2
147	Needle holder different sizes	3
148	Thread cutting scissors	1
	<b>Minor Operation Theatre</b>	
	<b>(a) Direct laryngoscope set</b>	
149	Laryngoscope – Anterior Commissure	1
150	Negus	1
151	Lighting system	1
152	Biopsy forceps	1
153	Foreign body removal forceps	1
	<b>(b) Micro ear examination set</b>	2
154	Aural speculum	4
155	Suction cannula	4
156	Aural cup forceps	2

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**OTORHINOLARYNGOLOGY**

**BASIC EQUIPMENTS**

S.No	NAME OF THE ITEMS	No. Required
	(c) Nasal packing set	2
157	St Clair Thompson nasal speculum different sizes	4
158	Nasal packing forceps	1
159	Nasal suction cannula	4
	(d) Nasal endoscopy trolley with 0 degree & 30 degree 4mm endoscope with light source, cable , monitor & camera	1
	(e) Others	
160	Higginson syringe	2
161	Sterilizer	As required
162	Aural Syringe	As required
163	Tracheostomy set	As required
164	Intubation set	As required
165	Bowls, kidney treys, towel clips, sponge holding forceps and Cheatle forceps	As required
	<b>(E) Miscellaneous Equipment</b>	
166	Operating microscope for major Operation Theatre ( with camera attachment & monitor for teaching and recording )	1
167	Electrocautery Unit	1
168	Spot Mobile Light	1
169	Basic OT table	1
170	Operating microscope for minor Operation Theatre	1
171	Puretone audiometer	As required
172	Brainstem evoked response audiometer with ASSR	As required
173	OAE Impedance audiometer (With sound treated air-conditioned room for audiometry)	As required
174	Multimedia Projector with Screen	1
	Teaching models/simulators as a part of the college CAL lab to teach clinical skills and procedure to the students must be available	
	<b>(F) Additional Equipment</b>	
175	Flexible nasopharyngolaryngoscope	1
176	Electronystagmograph(Optional)	1
177	Brainstem evoked response audiometer	1
178	Goggles, plastic apron, gloves for examination of patients with biohazard (HIV & AU +ve)	As required



  
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OBSTETRICS & GYNAECOLOGY

BASIC EQUIPMENTS

S.No.	Name of The Items	No. Required
(A)	<b>General</b>	
1	Speculums and retractors	100
2	EA + ECC sets	12
3	Cytology bottle	10
4	Microscope	2
5	MR Syringes	7
6	Colposcope	1
7	Cryo/electro cautery apparatus	1
8	Simple fetal Doppler	2
9	NST machine	2
10	Stitch removal sets	7
11	Dressing sets	7
12	Ultrasound machine	1
13	Weighing machine	3
14	Height scale	2
15	View box	1
16	Digital/ Electronic Blood Pressure apparatus, measuring tapes, gloves, syringes, needles, torch	6
17	Resuscitation tray (Laryngoscope, ET tube, Ambu bag, suction catheter)	2
18	Suction machine	2
19	Hysterosalphigogram Cannula	3
20	PCT forceps	5
21	Ayer's spatula	40
(B)	<b>Main Operation Theatre</b>	
22	Abdominal Hysterectomy set (Artery forceps, scissors, scalpel, Allis's kelly's clamp, Babcock forceps, thumb forceps, Harington & Richardson retractors.)	4
23	Vaginal Hysterectomy set	3
24	Scalpel, scissors, metal catheter, Sim's, Speculum volsellum, Kelly's clamps, right angle retractor, arteries, Allis, uterine sound, bladder sound.	3
25	Tuboplasty set	1
26	Myomectomy instruments (Myoma screw, Boney's clamp)	1
27	Diagnostic laparoscopy set	1
28	Operating laparoscopy set including one with HD with all accessories & hand instruments.	1
29	Laparocator for tubal ligation	1
30	Operative Hysteroscopy set	1
31	Electronic Carbondioxideinsufflator/ Insufflator basic unit	2

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**OBSTETRICS & GYNAECOLOGY**

**BASIC EQUIPMENTS**

S.No.	Name of The Items	No. Required
32	Resectoscope	1
33	Hysteromat	1
34	Operative microscope	1
35	Electrocautery	3
<b>(C)</b>	<b>Labour Room</b>	
36	Delivery sets	20
37	Digital/ Electronic B.P. Apparatus	4
38	Weighing machine	1
39	Fetal Doppler	1
40	Cardiotocogram machine	2
41	Portable ultrasound	1
42	High suction machine	2
43	Resuscitation tray	2
<b>(D)</b>	<b>Special Equipment</b>	
44	Oxytocin infusion pumps	2
45	Multichannel monitors	4
<b>(E)</b>	<b>Teaching Set</b>	
46	Doll and Dummy	1
47	Female Pelvis	1
48	Gross specimens	10
49	X-ray/US films	5
50	View box	1
51	Multimedia Projector with Screen	1
52	Set of instruments for teaching purpose	1
<b>(F)</b>	<b>Minor Operation Theatre</b>	
53	Cervical biopsy set	2
54	MTP set	3
55	D&C set	3
56	IUCD insertion/removal set	5
57	High suction machine	2
58	Resuscitation tray	1
59	E.B. set	3
60	Operation Theatre table, Operation Theatre lights, Central O2 and suction	As required
<b>(G)</b>	<b>Maternity Operation Theatre</b>	
61	Set for LSCS	12

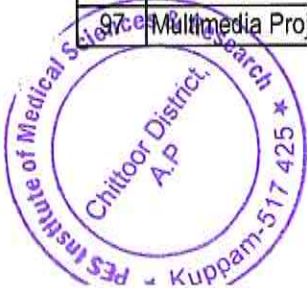
  
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**OBSTETRICS & GYNAECOLOGY**

**BASIC EQUIPMENTS**

S.No.	Name of The Items	No. Required
62	D&C set	3
63	MTP set	3
64	High suction machine	2
65	Cervical exploration set	2
66	Uterine packing forceps	3
67	Abdominal hysterectomy set	1
68	Diagnostic laparoscopy set	1
69	Postpartum ligation	2
70	Outlet forceps	1
71	Low mid cavity forceps/Keilland forceps	1
72	Vacuum Extractor and suction machine	1
73	Resuscitation tray	1
74	Infusion Pump	1
75	EB set	2
76	Laparocator for tubal ligation	1
77	Operation Theatre table, Operation Theatre lights, Central O2 and suction	As required
<b>(H)</b>	<b>Wards</b>	
78	Blood Pressure Apparatus (Digital/Electronic)	4
79	Weighing machine	1
80	Height scale	1
81	Speculum and retractors	30
82	Glucometer	1
83	Microscope	1
84	Suture removal sets	8
85	Dressing sets	5
86	Ultrasound	1
87	Cutdown sets	1
88	CTG machine	1
89	Suction machine	2
90	Resuscitation tray	2
91	X ray View box	1
92	Central O2 and suction	As required
<b>(I)</b>	<b>Special Equipment</b>	
93	Ultrasound machine with Doppler/Vaginal probe/facilities for Interventional procedure	1
94	Oxytocin infusion pumps	2
95	Multichannel Monitor with ECG, BP, HR, Pulse oximeter for high risk pregnant patients (eclampsia, heart diseases etc.)	3
96	Fetal Monitor for Antepartum Surveillance	3
97	Multimedia Projector with Screen	2



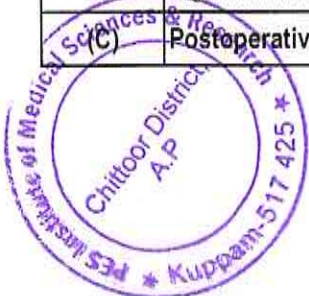
  
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ANAESTHESIOLOGY

BASIC EQUIPMENTS

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>OPD Anesthesia Clinic</b>	
1	Patient examination table	3
2	Blood Pressure Instrument (Non-invasive)	3
3	Height Measurement Scale	3
4	Weighing machine	3
(B)	<b>Operation Theatre</b>	
5	Anesthesia machine and accessories like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps,	One set for EACH operation table
6	Multipara monitor- with P, NIBP, ECG facility, SpO2	One set for EACH operation table
7	Electrical Suction apparatus	One set for EACH operation table
8	LMA / PLMA of all sizes	One set for EACH operation table
9	Spinal epidural set	One set for EACH operation table
10	EtCO2 monitor	One for 5 operation tables
11	Defibrillator	One for 5 operation tables
12	Mechanical ventilator Separate or with anesthesia machine	One for 5 operation tables
13	Fibre optic bronchoscope	1
14	USG machine (Desirable)	1
15	PNS (Desirable)	1
16	Resuscitation equipment (CPR)- Ambu bag with face mask	2set
17	a) Adult Manikin	3
18	b) Pediatric Manikin	3
19	Multimedia Projector with screen	2
20	Computer with Printer & Scanner	2
21	Photocopier	1
22	High definition TV	1
(C)	<b>Postoperative Recovery Room</b>	

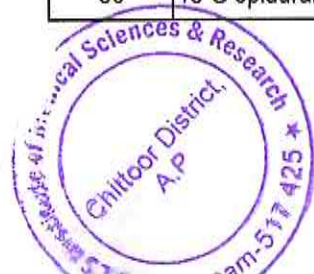


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**BASIC EQUIPMENTS**

S.No.	NAME OF THE ITEMS	No. Required
23	Oxygen therapy unit	8
24	Blood Pressure Monitor (digital/Electronic)	8
25	Pulse oximeter	8
26	E.C.G. Monitor	8
27	Suction Machine	8
28	Provision for resuscitation equipment and CPR Algorithms	1
29	Airway crash cart	1
30	ABG machine (Optional)	1
31	Side lab for emergency investigations (Optional)	1
32	TOF monitor (PNS) (Optional)	1
(D)	<b>Pain Clinic</b>	
33	Radio frequency ablation machine	2
34	Fluoroscopy machine (e-ARM)(may be shared with other department)	2
35	Ultrasound machine	1
36	Patients controlled analgesia system (portable)	1
37	Styleted Epidural catheter	10
38	Rac's catheters	As required
39	Intrathecal infusion pumps	As required
40	Pain assessment chart	4
41	OT Table fluoroscopy compatible	2
42	Nerve locator	1
43	Computer	2
44	Anodyne Machine (Optional) (For diabetic foot care)	2
45	Transcutaneous Electric Nerve Stimulating Machine (optional)	1
46	Anesthetic machine with resuscitation equipment	2
47	Crash cart	2
48	Monitors for vital signs (NIBP, P.R, ECG, SPO2, Temperature, R.R)	2
49	Nerve stimulator	2
50	18 G epidural needle	4



  
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BASIC EQUIPMENTS

S.No.	NAME OF THE ITEMS	No. Required
51	Multimedia Projector with screen	1



  
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DEPARTMENT OF AUDIOVISUAL AIDS		
S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>ARTIST SECTION</b>	
1	Drawing Board (Big)	1
2	Drawing Board(Small)	1
3	Drawing instrument Box	1 set
4	Plastic Transparent Set square 10"	1 pair
5	Plastic Scale transparent 18'	1
6	Parallel ruler 18"	1
7	Proportional Compass.	1
8	Bowpen one for fine and one for thick line.	2
9	"T" scale 24" wooden	1
10	"T" scale 48" wooden	1
11	Frenet curves Plastic 1 set of 12	1 set
12	Protractor Plastic Semiround 6" dia.	1
13	Drawing paper various sizes	24
14	Drawing paper	12
15	Water colour tubes	1 set
16	Poster colours in different shades.	1 set
17	Reeves Indian Black ink.	12
18	Sable hair brushes	1set
19	Calligraphy and lettering nibs	1 set
20	Clip holders.	6
21	Computer, printer, photocopier and scanner	1
(B)	<b>MODELLING SECTIONS AND PHOTOGRAPHY</b>	
22	Modeling Instrument box.	1
23	Saw for wood work.	1
24	Bandsaw	1
25	Plier	1
26	Plier Goldsmith.	1
27	Scissors ordinary	1
28	Scissors Goldsmith	1
29	Hammer	1
30	Mortar Iron.	1



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DEPARTMENT OF AUDIOVISUAL AIDS		
S.No.	NAME OF THE ITEMS	No. Required
31	Bucket Iron.	1
32	Chisel.	1
33	Drilling machine	1
34	Modelling clay	As required
35	Clay of different types	As required
36	Drawing Board with Stand	1
37	Soft stone powder.	As required
38	Plaster of Paris	As required
39	Gum.	As required
40	Sand paper	As required
41	Plasticine	As required
42	Wires G.I. copper and wire netting.	As required
43	Synthetic Enamel colours	As required
44	Oil colour brushes.	As required
45	Projection Screen	1
46	Digital SLR Camera (Latest Model )	1
47	Video Camera (Latest Model )	1
48	Microprojector Dark room & developing equipment	1 set
<b>NOTE:</b>		
1	All Mercury containing instruments should be replaced by digital or other suitable alternatives.	
2	In order to make teaching hospital more effective, it is necessary that a periodic maintenance and upgrading of the instruments in various departments is carried out.	
3	Endoscopes shall be fibre-optic preferably with a videoscope.	
4	Close circuit TVs (CCTVs) , videoconferencing, Internet and other facilities for live audiovisual demonstration of procedures shall be provided in the institution for effective teaching and training facilities	
5	All Clinical departments must be provided with one flat high definition TV monitor, DVD Player, one laptop, desktop computer with printer (one per Unit) and one Desktop computer with printer, scanner and photocopier for department office. Requirements of computers and printers and scanners for pre and Paraclinical departments have been mentioned in respective columns.	
6	Number of Operation Theatre(OT) are according to the number of admissions. All OT in the hospital should have wall/dongle mounted suction lines along with piped wall/dongle mounted central gas (O2, NO2) lines.	
7	All Operation theatres in the hospital should have resuscitation equipment like Anesthesia machine and accessories like laryngoscope, all - size endotracheal tubes, nasal and oral airways, Magill's forceps , Mechanical ventilator,	



  
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S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>General</b>	
1	Table with marble or stainless steel tops with a minimum size of 6' x 2' x3'	18
2	Tables with marble or stainless steel tops - half standard size	5
3	Drill machine	3
4	Hand saw, preferably metal	3
5	Band saw for sectioning body and limbs	1
6	Brain knife	3
7	Mortuary cooler with arrangement to keep 1 body	1
8	Storage tank to hold 10 cadavers, static/movable, durable tank with input and output	3
9	Plastic tanks for storing soft and dissected parts	10
10	Multimedia Projector with screen	2
11	Trolley Table (Steel)	2
12	Movie camera with projection screen	1
13	Computer with internet connection, & video CD library	3
14	X-ray viewing lobby	4
15	X-Ray plates/MRI/CAT scan/USG	As required
16	Charts, Diagrams, Models, Slides etc.	As required
17	Dissecting instruments for cadaveric dissection	As required
18	Meat cutting machine for thin body sections (trans and vertical) for gross anatomy	1
19	Cadavers	15
20	Embalming Machine	1
(B)	<b>Histology Laboratory</b>	
21	Microscopes, Monocular	75
22	Dissection microscope	4
23	Microtomes, rotary (Optional)	1
24	Microtomes, Sledge, large cutting	1
25	Cabinet for slides (1000)	5



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**ANATOMY**

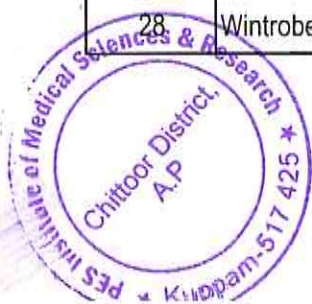
S.No.	NAME OF THE ITEMS	No. Required
26	Incubators	1
27	Paraffin embedding bath	1
28	Hot plates for flattening sections	1
29	Hot air oven for drying slides (45 °C)	1
30	Refrigerators (Minimum 165 litres)	2
31	Marking pencils	As required
(C)	<b>Museum</b>	
32	Articulated Skeleton set	7
33	Bones (Dis-articulated) sets	30
34	Specimen Wet	150
35	Steel racks	As required
36	Laptop	1
37	Desktop Computer, with Printer	3
38	Photocopier and Scanner	1



  
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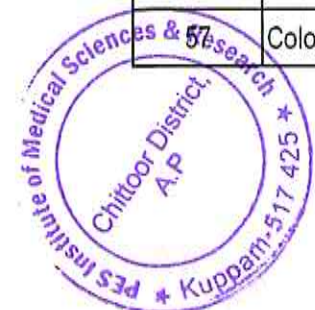
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PHYSIOLOGY		
S.No.	NAME OF THE ITEMS	No. Required
1	Sherrington Starling kymograph (electrically driven)	2
2	Myograph stand	2
3	Inductorium	2
4	Simple key	2
5	Short circuiting key	2
6	Pohl's commutator	2
7	Vibrating interrupter	2
8	Muscle trough	2
9	Muscle lever	2
10	Muscle grip of femur clamp	2
11	Hook and Weight set	2
12	Heart lever (simple & Starling)	2
13	Frog board for dissection	2
14	Enamel tray	2
15	Frog board cork lined with boss head	2
16	Low voltage unit for tapping 2 and 4 volts for stimulation	2
17	Electromagnetic time marker	2
18	Tuning fork time marker 100/sec	2
19	Electrodes	2
20	X-blocks	2
21	Spirit lamps	2
22	Marey's tambour	2
23	Microscopes, oil immersion	60+8
24	Demonstration eye piece	4
25	Double demonstration eye piece	4
26	Stage incubator	1
27	Westergren's pipette for E.S.R. on stand(with space pipette)	30
28	Wintrobe's pipette for ESR and PCV with stand	30



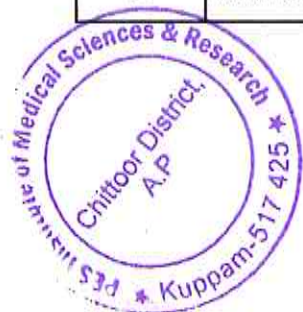
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PHYSIOLOGY		
S.No.	NAME OF THE ITEMS	No. Required
29	Perimeter Pristely Smith S/LP.984 B & T	15
30	Hemoglobin-meter Sahli's or Hellige (with spaces)	60
31	Hemocytometer	60
32	Sphygmomanometer (digital) (Mercury based instruments to be replaced with suitable)	60
33	Stethoscopes	60
34	Stethoscopes, demonstration with multiple ear pieces	4
35	Polygraphs	1
36	Venous pressure apparatus	2
37	Spirometer, ordinary	20
38	Gas analysis apparatus, Halden's student type	1
39	Van Slyke's apparatus manometric	1
40	Gas analyser automatic for CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub>	1
41	Douglas bag, complete	2
42	Basal metabolism apparatus	1
43	Mosso's Ergograph	10
44	Clinical thermometer (Mercury based instruments to be replaced with suitable)	60
45	Compass aesthesiometer	20
46	Thermo-aesthesiometer	20
47	Algometer	20
48	Apparatus for passive movement	1
49	Knee hammer	40
50	Stethograph	20
51	Bicycle Ergometer	1
52	Olfactometer	1
53	Ophthalmoscope	1
54	Schematic eye	2
55	Phakoscope	1
56	Perimeter with charts (Lister's)	5
	Color perception lantern Edridge green	2



  
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PHYSIOLOGY		
S.No.	NAME OF THE ITEMS	No. Required
58	Maddox rod	1
59	Newtons color wheel	1
60	Tuning fork to test hearing 32-10000 cps(sets-100, 256, 512 hz)	20
61	Dynamometer	2
62	Otorhinolaryngoscope	1
63	Sterilizer electrical	1
64	Instrument trolley	1
65	Stop watch	20
66	Multi channel Physiograph, 3 channels, complete with accessories	3
67	Student physiograph, (single channel) with accessories	8
68	Centrifuge, high speed with technometer	1
69	Colorimeter, photoelectric	1
70	pH meter electric	1
71	Refrigerator	1
72	Oxygen cylinder with trolley	1
73	CO2 cylinder with trolley	1
74	Electronic stimulator	1
75	Water distillation steel with spare heating elements	1
76	All glass distillation apparatus double stage	1
77	Voltage stabilizer	1
78	Thermometers, balances, microslides and glassware	As required
79	Digital Physiograph	2
80	Models and Charts	25 each
81	ECG Machine	3
82	Laptop	1
83	Desktop Computer, with Printer	3
84	Photocopier and Scanner	1
85	Multimedia Projector with screen	2



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