

ENERGY & SAFETY AUDIT REPORT

JUNE – 2021

D. D.Y. Patil Medical College, Hospital & Research Institute, Kolhapur.



Hospitals are institutions where the treatment of the sick and injured people is going on and usually function 24 hours per day, all year round. They usually consist of large buildings, and careful control of their internal climate is considered necessary. Substantial amount of heat is normally generated internally by the occupants and operating equipment. An effective cooling (and heating depending upon the external weather conditions.) and ventilation systems combined with good insulation of hospital building, usually reduce hospital's sensitivity to the outside weather. Hospitals also require standby electricity generators to ensure a continuous supply of power in emergencies and critical operations.

Generally, hospital building is designed for long-term use and, in practice, is often used for longer periods than its builders ever intended. The actual lifetime of building is normally over 60 years. During this period, the building is retrofitted and renovated many times. Reasons for this include the shorter life of technical equipment, the development of new types of equipment and health care facilities, new regulations, new energy-saving technologies and the ageing of the building itself.

When considering energy-efficiency in hospitals, it is important to keep in mind that it is not the end-use of energy alone, but also the need to control the indoor climate, that is one of the principal requirements. The indoor climatic requirements are determined by the hospital activities in the building. Once these are established, it is necessary to provide the required climate, ideally in the most economical way. Now a days, energy efficiency is increasingly becoming important requirement, but medical considerations remain the top priority in the hospitals.

The main source of energy used in this hospital is electrical energy. It is mainly used in this hospital for cooling/heating equipment, lighting, air compressors, water pumps, fans and ventilation. Other applications include laundry equipment; kitchen and canteen equipment; ovens and geysers and medical equipment including autoclaves, office facilities such as computers and photocopiers, utilities such as lifts, refrigerators, water coolers, etc.

Another source of energy is Compressed air can be divided into two main categories, namely medical air and technical air. Medical compressed air refers to the direct treatment and care of patients. Examples include breathing apparatus and surgical tools driven by the compressed air. The medical compressed air is subjected to very high standards for availability and quality. The technical compressed air is used for HVAC control systems, workshop applications or keeping containers under pressure.



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SUMMARY

Sr. No.	Floor Number	Total Load
Dr. D. Y. Patil Hospital		
1	Ground Floor	851036 W
2	First Floor	3616110 W
3	Second Floor	32221 W
4	Third Floor	48297 W
5	Fourth Floor	25067 W
6	Fifth Floor	54355 W
	Total	4627086 W
Nursing College		
6	Ground Floor	18025 W
7	First Floor	24140 W
	Total	42165 W



Major Electricity End-Users in Hospitals are as follow:

Air Conditioning System

Mainly split air conditioners are used here, and these Air Conditioners are consuming major share of the total electricity consumption. Air Conditioning and Ventilation system in hospital is required for:

- Maintaining the requisite indoor temperature, air distribution and humidity levels for thermal comfort.
- Maintaining indoor air quality, particularly in areas requiring prevention of infection

Building envelope design plays a very important role in the determination of Heat Ventilation and Air Conditioning capacity in the hospital.

Lighting

Lighting is a major electricity consumer next only to HVAC systems. Requirement of lights in a hospital varies widely depending upon the activity, time of day and the occupancy level. The complexity can be well understood from the simple fact that IS Code (NBC) 3646(edition 1992) recommends Illuminance level varying from one Lux for night lighting in some areas to 750 Lux in operation theaters for general requirements. At times special lights are used with illuminance of 10,000- 50,000 Lux in operation theaters. (Lux is the unit to measure light intensity.)

Electrical Motors

Water is consumed in different sections of the hospitals for various requirements. In this hospital, electrical motors are used for various purposes like, water pumping systems, Compressed air system, various laundry equipments etc, may account for 5-15% of total electricity consumption and offer scope for reducing energy consumption.



Medical Hospital Campus.

Details of the transformers are as mentioned below:

Transformer No.1:

Manufacturer: Siddhi Vinayak Transformer Industries, Kakati, Belgaum.

Rated KVA: 500 KVA.

Parameter	High Voltage	Low Voltage
Volts	11000(Volts)	433 Volts
Current	26.25 Amperes	666.7 Amperes
Frequency	50 Hz	Oil Temp.: 31 ⁰ c
Type of cooling	Oil Natural Air Natural	
Oil (Kg)	485 Kg.(550 Liters)	
Type	Wound Transformer	

Transformer No.2:

Manufacturer: Static Electricals, Pune.

Rated KVA: 630 KVA.

Parameter	High Voltage	Low Voltage
Volts	11000(Volts)	433 Volts
Current	33.07 Amperes	840 Amperes
Frequency	50 Hz	Oil Temp.: 31 ⁰ c
Type of cooling	Oil Natural Air Natural	
Volume of Oil	750 Liters	
Type	Wound Transformer	

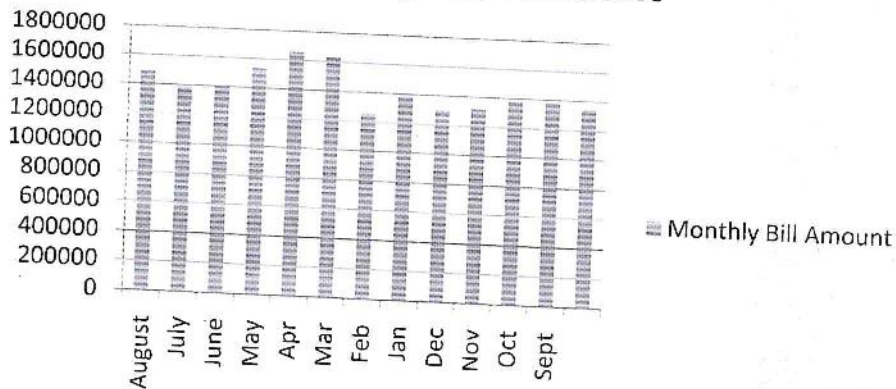
Month	Amount	KWH	MD
Aug-2021	1488860	114500	432
July-2021	1389029	103730	300
June-2021	1398298	104760	300
May-2021	1537717	116770	300



April-2021	1661399	125735	325
Mar-2021	1631715	119845	336
Feb-2021	1257381	91850	275
Jan-2021	1386397	102300	275
Dec-2020	1302229	95470	275
Nov-2020	1322330	95910	305
Oct-2020	1382541	102410	275
Sept-2020	1387541	102970	275
Aug-2020	1350893	99845	275
Total	1,84,96330	1376095	3948
Average	14,22,795	105853	307

Average cost of Unit is Rs. 13.441235/-

Monthly Bill Amount



17	Ophthalmology OPD	39	Split	1
	Ophthalmology OPD	40	Split	1
18	Conference Hall	41	Cassette	3
	Conference Hall	42	Cassette	3
	Conference Hall	43	Cassette	3
	Conference Hall	44	Cassette	3
	Conference Hall	45	Cassette	3
19	X-Ray Dept HOD Room	46	Split	1.5
	X-Ray Dept HOD Room	47	Split	1.5
20	Main O.T	48	Split	1.5
	Main O.T	49	Split	1.5
	Endocrinology	50	Split	2
	Septic O.T	51	Split	2
	Post O.T	52	Split	1.5
	Post O.T	53	Split	1.5
	O.T No 1	54	AHU Laminar Flow	8.5
	O.T No 2	55	AHU Laminar Flow	8.5
	O.T No 3	56	AHU Laminar Flow	8.5
	O.T No 4	57	AHU Laminar Flow	8.5
	O.T No 5	58	AHU Laminar Flow	8.5
	O.T No 6	59	AHU Laminar Flow	9
	O.T No 7	60	AHU Laminar Flow	8.5
	O.T No 8	61	AHU Laminar Flow	8.5
21	D.S.A Unit	62	Split	1.5
	O.T Passage	63	Cassette	3
	O.T Passage	64	Cassette	3
	O.T Passage	65	Cassette	3
	O.T Passage	66	Cassette	3
	Anesthesia	67	Split	1.5
22	2nd floor			
	SICU	68	Ducted	8.5
	SICU	69	Ducted	11
	MICU	70	Ducted	8.5
	MICU	71	Ducted	8.5
23	Medicine Ward	72	Split	1.5



	Medicine Ward	73	Split	1.5
	Medicine Ward	74	Split	1.5
24	Surgery Demo Room	75	Split	1.5
	Surgery Demo Room	76	Split	1.5
25	Surgery Seminar Room	77	Split	1.5
26	Medicine Seminar Room	94	Split	1.5
	Medicine Seminar Room	95	Split	1.5
	Medicine Seminar Room	96	Split	1.5
27	NICU			
	PICU	78	Split	1.5
	PICU	79	Split	1.5
	Clinic Demo Room	80	Split	1.5
28	Psychiatric Dept	81	Split	1.5
	Psychiatric Dept	82	Split	1.5
29	4th Floor Lab Skill lab	83	Split	1.5
		84	Split	1.5
		85	Split	1.5
		86	Split	1.5
		87	Split	1.5
		88	Split	1.5
		89	Split	1.5
	Research Lab HOD Cabin	90	Split	2
	Research Lab Covid-19	91	Split	1.5
	Research Lab	92	Split	1
	Research Lab	93	Split	1
	Research Lab	94	Split	1
	Research Lab	95	Split	1
30	R.N.T.C.P	96	Split	1.5
		97	Split	1.5
		98	Split	1.5
		99	Split	1.5
31	M.R.I Room	100	Ducted	11
		101	Ducted	11
32	C.T Scan	102	Ducted	5.5
		103	Ducted	5.5
33	Console Rooms ,ETC	104	VRF	16
34	Pathology	105	VRF	26
35	A. wing Skill Lab	106	VRF	30
		107	VRF	30
36	A. Wing Conference Room	108	Cassette	3
37	A. Wing Server Room	109	Split	1

38	A. Wing Skill Lab In charge Room	110	Split	1
39	A. Wing Skill Lab Admin Block	111	Split	1
40	A. Wing Passage	112	Cassette	2
41	Gynac OT	113	AHU Laminar Flow	8.5
42	Gynac OT Room	114	VRF	16
43	Gynac Pre Delivery Room	115	Split	1.5
44	Gynac Conference Room	116	Split	2
45		117	Split	2
			Total TR	439.5 T



1) Substation Cabin

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Room No.1: Panel Cabin				
Tube light	20 W	2	40	
Tube light	55 W	1	55	
Incandescent Bulb	60 W	3	180	Phase Indicators
Room No.2: 320 KVA Generator				
Tube light	20 W	1	20	
Tube light	55 W	1	55	
Tube light	45 W	1	45	
Room No.3: 500 KVA Generator				
Tube light	20 W	1	20	
Tube light	55 W	1	55	
Total			470 W	

2) Generator Details:

Generator 1 ▼

Manufacturer	M/s Kirloskar Oil Engines Limited.
KVA	320
KW	256 (0.8 PF)
Volts	415, 3 Phase, 50Hz
Amps	445.2 A
RPM	1500
Connection	Star
Tank capacity	850 Liter

Generator 2 ▼

Manufacturer	M/s Kirloskar Oil Engines Limited.
KVA	500
KW	400 (0.8 PF)
Volts	415, 3 Phase, 50Hz
Amps	695.6 A
RPM	1500
Connection	Star
Tank capacity	990 Liter

i) $V_{L-N} = 234 \text{ V}$ ii) $V_{L-E} = 228 \text{ V}$ iii) $V_{N-E} = 2.1 \text{ V}$ (Measured in Substation area)

3) Fire Fighting Cabin

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	2	40	
Motor-pump set	30,000 W	2	60,000	
Motor Pump set	7300 W	1	7300	
Other places:				
Gardening motor pump	11000 W	1	11000	
Submersible pump	7000 W	1	7000	
Total			85340 W	

Some useful tips for substation maintenance:

- Inspect substation fencing/ gate / lock/ signage/ damage.
- Inspect substation grounds - weed / etc.
- Inspect outside lighting.
- Check earth connection are tight and in good condition.
- Inspection paintwork condition.
- Check for oil leaks.
- Inspect cable condition.
- Inspect paintwork condition.
- Keep area near by the transformer clean
- Maintain Logbook of substation maintenance.

Street lighting:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Halogen Lamp	50 W	1	50	Substation
LED Lamp	150 W	1	150	Canteen back
LED Lamp	250 W	3	750	Canteen back
LED Lamp	150 W	1	15	Canteen back
LED Lamp	400 W	1	400	Canteen back
LED Lamp	350 W	2	700	Security Gate
LED Lamp	150 W	1	150	Security Gate
LED Lamp	250 W	2	500	Gate parking
LED Lamp	150 W	3	450	Gate parking
LED Lamp	200 W	1	200	Old store parking
LED Lamp	200 W	2	400	Accident ward
LED Lamp	350 W	3	1050	Temple area
LED Lamp	400 W	1	400	Temple area
Tube lights	20 W	22	440	College logo
LED Lamp	250 W	1	250	Near Dust Bin
Total			5905 W	

Security Cabin:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	1	20	
Ceiling Fan	80 W	1	80	
Total			100 W	



Ground floor passage and porch

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	13	260	
Ceiling Fan	80 W	5	400	9 in entrance porch
Light fittings	48 W	16	768	
Light fitting	15 W	81	1215	
Finger print scanner	5 W	2	10	
TV set	70 W	1	70	
Spot light	1W	3	3	
Water cooler	100 W	1	100	Show case
Total			2826 W	

MJPJY Counter 1:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	1	20	
Ceiling Fan	80 W	1	80	
CPU + Display	175 W	3	525	
Scanner cum printer	700 W	2	1400	
Total			2025 W	

MJPJY Counter 2:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	2	40	
Ceiling Fan	80 W	1	80	
CPU + Display	175 W	7	1225	
Scanner cum printer	500 W	5	2500	
X-ray viewer	20 W	1	20	
Total			3865 W	

Cashier Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	55 W	2	110	
Tube light	20W	1	20	
Ceiling Fan	80 W	1	80	
CPU + Display	175 W	4	700	
Scanner cum printer	700 W	4	2800	



Note counting machine	80 W	2	160	
Card swapping machine	10	2	20	
Total			3890 W	

Case paper room:

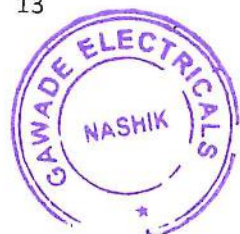
Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20W	2	40	
Ceiling Fan	80 W	1	80	
Wall mounted fan	50 W	3	150	
CPU + Display	175 W	4	700	
Scanner cum printer	700 W	4	2800	
Total			3770 W	

ECG Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20W	2	40	
Ceiling Fan	80 W	1	80	
ECG Machine	24 W	1	24	
Total			144 W	

Medicine OPDs:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
OPD 1				
Tube light	20W	1	20	
Ceiling Fan	80 W	1	80	
X-ray viewer	60 W	1	60	160 W
OPD 2				
Tube light	20W	1	20	
Ceiling Fan	80 W	1	80	
X-ray viewer	24 W	1	24	
CPU + Display	175 W	1	175	
Printer	600 W	1	600	899
OPD 3				
Tube light	20W	1	20	
Ceiling Fan	80 W	1	80	
X-ray viewer	24 W	1	24	124 W
OPD 4				
Tube light	20W	1	20	
Ceiling Fan	80 W	1	80	
X-ray viewer	24 W	1	24	124 W
Total			1307 W	



Ajit Patil Cabin:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	6	90	
Ceiling Fan	80 W	1	80	
CPU + Display	175 W	2	175	
Scanner cum printer	600 W	1	600	
Total			945 W	

Dietician Cabin:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	2	30	
Tube light	20 W	2	40	
X-ray viewer	30 W	2	60	
Total			130 W	

Dressing Room

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	40	Male Dressing Room
Fan	80 W	1	60	
Tube light	20 W	1	40	Female Dressing Room
Fan	80 W	1	60	
Total			200 W	

Minor Operation Theater:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	7	140	
Operation Lamp	500 W	1	500	
Suction Machine	85 W	1	85	
Monitor	20 W	1	20	
Total			745 W	

Mother craft Unit:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	4	60	
Light fittings	20 W	2	40	
Fan	80 W	2	160	
Total			260 W	



Immunization:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	2	40	
Fan	80 W	1	80	
Pedestal Fan	50 W	1	50	
CPU + Display	175 W	1	175	
Scanner cum printer	600 W	1	600	
Freezer	264 W	1	264	
X-ray viewer	60 W	2	120	
Total			1329 W	

Pediatrics:

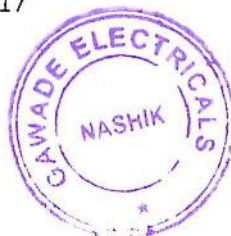
Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	2	40	
Fan	80 W	1	80	
CPU + Display	175 W	1	175	
Scanner cum printer	700 W	1	700	
Fridge	100 W	1	100	
X-ray viewer	60 W	4	240	
Total			1335 W	

Pediatrics Demo Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	6	90	
Fan	80 W	6	480	
Electronic Trade mill	700 W	1	700	
Auto traction unit	20 W	1	20	
Freezer	264 W	1	264	
Total			1554 W	

ORT Center:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
ORT center				
Tube Light	20 W	1	20	
Fan	80 W	1	80	
OPD 1				
Tube Light	20 W	1	20	



Fan	80 W	1	80	
Stadiometer	25 W	1	25	
X-ray viewer	20 W	1	20	
OPD 2				
Tube Light	20 W	1	20	
Fan	80 W	1	80	
X-ray viewer	20 W	1	20	
CPU + Display	175 W	1	175	
OPD 3				
Tube Light	20 W	1	20	
Fan	80 W	1	80	
Weighing scale	17 W	1	17	
CPU + Display	175 W	1	175	
Total			832 W	

Assistant Professor (Obs & Gynac)

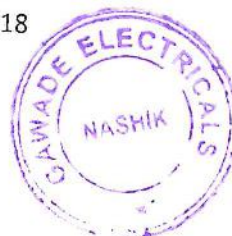
Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	2	40	
Fan	80 W	1	80	
CPU + Display	175 W	1	175	
X-ray viewer	60 W	4	240	
Total			535 W	

Post Natal Clinic:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	1	20	
Fan	80 W	1	80	
X-ray viewer	60 W	1	60	
Total			160 W	

Colposcopy:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	2	30	
Fan	80 W	1	80	
CPU + Display	175 W	1	175	
Scanner cum printer	600 W	1	600	
Sterilizer Unit	1000 W	1	1000	
colposcope	46 W	1	46	
Total			1931 W	



Professor and HOD (Obs & Gynac)

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	2	40	
Fan	80 W	1	80	
X-ray viewer	60 W	1	60	
Total			180 W	

OPD

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	20 W	1	20	
Fan	80 W	1	80	
LED Bulb	10 W	1	10	
Faetal Doppler	5 W	1	5	
Total			115 W	

OPD (Room no. 3)

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	10	150	
Light fittings	1 W	5	5	
Fan	80 W	3	240	
TV set	80 W	1	80	
TV set	70 W	1	70	
Set top box	17 W	1	17	
Total			562 W	

TMT Test:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	4	60	
Tube light	20 W	1	20	
Trade mill	230W	1	230	
CPU + Display	175 W	3	525	
Scanner cum printer	600 W	2	1200	
Total			2035 W	



Dental OPD (16)

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	17	255	
Ceiling Fan	80	4	320	
X - ray machine	900 W	1	900	
Dental chair	800 W	2	1600	
Air purifier	50 W	1	50	
Ultrasonic Cleaner	70 W	1	70	
UV cleaner	30 W	1	30	
Total			3225 W	

MS Cabin (18)

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	12	180	
Light fitting	10 W	2	20	
Ceiling Fan	80	3	240	Washroom
TV set	370 W	1	370	
Set top box	17 W	1	17	
Corona guard	30 W	1	30	Set top box
CPU + Display	146 W	1	146	
CPU + Display	175 W	1	175	
Scanner + printer	700 W	1	700	
Microwave oven	1400	1	1400	
X -ray viewer	15	1	15	
Total			3293 W	

Hon. Sanjay sir cabin:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	36 W	7	252	
Light fitting	10 W	2	20	
Light fitting	15 W	1	15	Washroom
Tube light	20W	1	20	
Tube light	12 W	1	12	
Ceiling Fan	80	4	320	
TV set	370 W	1	370	
Set top box	17 W	1	17	
Pedestal fan	50 W	1	50	
Steam Iron	1500 W	1	1500	
CPU + Display	175 W	1	175	



Emergency ventilator	300 W	1	300	
Microwave oven	1400	1	1400	
Fridge	100 W	1	100	
Exhaust fan	30 W	2	60	
Fan	50W	1	50	
Total			4661 W	

Casualty:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Rest Room				
Light fitting	15 W	8	120	
Tube light	20W	2	40	
Ceiling Fan	80 W	2	160	
Changing Room				
Light fitting	15 W	9	135	
Ceiling Fan	80 W	1	80	3 in passage
Operation Theater and Labor Room				
Light fitting	15 W	3	45	
Fan	50 W	1	50	
Operation Theater				
Light fitting	15 W	4	60	
Light fitting	36 W	4	144	
Radiant warmer	600 W	1	600	
Suction machine	85 W	1	85	
Operation Theater				
Light fitting	36 W	4	144	
Anesthesia workstation	1840 W	1	1840	
Suction machines	85W	3	255	
OT LED lamps	40 W	1	40	
Total			3798 W	

Casualty Ward:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	36 W	24	864	
Light fitting	10 W	47	470	
Ceiling Fan	80	20	1600	
Patient Monitors	90 W	7	630	
Patient monitor	150 W	1	150	
Ventilators	300W	5	1500	
X -ray machine	900W	1	900	
Water cooler	100 W	1	100	
LED lamp	40 W	14	560	
Total			6774 W	



Intupatient Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	36 W	4	144	
Ceiling fan	80 W	1	80	
Mini Freezer	130 W	1	130	
Total			354 W	

Passage and Lobby:

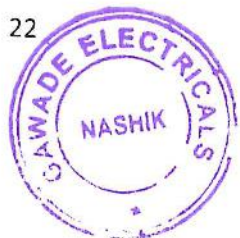
Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	5	75	
Light fitting	10 W	2	20	Outside
Pedestal Fan	50	1	50	
CPU + Display	175 W	1	175	
Printer	600 W	1	600	
Total			920 W	

CMO Cabin:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	10 W	3	144	
Ceiling fan	80 W	1	80	
X-ray viewer	60 W	1	60	
Total			284 W	

Swab Test:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	200 W	2	400	
Tube light	20 W	2	40	
Pedestal fan	50 W	1	50	
CPU + Display	175 W	2	350	
Printer	600 W	1	600	
Total			1440 W	



Antigen Test 1:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	10 W	2	20	
Tube light	20 W	1	20	
Pedestal fan	50 W	1	50	
Laptop	100 W	1	100	
Printer	700 W	1	700	
Total			890 W	

Antigen Test 2:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	10 W	2	20	
Tube light	20 W	1	20	
Pedestal fan	50 W	1	50	
Laptop	100 W	1	100	
Printer	700 W	1	700	
Fridge	150W	1	150	
Total			1040 W	

IT Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	8	144	
CPU + Display	175 W	2	350	
Printer	600 W	1	600	
Printer	700 W	1	700	
Total			1794 W	

Toilet:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	1	15	

Passage

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	10 W	49	490	
Light fitting	1 W	12	12	
Total			502 W	



X-ray and Sonography:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	20 W	2		
Electrical Panel Room CPU + Display	175 W	2	350	
Printer	600 W	1	600	
TV set	70 W	1	70	
Set to box	17 W	1	17	
Pedestal Fan	50 W	1	50	
Total			1087 W	

Electrical Panel Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	20 W	1	20	
120 KVA inverter	3960 W	1	3960	With 30 Batteries of 100 AH Capacity.
Total			3980	

CT Scan Center:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	9	135	
CT scanning machine	45000 W	1	45000	
Total			45135 W	

Console Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	10	150	
CPU + Display	175 W	7	1225	
Printer	600 W	1	600	
Printer	700 W	1	700	
Total			2675 W	



MRI Scanner Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	12	180	
CT Scanner	2500 W	1	2500	
Total			2680 W	

UPS Room

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	1	15	
20 KVA inverter	2574	1	2574	
Total			2589 W	

X-ray Room / Store

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	11 W	8	88	
Fridge	125 W	1	125	
Total			213 W	

Neighboring Room

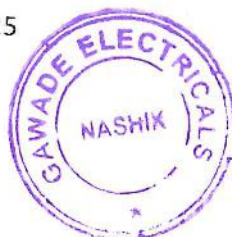
Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light Bulbs	10 W	5	50	
X-ray viewer	50 W	1	50	
CPU + Display	175	3	525	
Total			625 W	

Mammography Room

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light Bulbs	10 W	4	40	
Mammography machine	3000 W	1	3000	
Total			3040 W	

Sonography Machine

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light Bulbs	10 W	11	110	
Pedestal Fan	50 W	1	50	
Sonography Machine	400 W	2	800	
Total			960 W	



Central Clinical Laboratory

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Hematology and Coagulation Cabin				
Light fitting	15 W	6	90	
Cell counter	575 W	1	575	
Cell counter	110 W	1	110	Five part
HP ink tank printer	10 W	1	10	Three part
CPU +Display	175	1	175	
Biochemistry Laboratory				
Light fitting	15 W	6	90	
Ceiling Fan	50 W	1	50	
Siemens Rapid Lab	80 W	1	80	
Mispa nano plus	1300 W	1	1300	
CPU +Display	175	1	175	
Total			2480 W	

Immunoassay Department:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	6	90	
Ceiling Fan	50 W	1	50	
Adira centaur XP	2000 W	1	2000	
Remi Centrifuge	660 W	1	660	
CPU +Display	175 W	1	175	
Total			2975 W	

Cyto-pathology

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	6	90	
Biopsy Machine	3200 W	1	3200	
Coomb Tester	300 W	1	300	
Total			3590 W	



VITEK Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	6	90	
Ceiling Fan	50 W	1	50	
BD Projector	690 W	1	600	
Vitek 2 compact	920 W	1	920	
CPU + Display	175 W	1	175	
Printer	700 W	1	700	
Total			2535 W	

HOD Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	6	90	
Ceiling Fan	50 W	1	50	
Fridge	125 W	2	250	
Water cooler	120 W	1	120	
CPU + Display	175 W	2	175	
Total			625 W	

Reporting Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	6	90	
Ceiling Fan	50 W	1	50	
Meltroscope	58 W	1	58	
CPU + Display	175 W	1	175	
Total			373 W	

FNAC :

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	4	60	
Ceiling Fan	50 W	1	50	
Total			110 W	



Housekeeping Room:

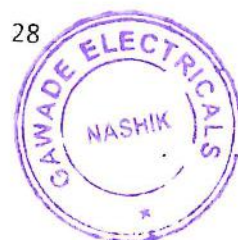
Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Housekeeping Room				
Tube light	20 W	2	40	
Sample Room				
Light fitting	15 W	5	75	
Ceiling fan:	50 W	1	50	
Cleaning Room				
Light fitting	15 W	6	90	
Ceiling Fan	80 W	2	160	
Fan	75 W	2	150	
Autoclave	2000 W	1	2000	
Autoclave	1000 W	1	1000	
Passage				
Light fitting	15 W	14	210	
Total			3775 W	

Serology 1:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	5	75	
Ceiling Fan	80 W	2	160	
Deep freezer	5000 W	1	5000	
Incubator	1000W	1	1000	
Rapid lab	80 W	1	80	
CRP Tester	80 W	1	80	
CRP Tester	230 W	1	230	
CPU +Display	175 W	1	175	
Centrifuge	138 W	1	138	
Uniplus 600	40 W	1	40	
Total			6978 W	

Serology2:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	6	90	
Ceiling Fan	80 W	2	160	
Fridge	110 W	1	110	
Incubator	1000 W	1	1000	
Bacteriological incubator	750	1	750	
Total			2110 W	



Bacteriology:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	6	90	
Ceiling Fan	80 W	2	160	
Laminar air flow	500 W	1	500	
Incubator	1000 W	1	1000	
Total			1750 W	

Mycology:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	6	90	
Ceiling Fan	80 W	2	160	
Fridge	125 W	1	125	
Incubator	1000 W	1	1000	
Electric microscope	57 W	5	285	
Blower	700 W	1	700	
Total			2360 W	

Inverter Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
5 KVA Inverter	1386 W	1	1386	
6 KVA Inverter	739 W	1	739	10 X 105AH
Total			2185 W	16 X 35 AH

Reception Area:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fittings	15 W	9	135	
CPU + Display	175 W	1	175	
Printer	600 W	1	600	
Photo Copier	2760 W	1	2760	
Photo Copier	1012 W	1	1012	
Sample Collection Area:				
Light fittings	15 W	6	90	
Ceiling Fan	50 W	1	50	
Total			4822 W	



Blood Bank Reception:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	10 W	7	70	
Shoe Cover Wrapper	1300 W	1	1300	
Total			1370 W	

Medical officer's Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube	54	4	216	
Ceiling Fan	80 W	1	80	
LED fitting	72 W	2	144	
Total			440 W	

Passage:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube	54 W	4	216	
LED fitting	22 W	5	100	
Total			316 W	

Refreshment Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	72 W	2	144 W	

Aphaeresis Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	72 W	4	288	
Cobe spectra	920 W	1	920	
Total			1208 W	



Serology Lab:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube	72 W	2	144	
CPU + Display	175	1	175	
Fridge	100 W	1	100	
Card centrifuge	1150W	1	1150	
Cartridge warmer	600 W	1	600	
Tube sealer	1000 W	1	1000	
Binocular microscope	58 W	1	58	
Blood Centrifuge	138 W	1	138	
Freezer	150 W	1	150	
Total			3515 W	

TTD Testing:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube	72 W	2	144	
Tube light	20 W	1	20	
CPU + Display	175	1	175	
Printer	70 W	1	70	
Fridge	150 W	1	150	
Incubator	1500 W	1	1500	
Centrifuge	150 W	1	150	
Elisa Washer	240 W	2	480	
Total			2689 W	

Washing and sterilization

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube fittings	72 W	2	144	
Exhaust Fan	35 W	1	35	
Hot air oven	1500 W	1	1500	
Autoclave	1000 W	1	1000	
Total			2679 W	

Blood Component Storage:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube fitting	72 W	2	144	
Tube light	20 W	2	40	
Deep freezer	3200 W	1	3200	
Blood bank refrigerator	2000 W	1	2000	
Blood bank refrigerator	2000 W	1	2000	



Deep freezer	2000 W	1	2000	
Platelet agitator	500 W	1	500	
Total			9884 W	

Office and Record Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube fittings	72 W	4	288	
Hematology analyzer	180 W	1	180	
Coagulometer	690 W	1	690	
Digital Ph Meter	15 W	1	15	
Total			1172 W	

Component Preparation Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube fitting	72 W	6	432	
Laminar air flow	500 W	1	500	
Platelet agitator	500 W	1	500	
Refrigerated centrifuge	1955 W	1	1955	
Plasma bath	1100 W	1	1100	
Cryo bath	1600 W	1	1600	
Total			6087 W	

Blood Collection Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube fitting	72 W	4	288	
Donor station	120 W	3	360	
Blood bank Refrigerator	2000 W	1	2000	
Fridge	150 W	1	150	
Total			2798 W	

Ground Floor Medical stores Lobby:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	20 W	11	220	
Ceiling fan	80 W	3	240	
Total			460 W	



ENT OPD:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube fitting	6 W	4	24	
Audiometry equipment	25 W	1	25	
Scanner + printer	700 W	1	700	
Laptop	100 W	1	100	
Impedance audio meter	16 W	1	16	
Total			865 W	

ENT HOD / OPD1

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
LED Tube fitting	6 W	4	24	
Ceiling Fan	80 W	1	80	
X- ray viewer	36 W	1	36	
CPU + Display	175	1	175	
Printer	600 W	1	600	
Bull lamp	18 W	1	18	
Total			933 W	

ENT OPD 2:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	20 W	2	40	
Ceiling Fan	80 W	1	80	
X- ray viewer	36 W	1	36	
CPU + Display	175	1	175	
Bull lamp	18 W	1	18	
Total			349 W	

ENT OPD 3:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	4	24	
Ceiling Fan	80 W	1	80	
X- ray viewer	36 W	1	36	
Suction machine	85 W	1	85	
Bulls lamp	18 W	3	54	
Total			279 W	



ENT OPD 4:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	4	24	
Ceiling Fan	80 W	1	80	
X- ray viewer	36 W	1	36	
Fridge	125 W	1	125	
Sterilizer	1000 W	1	1000	
Microscope	210 W	1	210	
TV set	30 W	1	300	
Scanner + Printer	700 W	1	700	
Light source	200 W	3	600	
Suction machine	85 W	1	85	
Total			3160 W	

ENT OPD 5:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	6	36	
Ceiling Fan	80 W	1	80	
X- ray viewer	36 W	1	36	
Projector	700 W	1	700	
Printer	600 W	1	600	
TV set	100 W	1	100	
CPU +Display	175	1	175	
Scanner + Printer	700 W	1	700	
Total			2427 W	

ENT OPD 6:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	4	24	
Ceiling Fan	80 W	1	80	
Laptop	100 W	1	100	
Total			204 W	



Optho OPD 1:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	6	36	
Ceiling Fan	80 W	1	80	
X- ray viewer	36 W	1	36	
Vision drum	10 W	1	10	
Near vision drum	5 W	1	5	
TV set	85 W	1	85	
Keratometer	100 W	1	100	
Slit lamp	30 W	1	30	
Surgical microscope	50 W	1	50	
Total			432 W	

Optho OPD 2:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	2	12	
Ceiling Fan	80 W	1	80	
Vision drum	10 W	1	10	
Near vision drum	5 W	1	5	
CPU + Display	175 W	1	175	
Scanner + printer	700 W	1	700	
Slit lamp	30 W	1	30	
Perimeter	40 W	1	40	
Total			1052 W	

Optho OPD 3:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	2	12	
Ceiling Fan	80 W	1	80	
Vision drum	10 W	1	10	
Near vision drum	5 W	1	5	
CPU + Display	175 W	1	175	
Scanner + printer	700 W	1	700	
Keratometer superkms6	5 W	1	5	
Lenso-meter	25 W	1	25	
Total			1012 W	



Ophtho OPD 4:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	2	12	
Ceiling Fan	80 W	1	80	
Specular microscope	100 W	1	100	
CPU + Display	175 W	1	175	
Scanner + printer	700 W	1	700	
Total			1067 W	

Ophtho OPD5:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	2	12	
Ceiling Fan	80 W	1	80	
Fridge	125 W	1	125	
Slit-meter	30 W	1	30	
Total			247 W	

Clinical Demo Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	6	90	
Wall mounted Fan	50 W	2	100	
X- ray viewer	36 W	1	36	
Total			226 W	

Optical Shop:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	6 W	2	12	
Wall Fan	50 W	1	50	
Tube light	14 W	3	42	
Total			104 W	



Medical Shop:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	16	240	
Tube lights	20 W	13	60	
Wall Fan	50 W	1	50	
CPU +Display	175 W	4	700	
Printer	70 W	1	70	
Fridge	200 W	1	200	
Note counting machine	555 W	1	555	
Total			1875 W	

Time Office:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Passage				
Tube lights	20 W	10	200	
Ceiling Fans	80 W	4	120	
Finger print scanner	5 W	11	55	
Cabin Number 1:				
Tube lights	20 W	1	20	
CPU +Display	175 W	1	175	
Cabin Number 2:				
Tube lights	20 W	2	40	
Wall Fan	50 W	1	50	
Ceiling Fans	80 W	1	80	
CPU +Display	175 W	2	350	
Printer	1058 W	1	1058	
Printer	600 W	1	600	
Cabin Number 3:				
Tube lights	20 W	1	20	
Ceiling Fans	80 W	1	80	
CFL lamp	80 W	1	80	
Cabin Number 4:				
CFL lamp	80 W	2	160	
Tube lights	20 W	2	40	
Total			3218 W	



First Floor:

First Floor Passage:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	15 W	10	150	
Light fitting	36 W	15	540	
Tube lights	20 W	4	80	
CFL light	36 W	1	36	
Water cooler	100 W	1	100	
Total			906 W	

Gynac Section:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
tube lights	20 W	12	240 W	

General Ward:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
General ward				
Light fitting	15 W	12	180	
Light fitting	6 W	45	270	
Tube lights	20 W	36	720	
Ceiling fan	80 W	24	1920	
Gynac Museum				
Tube lights	20 W	2	40	
Ceiling fan	80 W	1	80	
Nursing Superintendent				
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
Professor Room				
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
CFL Bulb	10 W		10	
Associate professor Room				
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
CFL Bulb	10 W	2	20	
Geyser	2000 W	1	2000	
Associate professor Room				
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	



CFL Bulb	10 W	2	20	
Assistant Professor				
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
CFL Bulb	10 W	2	20	
Departmental Research Lab.				
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
CFL Bulb	10 W	2	20	
Library				
Tube lights	20 W	2	40	
Ceiling fan	80 W	1	80	
CFL Bulb	10 W	1	10	
CPU +Display	175 W	1	175	
Laboratory				
Tube lights	20 W	2	40	
Ceiling fan	80 W	1	80	
CFL Bulb	10 W	1	10	
Professor and HOD Room				
Tube lights	20 W	3	60	
Ceiling fan	80 W	1	80	
CFL Bulb	10 W	3	30	
TV set	80 W	1	80	
Set top box	17 W	1	17	
Pediatric Doctor				
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
CFL Bulb	10 W	2	20	
20 KVA Inverter	1782 W	1	1782	5694 W
Ladies washroom:				3912
tube lights	55 W	3	165	
LED Bulb	10 W	1	10	
Safety labor Room				
Tube lights	20 W	2	40	
Ceiling fan	80 W	1	80	
CFL Bulb	10 W	1	10	
Seminar Room				
Ceiling fan	80 W	6	480	
Light fitting	15 W	12	180	
TV set	330 W	1	330	
Hysteroscopy Room				
Light fitting	36 W	4	144	
Endoscope	460 W	1	460	
Endoscope light source	120 W	1	120	



Display Unit	69 W	1	69	
Combi box	750 W	1	1	
Eclempsia				
Light fitting	36 W	2	72	
Ceiling fan	50 W	2	100	
Patient monitor	90 W	1	180	
Syringe pump	10 W	2	20	
Sonography Room:				
Tube light fitting	18 W	4	72	
Ceiling fan	80 W	1	80	
Sonography Machine	75 W	1	75	
ICU				
light fitting	15 W	6	90	
light fitting	36 w	7	252	
Patient monitor	90 W	6	540	
Ceiling fan	50 W	6	300	
Defibrillator	70 W	1	70	
Syringe pump	10 W	6	60	
Scrub Station				
Light fitting	6 W	3	18	
Ceiling fan	80 W	1	80	
Gynac Operation Theater				
Light fitting	6 W	4	24	
Light fitting	6 W	5	30	Passage
Light fitting	36 W	3	108	Preparation
Light fitting	6 W	5	30	operation
Intensive care warmer	600 W	2	1200	theater
Suction machine	85 W	1	85	
OT Lamps	40 W	1	40	
Anesthesia workstation	1840 W	1	1840	
Defibrillator	70 W	1	70	
Intensive care warmer	600 W	2	1200	
Light fitting	6 W	6	36	
Labor Room OT				
Light fitting	6 W	10	60	Student view
Light fitting	36 W	4	144	
Ceiling fan	50 W	4	200	
Pedestal Lights	50 W	6	300	
Meditin warmer	1000 W	2	2000	
Weighing machines	57 W	5	285	
Labor Room:				
Light fitting	36 W	6	216	
Light fitting	6 W	4	24	
Ceiling fan	50 W	3	150	
FHS Monitors	50 W	5	250	

Patient monitor	90 W	1	90
Doctors Duty Room:			
Light fitting	6 W	4	24
Ceiling fan	80 W	1	80
Pantry			
Light fitting	6 W	2	12
Ceiling fan	80 W	1	80
Doctors Lounge			
Light fitting	6 W	6	36
Ceiling fan	80 W	1	80
Treatment Room			
Light fitting	6 W	6	36
Ceiling fan	80 W	1	80
Ladies common Toilet			
Tube lights	20 W	2	40
Light bulb	10 W	1	10
Geyser	2000 W	1	2000
Visitor Dining Room			
Tube lights	20 W	1	20
Ceiling fan	80 W	1	80
Store			
Tube lights	20 W	1	20
Ceiling fan	80 W	1	80
Doctors Room			
Tube lights	20 W	1	20
Ceiling fan	80 W	1	80
Nurse Duty Room			
Tube lights	20 W	1	20
Ceiling fan	80 W	1	80
Total			
			20952 W

Operation Theater Section

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
OT Pantry				
Tube lights	20 W	1	20	
Light bulb	10 W	1	10	
Aqua-guard	25 W	1	25	
Doctor Lounge				
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
OT In-charge				



Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
Post Operative 1				
Light fitting	15 W	8	120	
Ceiling fan	80 W	2	160	
Patient Monitor	90 W	4	360	
Post Operative 2				
Light fitting	15 W	8	120	
Ceiling fan	80 W	2	160	
Patient Monitor	90 W	4	360	

OT Passage:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	36 W	17	612 W	

Operation Theater No. 1 (Emergency Surgery)

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	36 W	4	144	
OT Lamps	94 W	1	94	54+40
Patient warmer	600 W	1	600	
Anesthesia work station	1840 W	1	1840	
Cauty Machine	400 W	1	400	
Patient monitor	90 W	1	90	
Suction Machine	85 W	1	85	
Pass box	50 W	1	50	
X-ray viewer	45 W	1	45	
Total			3348 W	

Operation Theater No. 2 (Orthopedic Surgery)

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	36 W	6	144	
OT Lamps	94 W	1	94	54+40
Torrificate machine	230 W	1	230	
Anesthesia work station	1840 W	1	1840	
Cauty Machine	400 W	1	400	
Patient monitor	90 W	1	90	
Suction Machine	85 W	1	85	
Pass box	50 W	1	50	
X-ray viewer	45 W	1	45	
X-ray image intensifier	3450 W	1	3450	



Total			6428 W	
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Operation Theater No. 3

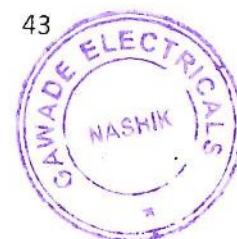
Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	36 W	7	252	
OT Lamps	94 W	1	94	54+40
Surgical camera	100 W	1	100	
Micro divider system	700 W	1	700	
ENT drill unit	230 W	1	230	
Anesthesia work station	600 W	1	600	
Cauty Machine	760 W	1	760	
Patient monitor	575 W	1	575	
Suction Machine	85 W	2	170	
Manman Unit	200 W	1	200	
Pass box	50 W	1	50	
Total			3959 W	

Operation Theater No. 4

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	36 W	6	216	
OT Lamps	108 W	1	108	54+40
Anesthesia work station	1840 W	1	1840	
Cauty Machine	760W	1	760	
Patient monitor	90 W	1	90	
Suction Machine	85 W	1	85	
Pass box	50 W	1	50	
X-ray viewer	45 W	1	45	
HD Camera	138 W	1	138	
HD Monitor	150 W	1	150	
Patient warmer	600 W	1	600	
Total			3812 W	

Operation Theater No. 5

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	36 W	6	144	
OT Lamps	94 W	1	94	54+40
X-ray viewer	45 W	1	45	
LED light source	120 W	1	120	
LCD Monitor	69 W	1	69	
CO ₂ Insufflators	1150 W	1	1150	
Anesthesia work station	1840 W	1	1840	



Cauty Machine	400 W	1	400	
Patient monitor	90 W	1	90	
HD Camera	138 W	1	138	
HD Monitor	150 W	1	150	
Pass box	50 W	1	50	
Patient warmer	600 W	1	600	
Total			4890 W	

Operation Theater No. 6

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	36 W	6	216	
OT Lamps	94 W	1	94	54+40
X-ray viewer	45 W	1	45	
X-ray image intensifier	3450 W	1	3450	
Torrificate machine	230 W	1	230	
Anesthesia work station	2300 W	1	2300	
Cauty Machine	400 W	1	400	
Patient monitor	90 W	1	90	
Pass box	50 W	1	50	
Total			6803 W	

Operation Theater No. 7

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	36 W	9	324	
OT Lamps	40 W	1	40	54+40
Anesthesia work station	1840 W	1	1840	
FECO machine		2		
Microscope		2		
Suction Machine	85 W	1	85	
Pass box	50 W	1	50	
X-ray viewer	45 W	1	45	
Total			3348 W	

Operation Theater No. 8

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	36 W	4	144	
OT Lamps	94 W	1	94	54+40
X-ray viewer	45 W	1	45	
LED source	600 W	1	600	
Anesthesia work station	1840 W	1	1840	
Cauty Machine	200 W	1	200	
Patient monitor	90 W	1	90	



Pass box	50 W	1	50	
Total			3063 W	

Operation Theater No. 9 (Septic OT)

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Light Fittings	15 W	6	90	
OT Lamps	94 W	1	94	54+40
X-ray viewer	15 W	1	15	
Anesthesia work station	600 W	1	600	
Cauty Machine	200 W	1	200	
Patient monitor	600 W	1	600	
Total			1590 W	

OT Rooms:

Rooms	(20 W) Tube light	(80 W) Fan	(10 W) Bulb	Total
Male changing room	1	1	1	110 W
Resident Interns	1	1	1	110 W
OT staff	1	1	1	110 W
OT store	1	1	1	110 W
Female consultant	1	1	1	110 W
Female Resi. & Interns	1	1	1	110 W
Toilet	0	0	1	10 W
Total				670 W

Counseling Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
Coffee maker	1200 W	1	1200	
Microwave oven	1400 W	1	1400	
X-ray viewer	45 W	1	45	
CPU + Display	175 W	1	175	
Total			2920 W	

OT Store:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	1	20	
fan	80 W	1	80	
Total			100 W	



Post operating Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	3	60	
fan	80 W	2	160	
Total			220 W	

OT Passage and Toilet

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light fitting	36 W	2	72	
CFL Lamp	12 W	2	24	Toilet
Total			96 W	

Pre-operative Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	3	60	
fan	80 W	2	160	
X-ray viewer	45 W	1	45	
Patient Monitor	345 W	1	345	
Total			610 W	

HOD Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	1	20	
CFL Bulb	10 W	1	10	
Ceiling fan	80 W	1	80	
X-ray viewer	36W	1	36	
TV set	70 W	1	70	
Printer	700 W	1	700	
CPU + Display	175 W	1	175	
Total			1091 W	

Store (2):

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	2	40	
Ceiling fan	80 W	1	80	
X-ray viewer	20 W	1	20	Toilet
Total			140 W	



First Floor X- ray section:

Passage:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube lights	20 W	2	40 Watts	

Bio-Medical Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	2	40	
Ceiling fan	80 W	1	80	
CPU + Display	175 W	1	175	
Printer	600 W	1	600	
Printer	700 W	700	700	
Total			1595 W	

Associate Professor Room:

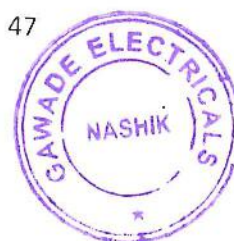
Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	2	40	
LED bulb	10 W	1	10	
Ceiling fan	80 W	1	80	
Wall fan	50 W	1	50	
CPU + Display	175 W	2	350	
Printer	600 W	1	600	
X -ray viewer	36 W	1	36	
Total			1166 W	

Museum:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	2	40	
Ceiling fan	80 W	1	80	
X -ray viewer	36 W	6	216	
Total			336 W	

Washing Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	55 W	1	55	
Washing machine	470 W	1	470	
Washing machine	1800 W	1	1800	9.5 kg.
Total			2325 W	5.5 Kg



Housekeeping store:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	1	20	
CPU + Display	175 W	1	175	
Total			195 W	

Central sterile Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	9	180	
Tube lights	55 W	4	220	
Tube lights	45 W	1	45	
Exhaust fan	50 W	2	100	
Ceiling fan	80 W	2	160	
Cylindrical Autoclave	18000 W	2	36000	
Cylindrical Autoclave	9000 W	1	9000	
Flash Autoclave	3000 W	1	3000	
ETO Sterilizer	4500 W	1	4500	
Periclave	20 W	2	40	
Printer	92 W	1	92	
Ultrasonic Cleaner	2000 W	1	2000	
Drying Cabinet	805 W	1	805	
Total			56142 W	

Other side of X-ray section:**Passage & Bathroom :**

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	3	60	
Ceiling fan	80 W	2	160	
Light fitting	15 W	3	45	
Tube light	18 W	1	18	
Total			278 W	Bathroom

Seminar Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	2	40	
Ceiling fan	80 W	1	80	
Projector	700 W	1	700	
X-ray viewer	36 W	5	180	
Total			1000 W	



Professor and HOD Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	55 W	2	110	
LED bulb	10 W	1	10	
Ceiling fan	80 W	1	80	
CPU + Display	175 W	1	175	
Printer	700 W	1	700	
X-ray viewer	36 W	3	108	
Total			1183 W	

Professor Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	55 W	1	55	
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
X-ray viewer	36 W	2	72	
Total			227 W	

X-ray Room (500 mA)

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
X-ray Machine	29050 W	1	29050	
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
X-ray viewer	36 W	1	36	
Total			29186 W	

X-ray Room (800 mA)

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	55 W	2	110	
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
X-ray machine	80000	1	80000	
X-ray viewer	36 W	2	72	
TV Display	70 W	1	70	
Total			80352 W	



X-ray Room (300 mA)

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	55 W	1	55	
Ceiling fan	80 W	1	80	
X-ray machine	32000	1	32000	
X-ray viewer	36 W	1	36	
Total			32171 W	

X-ray Room (800 mA)

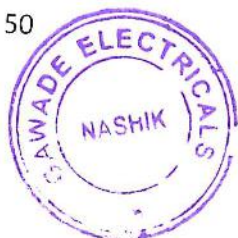
Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	55 W	4	220	
Ceiling fan	80 W	2	160	
X-ray machine	80000	1	80000	
X-ray viewer	36 W	1	36	
TV Display	70 W	1	70	
Total			80486 W	

Other Rooms:

Room	Tube light(20 W)	Fan(80 W)	Remark
Library	1	1	100 W
Store	1	1	100 W
Store	1	1	100 W
Ladies Toilet	2	0	40 W
Gents Toilet	2	0	40 W
Reading Hall	23	12	1420 W
Housekeeping Changing	2	0	40
Total			1840 W

Lecture Hall:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Spot light	8 W	32	256	
Spot light	10 W	40	400	
Public Address System	100 W	1	100	
Projector	700 W	1	700	
Total			1456 W	



Medical Record Section:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	8	160	
Tube lights	45 W	2	90	
Ceiling fan	80 W	4	320	
CPU +Display	175	5	875	
Printer	600	1	600	
Total			2045 W	

SECOND FLOOR:

Passage:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light Fitting	15 W	32	480	
Light Fitting	36 W	14	1224	
Ceiling fan	80 W	12	960	
Tube lights	15 W	4	60	
Total			2724 W	SICU Passage

Male Surgery Ward:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	16	320	
Zero watt bulb	15 W	6	90	
Ceiling fan	80 W	13	960	
Water cooler	100 W	2	200	
Total			1570 W	

Sister Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
Total			100 W	



Doctor Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
Fridge	100 W	1	100	
Total			200 W	

Pantry:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
Suction machine	85 W	1	85	
Total			185 W	

Treatment Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	1	20	
Ceiling fan	80 W	1	80	
ECG Machine	24 W	1	24	
Total			124 W	

Toilet:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	3	60	
LED Bulb	10 W	2	20	
Total			80 W	

Ward 2:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	20 W	12	240	
Zero watt bulb	15 W	4	60	
Ceiling fan	80 W	9	720	
Total			1020 W	
Tube lights	20 W	1	20	Store 1
Tube lights	20 W	1	20	Store 2
Tube lights	20 W	1	20	Male changing



Tube lights	20 W	1	20	
Light fitting	36 W	2	72	laboratory
Fan	80 W	2	160	Demo Room
Light fitting	36 W	3	108	Demo Room
Fan	80 W	1	80	Demo Room2
LED Bulb	10 W	2	20	Demo Room2
X-ray viewer	60 W	1	60	Demo Room2
Tube lights	20 W	1	20	Demo Room2
LED Bulb	10 W	2	20	Burn ward Passage
Fan	80 W	1	80	Room 1
Tube lights	20 W	1	20	Room 1
LED Bulb	10 W	2	20	Room 1
Fan	80 W	1	80	Room 2
CPM machine	35 W	1	35	Room 2
Infrared lamp	200 W	1	200	Room 2
Total			1055 W	Room 2

Third Ward:

Room	Tube light(20W)	Fan(80 W)	LED Bulb(10W)	Total (W)
General ward	23	13	4	1540
Store	1	1	-	100
Treatment	1	1	-	100
Nurse duty room	1	1	-	100
Store	1	1	-	100
Store	1	1	-	100
Bathroom	3	-	-	60
Ladies bathroom	-	-	1	10
Clerk	1	1	-	100
Professor Room	1	1	1	110
Professor Room	2	1	1	110
Associate Prof.	1	1	1	130
Associate Prof.	1	1	1	110
Asst. Prof.	1	1	1	110
Asst. Prof.	1	1	1	110
Museum	1	1	-	100
B-209	4	1	1	170
Total				3160 W
Other Equipments on this ward				
Light fitting	48 W	1	48 W	Passage
Spot light	2 W	2	4	
Thumb print scanner	5 W	1	5	Asso. Prof.
CPU +Display	175 W	2	175	HOD
Printer	600 W	2	600	Asso. Prof.



X-ray viewer	36 W	1	36	B-209
Total			120 W	

SECOND FLOOR MEDICINE WARD

Room	Tube light(20W)	Fan(80 W)	Bulb(15W)	Total (W)
General ward I	18	13	4	1460
Nurse duty room	1	1	-	100
Changing Room	1	1	-	100
Treatment Room	1	1	-	100
Bathroom	2	1	3	165
Ward No. 2	12	10	4	1100
Store	1	1	-	100
Clinical Demo Room	2	2	-	200
Store	1	1	-	100
Corona ward				
General ward	24	13	6	1610
Ladies bath room	4	-	-	80
Stores	1	1	-	100
Stores	1	1	-	100
Treatment Room	1	1	-	100
pantry	1	1	-	100
Doctors Duty Room	1	1	-	100
Stores	1	1	-	100
Clinical Demo	2	1	-	120
Total				5835 W
Other Equipments on this ward				
Geyser	2000 W	1	2000	Bathroom
Ventilator	300 W	7	2100	Ward 2
X-ray viewer	36 W	1	36	Clinical demo
Total			4136 W	

SECOND FLOOR MEDICINE WARD:

Room	Tube light(20W)	Fan(80 W)	Bulb(15W)	Total (W)
General ward I	18	13	4	1460
Nurse duty room	1	1	-	100
Changing Room	1	1	-	100
Treatment Room	1	1	-	100
Bathroom	2	1	3	165
Ward No. 2	12	10	4	1100
Store	1	1	-	100
Clinical Demo Room	2	2	-	200



Seminar Room			
Light fitting	15 W	8	120
Ceiling Fan	80 W	1	80
Stores			
Tube light	20 W	1	20
Fans	80 W	1	80
Total			7662 W
THIRD FLOOR			

Passage:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	8	160 W	
			160 W	

"C" Wing

Room	Tube light(20W)	Fan(80 W)	Tube light(55 W)	Total (W)
Clinical Demo Room	1	1	-	100
Storage	1	1	-	100
Pediatrics	12	9	-	960
Histology				
Puva chamber	1	1	-	100
Associate Professor	1	1	-	100
Associate Professor	1	1	-	100
Pediatrics	1	1	-	100
Passage			11	605
Total				1005 W

Psychiatric Ward:

Room	Tube light (55 W)	Fan (80 W)	Tube light (20 W)	Tube light (36 W)	Total (W)
Psychiatric OPD					
Doctor duty room	2	1	-	-	190
Asst. Professor	1	1	-	-	135
Asst. Professor	2	1	-	-	190
HOD	2	1	-	-	190
Professor room	1	1	-	-	135
Psychiatric Ward:					
Ward	-	5	6	-	520
Toilet			2	2	112
Seminar room	-	1	1	-	100
Psychiatric ward	5	7	3	-	895



Clinical demo room		1	1	(x-ray reader)	136
Recovery Room		2	1		
Total					180
ECT Room:					2783 W

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube lights	55W	1	55	
Ceiling fan	80 W	1	80	
ECG machine	24 W	1	24	
Monitor	70 W	1	70	
ECT machine	1150 W	1	1150	
Total			1379 W	

DEMO ROOM:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Light Fitting	72 W	12	864	
Ceiling fan	80 W	8	640	
Projector	700 W	1	700	
Total			2204 W	

SKIN DISESEASES HOD ROOM:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	55 W	2	110	
Ceiling fan	80 W	1	80	
CPU +Display	175	1	175	
Printer	600	1	600	
Total			965 W	

Asst . professor Dermatology:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	20 W	2	40	
Ceiling fan	80 W	1	80	
CPU +Display	175	1	175	
Printer	700	1	700	
Total			995 W	



PUVA Chamber:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	55 W	2	110	
Ceiling fan	80 W	1	80	
UV Chamber	2400 W	1	2400	
Fridge	125 W	1	125	
Total			2715 W	

Asst. Professor Dermatology:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	55 W	2	110	
Ceiling fan	80 W	1	80	
Cosmo laser machine	20 W	1	20	
Derma india Mega surg	40 W	1	40	
Pedestal Light	36 W	1	36	
Total			286 W	

Asso. Professor

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	55 W	2	110	
Ceiling fan	80 W	1	80	
Total			190 W	

Pediatrics Chamber:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	55 W	2	110	
Ceiling fan	80 W	1	80	
CPU +Display	175	1	175	
Printer	14	1	14	
Total			379 W	

Gynecology Ward:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube Light	55 W	7	385	
Tube Light	20 W	11	220	
Ceiling fan	80 W	15	1200	
Table lamp	10 W	1	10	
Suction machine	85 W	1	85	
Total			1900 W	



Artist Room:

Electrical Load	Wattage	Numbers	Total consumption(Watts)	Remark
Tube light	20 W	1	20	
Ceiling fan	80 W	1	80	
Total			100 W	

Third Floor: Pediatrics Ward

Passage and Toilet

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	12	160	4 :in toilet
LED Bulb	10 W	2	20	
Geyser	2000 W	1	2000	
Aquarium pump	3.5 W	1	3.5	
TV set	70 W	1	70	
Set top box	17 W	1	17	
Total			2270 W	

Ward No. 1

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube Light	55 W	13	715	ward
Bulb	15 W	4	60	
Ceiling fan	80 W	13	1040	
Tube Light	20 W	4	80	Toilet 2
LED Bulb	10 W	2	20	Toilet 2
Total			1915 W	

ICU:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Fridge	125 W	2	250	ward
Public address system	100 W	1	100	
Ceiling fan	80 W	2	160	
Tube Light	20 W	4	80	Toilet 2
Total			590 W	

Clean ICU:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Warmer	600 W	6	3600	
Patient monitor	90 W	5	450	
LED Photometry	600 W	2	1200	
Ceiling fan	80 W	2	160	



Tube Light	20 W	2	40	Toilet 2
Total			5450 W	

Septic ICU:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Warmer	600 W	4	2400	
Patient monitor	90 W	6	540	
Exhaust Fan	35 W	2	70	
LED Photometry	600 W	3	1800	
Ventilator	300 W	3	900	
Ceiling fan	80 W	2	160	
Tube Light	20 W	2	40	Toilet 2
Total			5910 W	

Mother feeding room:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	20	
Fan	80 W	1	80	
Total			100 W	

Step down Room

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	20	
Fan	80 W	1	80	
Ventilator	300 W	3	900	
Photo therapy Unit	216 W	3	648	
Warmer	600 W	3	1800	
Incubator	100 W	1	100	
Total			3548 W	

Doctors Duty Room:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	20	
Fan	80 W	1	80	
Pedestal fan	50 W	1	50	
Total			150 W	



ICU 3:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
ECG Machine	24 W	1	24	
Exhaust Fan	35 W	2	70	
Defibrillator	70 W	1	70	
Weighing Scale	15 W	1	15	
Suction machine	85 W	1	85	
Ventilator	300 W	1	300	
Ceiling fan	80 W	4	320	
Tube Light	55 W	1	55	
Tube Light	20 W	3	60	Toilet 2
Total			999 W	

Clinical Demo Room:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	20	
Fan	80 W	1	80	
X-ray viewer	36 W	1	36	
Total			136 W	

Doctor Duty Room:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	20	
Fan	80 W	1	80	
Total			100 W	

Clinical Demo Room 2:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	4	80	
Fan	80 W	1	80	
Projector	700 W	1	700	
X-ray viewer	36 W	1	36	
Total			895 W	

Pantry:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	20	
Fan	80 W	1	80	
Total			100 W	



Treatment Room:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	40	
Fan	80 W	1	80	
Suction pump	85 W	1	85	
Weighing scale	15 W	1	15	
Total			220 W	

Store:

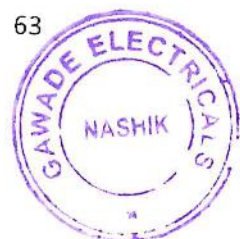
Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	55 W	1	55	
Fan	80 W	1	80	
Total			130 W	

Pulmonary Lab:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	20	
Fan	80 W	1	80	
Total			100 W	

NICU Ward:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Feeding Ward				
Tube light	20 W	5	100	
Fan	80 W	4	320	1 in passage
LED Bulb	10 W	2	20	
NICU Ward				
Tube light	20 W	3	60	
Tube light	55 W	10	550	
Fan	80 W	17	136	
X-ray viewer	36 W	1	36	
Treatment room				
Tube light	55 W	1	55	
Fan	80 W	1	85	
Laboratory				
Tube light	55 W	1	55	
Fan	80 W	1	85	
Pantry				



Tube light	45 W	1	45	
Fan	80 W	1	85	
Ladies Bathroom				
Tube light	20 W	3	60	
Thalesamia Ward				
Tube light	20 W	9	180	
Fan	80 W	7	560	
Monitors	90 W	4	360	
Suction Machine	85 W	1	85	
			2877 W	

Third Floor ENT Section:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Electrical Panel room				
Tube light	55 W	1	55	
ENT passage				
Tube light	20 W	3	60	
Fan	80 W	1	80	
Table fan	50 W	1	50	
Fridge	125 W	1	125	
Monitor	70 W	1	70	
ENT Store				
Tube light	45 W	1	45	
Suction machine	85 W	1	85	
ENT Ward				
Tube light	20 W	24	480	
Fan	80 W	8	640	
Treatment Room				
Tube light	20 W	1	20	
Fan	80 W	1	80	
Clinical Demo Room				
Tube light	20 W	4	80	
Fan	80 W	2	160	
X-ray viewer	36 W	1	36	
Optho Passage				
Tube light	20 W	3	60	
Fan	80 W	2	160	
Ortho Ward				
Tube light	20 W	5	100	
Tube light	45 W	7	315	
Tube light	55 W	3	165	
Fans	80 W	14	1120	
Treatment Room				
Tube light	55 W	1	55	



Fans	80 W	1	80	
Doctor on Duty Room				
Tube light	55W	1	55	
Fans	80 W	1	80	
Clinical Demo Room				
Tube light	55W	1	55	
Fans	80 W	1	80	
Total			4291 W	

Third Floor Nursing Staff Hostel:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Passage				
Tube light	20 W	8	160	
Water cooler	125 W	1	125	
Water Dispenser	90 W	1	90	
Wash room 1,2,3				
Tube light	20 W	1	20	No.1
Tube light	20 W	5	100	2
Tube light	20 W	2	40	3
Hostel Ward				
Tube light	45 W	20	900	
Fan	80 W	19	1520	
Hostel				
Room No.1				
Tube light	45 W	1	45	
Fan	80 W	1	80	
Room No. 2				
Tube light	45 W	1	45	
Fan	80 W	1	80	
Room No. 3				
Tube light	45 W	1	45	
Fan	80 W	1	80	
Room No.4				
Tube light	45 W	1	45	
Fan	80 W	1	80	
Total			3455 W	



Fourth Floor

Corona ward

Passage and Bathroom:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	6	120	Passage
Tube light	20 W	2	40	Ladies
Tube light	55 W	2	110	Gents
Total			270 W	

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Ward 1				
Tube light	20 W	14	280	
Light fitting	72 W	12	864	(36 W X2)
Ceiling fan	80 W	15	1200	
X-ray viewer	36 W	1	36	
TV set	80 W	1	80	
Set top box	17 W	1	17	
Ward 2				
Tube light	20 W	7	140	
Tube Light	55 W	8	440	
Ceiling fan	80 W	12	960	
Treatment room				
Tube Light	20 W	1	20	
Ceiling fan	80 W	1	80	
Store				
Tube Light	55 W	1	55	
Ceiling fan	80 W	1	80	
Nurses on duty				
Tube Light	55 W	1	55	
Ceiling fan	80 W	1	80	
Library				
Tube Light	20 W	1	20	
Ceiling fan	80 W	1	80	
Ward No. 3				
Tube light	20 W	2	40	
Tube light	45 W	1	45	
Tube Light	55 W	13	715	
Ceiling fan	80 W	12	960	
stores				
Tube light	45 W	1	45	
Pantry				

Tube Light	20 W	1	20	
Ceiling fan	80 W	1	80	
Demo Room				
Tube Light	20 W	2	40	
Ceiling fan	80 W	2	160	
X-ray viewer	36 W	1	36	
TV set	80 W	1	80	
Set top box	17 W	1	17	
Passage				
Tube light	45 W	3	135	
Asst. Professor				
Tube Light	45 W	1	45	
Ceiling fan	80 W	1	80	
Associate Professor				
Tube Light	45 W	1	45	
Ceiling fan	80 W	1	80	
Professor and HOD				
Tube Light	45 W	1	45	
Ceiling fan	80 W	1	80	
CPU + Display	175 W	1	175	
Printer	700 W	1	700	
Professor				
Tube Light	20 W	1	20	
Ceiling fan	80 W	1	80	
X-ray viewer	60 W	1	60	
			8270 W	

Ladies Hostel Rooms:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Passage + Bathroom				
Tube Light	45 W	4	180	Passage
Tube Light	45 W	2	90	Bathroom
Room No. 401,402, 403, 404, 411(attached bathroom)				
LED bulb	10 W	2	20	
Ceiling Fan	80 W	1	80	
TV set	80 W	1	80	
Set top box	17 W	1	17	
Total			197 W X 5 =985 W	
Room No. 405, 406,407,408,409, 410 (without attached bathroom)				
LED bulb	10 W	1	10	
Ceiling Fan	80 W	1	80	
TV set	80 W	1	80	
Set top box	17 W	1	17	
Total			187 W X 5 =935 W	

Fourth Floor Nursing Boy's Hostel:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Reception				
Tube Light	20 W	1	20	Reception
Doffing area				
Tube Light	20 W	3	60	
Ceiling Fan	80 W	3	240	
LED bulb	10 W	3	30	
Room Number 412, 413, 414, 415 (Attached bathroom facility) Each room has				
Tube Light	20 W	1	20	
Ceiling Fan	80 W	1	80	
LED bulb	10 W	2	20	
TV set	80 W	1	80	
Set top box	17 W	1	17	
Total			217 W X 4 = 868 W	
Room Number: 416, 417, 418, 419, 420				
Tube Light	20 W	1	20	
Ceiling Fan	80 W	1	80	
LED bulb	10 W	1	10	
TV set	80 W	1	80	
Set top box	17 W	1	17	
Total			207 X 5 = 1035 W	

Fourth Floor General Ward:

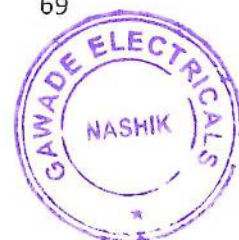
Passage and Toilet:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube Light	55 W	11	605	Passage
Tube Light	55 W	2	105	
LED bulb	10 W	1	10	
Total			720 W	
Room Number	Tube Light(45W)	Fan(80 W)		Additional
1	1	1	125	
2	1	1	125	
3	1	1	300	CPU +Display
4	2	1	170	
5	1	1	125	
6	3	1	215	
7	3	1	251	X-ray viewer
8	2	1	170	
9	2	1	170	
10	2	1	206	X-ray viewer



11					
Ward 1		1	1	125	
Ward 2		6	4	590	
Ward 3		6	4	590	
Ward 3		12	12	1597	
Pantry		1	1	125	TV, Set Top
Store		1	1	125	
Treatment Room		1	1	125	
Duty Doctor Room		1	1	125	
Total				5259 W	
Ward 4					
Tube Light	20 W		10	200	
Fan	80 W		12	960	
TV Set	70 W		70	4900	
Set Top Box	17 W		17	289	
Light Fitting	72 W		12	864	(36 W x 2)
CFL fitting	36 W		12	432	
Total				7645 W	
Clinical Demo Room					
Light Fitting	72 W		2	144	(36 W x 2)
Fan	80 W		1	80	
X-ray Viewer	36 W		1	36	
Laboratory					
Light Fitting	72 W		2	144	(36 W x 2)
Fan	80 W		1	80	
Treatment					
Light Fitting	72 W		2	144	(36 W x 2)
Fan	80 W		1	80	
Store					
Light Fitting	72 W		2	144	(36 W x 2)
Fan	80 W		1	80	
Total				932 W	

Total load of fourth floor is KW



FIFTH FLOOR (Intern Hostel)

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Passage and Toilet:				
Tube light	20 W	19	380	Passage
Fan	80 W	1	80	
TV set	80 W	1	80	
Water cooler	110 W	1	110	
Geyser	2000 W	1	2000	Toilet
Tube light	20 W	4	80	
Cafeteria				
Tube light	20 W	5	100	
Fan	80 W	1	80	
Fridge (pepsi)	340 W	1	340	
Fridge (Coca-cola)	275 W	1	275	
Kitchen grill	1500 W	1	1500	
Microwave	1400 W	1	1400	
Induction Heaters	2000 W	2	4000	
Mixer	500 W	1	500	
Gents Hostel (Room No. 501 to 518) 18 Rooms				
Tube light	20 W	1	20	(In each Room)
Fan	80 W	1	80	
			100 x 18 = 1800W	
Ladies Hostel: (Room No.601 to 618)				
Light fitting	6 W	12	72	Passage
Light fitting	6 W	6	36	Bathroom 1
Light fitting	6 W	6	36	Bathroom 2
Geyser	2000 W	1	2000	Bathroom 2
Ladies Hostel:				
Tube light	20 W	1	20	(In each Room)
Fan	80 W	1	80	
			100 x 18 = 1800W	
Total			16669 W	



Lift Room:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	55 W	2	110	
Electric Motor	7500 W	1	7500	
Electric Motor	11000 W	1	11000	
Electric Motor	7500 W	1	7500	
Total			26110 W	

Male Resident Doctors Hostel:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Common passage				
Tube light	55 W	2	110	
Ceiling fan	80 W	1	80	
Light fitting	6 W	4	24	
Male Resident Area: Passage				
Light fitting	6 W	15		
Water Cooler	100 W	1	100	
TV set	80 W	1	80	
Set top box	17 W	1	17	
Tube light	20 W	20	400	
Light fitting	6 W	8	48	Gym
Ceiling fan	80 W	3	240	Gym
Light fitting	12 W	7		Pool
Resident Rooms (1 to 22)				
Light fitting	6 W	8	48	
Ceiling Fan	80 W	2	160	
			208 X 22=4576 W	
Total			5883 W	

Female Resident Doctors Hostel:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Common passage				
Tube light	20 W	14	280	
Light fitting	6 W	10	60	
Water Cooler	100 W	1	100	
TV set	80 W	1	80	
Set top box	17 W	1	17	
Light fitting	6 W	8	48	Gym
Ceiling fan	80 W	3	240	Gym
Light fitting	12 W	7	84	Pool
Resident Rooms (24 to 48)				
Light fitting	6 W	8	48	



Ceiling Fan	80 W	2	160	
			208 X 22=4576 W	
Total+			5693 W	

Main Staircase Lighting

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	55 W	2	110	
Tube light	20 W	5	100	
Light fitting	6 W	3	18	
Total			228 W	

Medical Gas Unit:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	45 W	2	90	
Ceiling Fan	80 W	1	80	
Air Compressor	11000 W	1	11000	
Air Compressor	3700 W	1	3700	
Vacuum compressor	7500 W	1	7500	
Vacuum compressor	3700 W	1	3700	
Total			26070 W	

It is observed that Average ON time of compressor = 1.347 minutes

Average OFF time of compressor = 7.595 minutes

Theoretical Capacity of the compressor is = 2.83168 m³ per minute

Leakage Quantity = $(1.347 / \{1.347+7.595\}) \times 2.83168$

= 0.426557 (m³ / minute)

= 615 m³ / day

Specific power for compressed air generation = 11 KWh / (2.83168 x 60) m³ / day = 0.0647 KWh / m³

Energy lost due to leakage / day = 0.0647 KWh / m³ x 615 m³/day

= 39.81 = 40 Units per day

Energy lost due to leakage / month = 1200 Units



Average cost of Unit is Rs. 13.441235

Loss in terms of Rupees = $1200 \times 13.44 = 16,128/-$ Rupee.

Laundry Section:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Common passage				
Tube light	55 W	10	550	
Wall mounted fan	80 W	6	480	
Washing machine	1500 W	2	3000	
Hydro machine	2200 W	1	2200	
Washing machine	2200 W	2	4400	
Hydro machine	3700 W	2	7400	
Dryer Tumber	2600 W	2	5200	
Flat bed press machine	10800 W	1	10800	
Calendar Machine	460800 W	1	460800	
Pressing Iron	2000 W	1	2000	
Total			496830 W	

Central Store:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	55 W	5	275	
Almond wall Fan	100 W	2	200	
Pedestal fans	50 W	2	100	
CPU + Display	175 W	3	525	
Printer	700 W	1	700	
Total			1800 W	

Hospital Canteen:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	7	140	
Fridge	100 W	1	100	
Ceiling fan	80 W	1	80	
Wall fan	50 W	1	50	
Total			370 W	



Other Canteens:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Kitchen 1				
Tube light	20 W	5	100	
Cola Fridge	275 W	1	275	
Pepsi fridge	340 W	1	340	
Ceiling fan	80 W	1	80	
Popcorn Oven	2000 W	1	2000	
Mixer	500 W	2	1000	
Kitchen 2				
Tube light	20 W	3	60	
Ceiling fan	80 W	1	80	
LED Bulb	10 W	1	10	
Fridge	150 W	1	150	
Pepsi fridge	340 W	1	340	
Ceiling fan	80 W	1	80	
Popcorn Oven	2000 W	1	2000	
Mixer	500 W	1	500	
Microwave oven	1400 W	1	1400	
Tower Fan	100 W	1	100	
Induction Heater	1500 W	1	1500	
Kitchen 3				
Tube light	20 W	2	40	
Magbon LED	50 W	1	50	
Microwave oven	1400 W	1	1400	
Fridge	150 W	1	150	
Mixer	500 W	1	500	
Pepsi fridge	340 W	1	340	
Front Sitting Area				
Tube light	20 W	9	180	
Ceiling fan	80 W	9	720	
Total			13395 W	

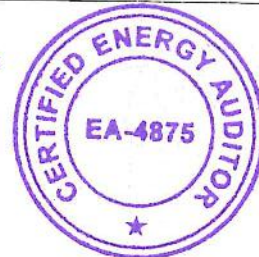
Workers Shade:

Electrical Load	Wattage	Numbers	Total (Watts)	Remark
Tube light	20 W	1	20	
Ceiling fan	80 W	1	80	
Welding machine	4200 W	1	4200	
Cutter machine	300 W	1	300	
Drilling Machine	500 W	1	500	
Total			5100	

For Gawade Electricale

Sanjay P. Gawade

Proprietor
(Sanjay P. Gawade)



ENERGY SAVING OPPORTUNITIES IN HOSPITAL.

l) Hospital management recognize the importance of having an effective cooling systems to keep patients and staff comfortable. It is often possible to reduce energy wastage while improving internal comfort conditions at the same time. Setting appropriate temperatures, ensuring that cooling equipment and controls are operated and managed correctly can help reduce costs. In fact, it is possible for the hospital to save up to 30% on cooling costs through the implementation of energy saving measures.

Obtain Feedback

Encourage staff to report any areas that are too cold or draughty. Investigating those problematic areas can help to identify operation and maintenance issues. If these issues are addressed, the hospital staff and patients are less likely to adjust the temperatures by opening windows while cooling is on, or opening the door of the air conditioned rooms frequently during cooling is going on. Therefore in order to maintain appropriate internal temperatures, the temperature settings should be in accordance to the activity taking place in the area. A good starting point is to know the recommended temperatures for specific areas in hospitals as mentioned below.

Room Type	Temperature °C	Relative Humidity
Operation theatres	17-27	45-55%
Recovery Rooms	24-26	45-55%
Patients Rooms	24-26	45-55%

REDUCE HEAT GAIN

If you are thinking that how to make your air conditioner work more efficiently, then Reducing the Heat Gain can be another way. To improve your air conditioners efficiency is to reduce the heat gain. Here are some easy ways to reduce AC's heat gain.

- **Seal Air Leaks**

If the room is leaky, it is difficult for AC to work effectively cool it. If room is older, there's a good chance it's never been air-sealed. Air sealing of the room will help your heat gain problem, especially if there are leaks on your ceiling because heat rises.



- **Keep the Sun out**

If your room is getting direct sunlight, that can really affect your cooling loads. So make sure you shade your windows, especially if they are getting east or west exposure. It's best to shade your window from the outside, but indoor shading also works.

- **Get More Efficient Lights and Appliances**

Electric appliances and lights are great but they also waste a lot of heat that gets added to your room. Take incandescent lights, for example, these lights convert almost 90% of the electricity used into heat. Or if you've been holding on to your old fridge, if you replace it with a newer model, you will save a ton on your electricity bills.

- **Move Appliances to Other Areas**

If there is a room in your home that is already overheating due to perhaps too many west-facing windows, that might not be the best place to put your new IT appliance. The heat in that room could become unbearable, so relocate those appliances to cooler areas.

4. INVEST IN ENERGY EFFICIENT HVAC EQUIPMENT

You can double and even triple your return on investment when you replace a system that is at least 10 years old. Newer AC models have high BEE ratings. This means these newer systems are more HVAC energy efficient.

Today's AC's BEE ratings are usually around 14 to 18. This is a huge improvement from the units that were made a decade ago. You also might want to look out for Energy Star-rated models. These models follow strict guidelines and are incredibly efficient.

IMPROVE AIR CONDITIONER EFFICIENCY

Just as it's important to reduce heat gain, you also want to make efforts in your air conditioned room to improve your heat removal. Here are a couple of easy steps you can do to help remove heat from your room.

Please note that these steps only work if your AC is already properly functioning.

- **Replace Dirty Filters**

When something is wrong with your Air Conditioning Unit and you call an HVAC service person the first thing they will check is the status of your filters. So you might as well do this on your own frequently as a good maintenance habit.

If your filters are dirty, then airflow is reduced which means there is less cooling happening in your room. Dirty filters can even reduce your airflow so much that it freezes your air conditioning coil which can damage compressor.

Maintenance people can avoid this problem altogether if they keep an eye on AC filters, and clean or replace them when they get dirty.



- **Keep The Vents Clear**

When you choke off ac airflow, vents increase their pressure in the duct system and then air flow is reduced throughout your home. You want to make sure that all return and supply vents in your ac are able to easily move air.

You also want to check to make sure all AC louvers are open. Don't close vents in rooms you're not using. That only creates a problem.

PRESERVE AIRFLOW

Looking for how to maximize air conditioning efficiency? You can help your HVAC energy efficiency by simply keeping your units clean and clear of leaves, dust, and debris. You also want to make sure that vents are not getting blocked by any objects or furniture. When you preserve airflow it's important to the efficiency of your AC unit.

BE VIGILANT ABOUT MAINTENANCE

When you regularly maintain your AC (before there's a problem) this keeps your equipment running efficiently and maximizes your HVAC energy efficiency. You want to keep seasonal maintenance appointments at the beginning and end of the heating and cooling season. You will also save money this way from expensive repairs.

TWEAK YOUR THERMOSTAT

Chances are you won't notice when your AC goes up or down one degree Fahrenheit. People usually aren't aware of small changes in temperature. Your AC can be a lot more efficient if you simply adjust the temperature closer to the outside one.

If it's hot outside, an HVAC that is set to 75 degrees will use 18% more energy than one set that is set at 78 degrees. And when you set your system to 72 degrees then 39% more energy is being used than if it was set to 78 degrees.

You'll want to turn your AC up more when there is no one in your home. Which is why again programmable thermostats make controlling the temperature of your home super easy.

CHANGE AIR FILTERS

This is worth repeating since blocked air filters commonly cause HVAC energy efficiency issues. If a filter gets clogged, then your equipment uses more power and runs longer. Filters trap dust before it can damage parts when it enters the system.

When your filter gets clogged, dust can get collected on motor parts and fan blades which slows down your unit and wastes electricity.

POWER DOWN ELECTRONICS

When you're not using electronics like computers, machinery, media systems, and exercise equipment, you're going to want to turn them off. Not only will this save you energy, but these electronics also generate a lot of heat. Which means, your AC will use less energy to cool down your space when these items are turned off.

Even when you're not using electronics, these devices can draw a lot of energy simply by being plugged in. It is found, constantly-plugged-in devices account for five to ten percent of total residential energy use.



Lighting

Effective lighting is essential for healthcare staff to carry out their work properly, yet it is possible to achieve significant savings in this area and improve the quality of the lit environment.

Lighting can account for over 20% of the total energy use of the electricity used in a typical hospital. Good lighting design can reduce costs and have the added benefit of decreasing internal heat gains, thus reducing the need for air conditioning too.

The lighting of healthcare buildings requires specific knowledge of a wide range of light sources and lamp types. Normal standards and methods of lighting may not be appropriate. If in doubt, always seek professional advice before making major changes to a lighting system.

Switch Off Policy

Involve all staff in making energy and cost savings. As part of an awareness campaign, conduct regular meetings, place suitable stickers above light switches and put posters up in the staff areas.

Make a member of staff responsible for going around at set times during the day to check lighting. For example, a morning check would include making sure that external lights are switched off, if there is sufficient daylight.

Label Light Switches

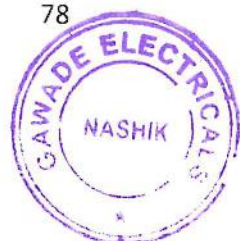
Help staff to select only those lights they need, by labeling light switches suitably. As part of general policy, lights in unoccupied areas should be switched off but remember to consider health and safety implications, particularly in corridors and stairwells. Key areas for security lighting include pharmacy drug stores, laboratories and residential accommodation.

Maintenance

Without regular maintenance, light levels can fall by 30% in 2–3 years. Keep windows, skylights and light fittings clean. Replace old, dim or flickering lamps and keep controls in good working order by ensuring timers are set correctly and that any occupancy sensors are clean. Encourage staff to report maintenance issues. This will help maintain the desired light output and, in turn, provide a safer, more attractive environment for both staff and patients.

Install Low-Energy Lighting

Upgrade lights to the most efficient suitable options. For example, at many locations in the hospitals, any 'standard' tungsten light bulbs can be upgraded directly to energy saving compact fluorescent lamps (CFLs) which use 75% less energy, produce less



unwanted heat and last 8–10 times longer. Replace blackened, flickering, dim or failed fluorescent tubes with tri-phosphor coated ones. Tri-phosphor coating provides a more natural, brighter light for the whole life of the tube. If the tubes are 38mm (1.5 inch), replace them with slimmer 26mm (1 inch) tubes or T5, (5/8th of an inch) fluorescent lamps.

Specify high frequency fluorescent lighting systems and mirror reflectors whenever fluorescent lighting is to be replaced. This should be included in the hospital's purchasing policy. High frequency tubes reduce energy use and heat output, eliminate flicker and hum, extend lamp life (by up to 50%) and can allow dimming — all of which can make a ward more comfortable.

Always consult a qualified lighting specialist before upgrading lighting systems and refer to BEE Star labeled lamps to ensure it is efficient.

Switching in Parallel

Hospitals tend to have a lot of windows, particularly in wards and in consulting areas. This provides a good opportunity to maximize daylight. Wire lights so that those closer to the windows can be switched off, while the rest remain on with separate controls. This is called 'switching in parallel' and enables staff and patients to make the most of natural daylight, which is usually preferred. As a result, less lighting is used, reducing energy consumption and additional heat generated by the lights, which, in turn, means that less cooling is required.

Occupancy Sensors

Occupancy sensors ensure lights only operate when there is somebody there to require them. These are especially useful in, for example, the following spaces:

- Intermittently used office areas
- Toilets and washroom facilities
- Storerooms
- Areas where lighting is zoned.
- Occupancy sensors can also be used to lower light levels in corridors at night time, which can be an effective cost-saving measure. However, it is imperative to maintain minimum light levels so as not to compromise health and safety standards.
- Occupancy sensors may not be appropriate for wards and in patient rooms where people may not be moving frequently enough to be detected.



Office and Small Power Equipment

Office and small power electrical equipment may account for more than 10% of total electricity use within the hospital.

Office and IT equipment is widely used in hospitals, particularly in administration section and reception areas. Other common small power appliances include equipment such as kettles, electric cookers, toasters, microwaves and other electrical appliances including vending machines, televisions, vacuum cleaners, etc.

Turn off and Power Down

Where equipment is left on unnecessarily there are opportunities to make significant savings. Switch off all equipment when not in use and enable power-down modes. This reduces the energy consumption and heat produced by equipment, lowering cooling costs and improving staff and patient comfort. The lifespan of this equipment will also be extended, and the risk of breakdown reduced.

Seven-day timers

These only cost little but reduce the likelihood of machines being left on out of hours. They can be fitted to photocopiers, printers, drinks and vending machines. Check with your equipment supplier first about any service agreements particularly in vending machines.

Maintain Equipment

Check and clean all heat-emitting equipment regularly, including keeping filters free of dust. This is not just to improve cleanliness and appearance; dirt can reduce the effectiveness of equipment and affect its cooling down process. Seek advice from the manufacturer on servicing schedules in order to maintain optimum efficiency.

Catering

Water and energy usage in catering department are areas that can offer major energy savings without compromising hygiene or resources.

Efficient catering facilities can reduce the energy requirement per meal significantly. Energy consumption in kitchens can represent more than 10% of total hospital energy usage. This is equivalent to 1-2 kWh/bed/day.² Managing consumption can have additional benefits of improving the quality of the food produced as well as the working environment for kitchen staff.

Raise Awareness amongst Kitchen Staff

Do not switch on too soon — most modern catering equipment reaches optimum temperature quickly. Label equipment with its preheat time and educate staff to switch on only when required



- Avoid using catering equipment to warm the kitchen space on staff arrival in winter months
- Switch off heating and cooking equipment immediately after use
- Avoid overfilling saucepans and kettles, and use lids where possible
- Keep fridge and freezer doors closed and defrost at manufacturers' recommended intervals to save energy and prolong equipment lifetime
- Switch off equipment, lights and exhaust fans when they are not being used.

Purchase Equipment with running costs in Mind

Although gas-fired equipment is often more expensive to buy than electrical or steam equivalents, savings made on running costs make it an attractive option. Equipment that automatically switches off, such as pan sensors on hobs, can save on energy costs. Select ovens with large, double-glazed viewing windows to reduce the need to open doors to inspect contents.

When purchasing any domestic-sized catering equipment such as fridges, freezers or dishwashers refer to BEE efficiency label and always look for the most efficient rated models.

Consider Heat Recovery

Large volumes of warm air are expelled from kitchens. Many managers do not realize that heat can be recovered using heat recovery devices, which can significantly reduce energy costs. An air- to-water recovery device is often the most effective method of recovering heat because it can then preheat hot water, providing a year-round use for the recovered heat.

Maintain Kitchen Extract Ventilation

Ventilation units and extractor hood grease filters should be kept free from dust and grease and cleaned at regular intervals, as recommended by the manufacturer. Regular cleaning of ventilation systems can increase efficiency by as much as 50% compared with unmaintained systems. There is also a reduced risk of breakdown.

Monitor with Sub-Meters

Sub-metering kitchen areas can provide an extra incentive for staff to be efficient, by showing how energy is used in this facility and how subsequent efforts have paid off. Catering in hospitals is at times outsourced so there is the additional benefit of allowing for budget allocation and charging to take place.



Laundry

Laundry facilities are extremely energy-intensive. With an average of three kg of dry laundry per bed per day, laundries are big consumers of steam. They may account for as much as 10-15% of a hospital's total energy consumption in large modern hospitals.³ Water usage is also an important issue. Make sure that laundries are targeted in the site-wide energy strategy. Some actions to consider are listed below:

- Most steam-heated laundries will generate excess low-grade heat that can be conveniently re-used elsewhere across the site
- Water recovery by recycling the rinse water from washer extractors is a proven means of reducing water usage
- Total water recovery is becoming more acceptable and should be investigated
- Heat recovery via heat exchangers from hot effluent is standard practice and can be used on all types of machine
- Consider energy efficient motors in place of ordinary motors, as they are less heated, less noisy, and highly efficient. Although they are 15 to 20 percent costlier than ordinary motors, this high initial cost can be easily returned in few months.

Specialist Equipment

The specialist nature of a hospital environment means that there is a significant amount of energy-intensive equipment, such as medical fridges, mortuary and pharmacy cold stores, laboratory equipment, X-ray, CAT-Scan, MRI machines, etc.

Each specialty area will have a wide range of equipment. Since each item requires careful evaluation, and because of the potential risks to the welfare of the patients, this Audit Report does not provide in-depth guidance on this topic. However, careful purchasing, along with maintaining good housekeeping practices can generally keep consumption to a minimum, as detailed in the action points below.

Portable Medical Equipment

While being both convenient and cost-effective, portable medical equipment can cost hospitals in terms of energy use. Fortunately, energy performance can be tackled in several ways:

- **Establish a purchasing policy** — choosing the most efficient equipment will reduce energy use and heat gains.
- **Raise awareness of energy management techniques** — encourage staff to switch off devices when they are not being used, or to make use of built-in standby or power-down modes.
- **Building design** — deal with heat gains generated by medical equipment in the context of the building's overall design strategy. For example, instead of



Choosing sterilizing and disinfecting equipment on the basis of energy usage as well as Performance — energy usage and whole-life cycle costs can differ widely between manufacturers

- Insulating sterilizer bodies and pipe-work connections, valves, flanges and so forth, to minimize standby losses
- Metering the department for each utility and specifying individual energy metering for each major washer and sterilizer.

Motors and Drives

Motors are generally running out of sight, sometimes constantly, every day of the year. The value of the electricity consumed by an electric motor over its life is typically 100 times the purchase price of the motor itself. It is therefore important to ensure that motors (and their associated drives) are as efficient as possible.

Considerable energy savings can be achieved by good system design to minimize the motor load. A small increase in duct or pipe size can significantly reduce system losses and thus greatly reduce the fan or pump power required.

- Low-loss motors, variable-speed controls and effective control can realize substantial savings. Replace old elevator machinery with variable frequency drive.
- Replace reciprocating type compressor by screw type compressor.

Building Envelope

Considering the age and outdated design of many hospital buildings, it is not surprising that some can be inefficient.

Identifying and repairing problems quickly can help avoid expensive problems later on.

Typically, two thirds of Energy (for cooling/heating) from a hospital is lost through the building envelope, with the remaining third being lost through air infiltration and ventilation. The rate at which energy is lost depends on:

- The temperature difference between inside and outside
- The insulation properties of the building envelope
- The amount of fresh air entering the building either by controlled ventilation or through poorly fitting windows, doors or joins in walls

Improving building envelope in a hospital makes good sense for many reasons:



- ❑ Better temperature control — it can lower cooling and ventilation costs and prevent overheating
- ❑ Enhanced patient comfort — a more comfortable ward gives patients the best conditions for a faster recovery
- ❑ Improved productivity — staff morale and output can be enhanced by providing a more comfortable working environment through reducing draughts, solar glare, overheating and noise
- ❑ Lower capital expenditure — a more efficient, well insulated hospital needs smaller heating and cooling plant
- ❑ A brighter, cleaner environment — this may help increase patients' confidence in the care the unit is providing.

Undertake Regular Maintenance

- ❑ Identify potential building envelope problems as part of routine maintenance and deal with them promptly. In particular, repair gaps or holes in walls, windows, doors and skylights immediately. Preventing the loss of heated or cooled air provides instant savings and also improves the appearance of a hospital. It is more comfortable for staff and patients too.

Establish a Housekeeping Schedule

- ❑ Compile a regular checklist to address areas where energy is lost via the building structure. If the hospital is large, it would be worth delegating this to several members of staff, all of whom can work from the same checklist. A comprehensive schedule includes checking walls, floors, roofs and skylights, doors and windows, including frames and panes.
- ❑ Keep windows and external doors closed as much as possible when cooling/heating is on and consider sealing unused doors or windows to further reduce draughts.

Regularly Check the Building for Dampness and Moisture Damage

- ❑ Moisture can cause significant damage to the building structure and reduce its insulating properties. It is also unsightly and even though it may not reflect the quality of the healthcare offered, patients could be concerned by what appears to be dirty and unkempt premises.
- ❑ Prolonged dampness can lead of mould growth, which can be very dangerous for the health of patients and hospital staff.
- ❑ Repair split down-pipes, faulty gutters and leaky roof tiles as soon as an issue becomes apparent. Do not just opt for a quick fix — repair the cause and save time on expensive work later on.
- ❑ Regularly check for signs of damp and condensation at least once a year, preferably prior to winter months.



Check and Maintain Insulation

Ensure that hot water and heating pipes are insulated. Similarly, check accessible loft spaces to make sure that insulation is in good condition and replace if required. As well as saving energy by reducing heat loss from the pipe, insulation can also improve internal comfort by reducing the risk of overheating.

AIR CONDITIONING MAINTENANCE CHECKLIST

SITE:

AIR CONDITIONING SYSTEM

ENTER OK OR NEEDS ATTENTION (N/A) 1 2 3

OK N/A OK N/A OK N/A

- DUCT CHECK CONDENSATION
- DUCT CLEAN R/A GRILLS AND PLENUM BOX
- DUCT CHECK SUPPLY & R/A GRILLS & CLEAN
- DUCT CHECK FOR AIR LEAKS & VIBRATION
- EVAP CLEAN DRIP TRAYS & FLUSH
- EVAP CLEAN R/A FILTERS
- EVAP CHECK PUMPS ON CASSETTE UNITS
- EVAP REPLACE DISPOSABLE FILTERS IF FITTED
- EVAP CHECK COIL FOR DIRT BUILD UP
- EVAP CHECK FAN OP & VIBRATION/BELTS
- COND CHECK FANS
- COND CHECK COMP MOUNTS/VIBRATION
- COND CHECK FOR OIL LEAKS & PIPEWORK
- COND CHECK CONDITION OF CONDENSERS
- COND CHECK REFRIGERANT CHARGE
- COND CHECK ELEC/TIMERS CONTS & O/LOADS
- COND CHECK WIRING A & TERMINALS
- COND CHECK OPERATION COOL/HEAT
- GENERAL CHECK T/STAT & SETTING
- GENERAL CHECK PIPE & INSULATION
- GENERAL CHECK OPERATION OF EXHAUST FAN
- GENERAL CHECK SIGNS OF WATER LEAKS
- INFO RECORD ALL COMPS SUCTION PRESSURES
- INFO RECORD OUTDOOR AMBIENT TEMP
- INFO RECORD SUPPLY AIR TEMPS
- INFO RECORD MAKE & MODEL OF A/C UNITS
- INFO RECORD TYPE OF SYSTEM

SPLIT DUCTED CASSETTE

COMMENTS :-----

CLIENT SIGNATURE:

STORE STAMP

TECHNICIAN SIGNATURE

DATE:



There are total 124 Numbers of 55 W Tube lights with old fashioned choke and starter facility, in this premises in working conditions .

If it is assume that, these tube lights are working for 8 hours per day on an average.

Then these tube lights consume, $(124 \times 55 \times 8 / 1000) = 54.56$ Units per day.

Remember, our per unit cost is Rs. 13.44/- Therefore the cost of this consumption is, $54.56 \times 13.44 = 733/-$ Rupee per day. That means, 21998 /- Rupee per month.

If we replace these tube lights by energy efficient 20 W LED Tube lights, Then the same expense cut down to, $(124 \times 20 \times 8 / 1000) \times 13.44/- = \text{Rs. } 267 /-$ per day That means $217 \times 30 = 7999 /-$ Rupee per month.

There is a saving of Rs. $21998 - 7999 = 13999/-$ Rupee. Per month.

Similarly, there are 101 numbers of 45 W Tube lights (With electronics Ballast),

If these tube lights are replaced by same 20 W tube lights, then we can save,

$(101 \times 8 \{45-20\} / 1000) \times 13.44) = 271$ Rupee per day, that means Rs.8145 /- per month.



SAFETY AUDIT REPORT OF D.Y.PATIL HOSPITAL CAMPUS

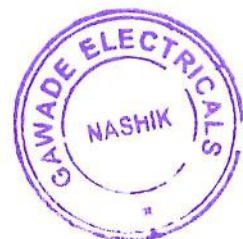
Sr No.	General Information	Particulars to be submitted	Remark
1	Name of Hospital	D. Y. Patil Medical College Hospital and Research Institute, Kolhapur	
2	Hospital owner's Name and address	507, E Ward, Kadamwadi, Kolhapur	
3	Telephone Numbers:	0231 265 5663	
4	Email id:	dypatilmedicalcollege@gmail.com	
5	Hospital type- (Private/ Govt. /Municipal /Trustee/ Charity)	Private	
6	Name of The Contact Person in (Emergency'/(Mobile No.)	Day: Night:	
7	No of total operating staff shift wise	1 st Shift: Shift:	2 nd
8	No. of other staff : Ensure staff are able to obtain an MSDS	All the nursing staff is able to obtain a Material Safety Data Sheet (MSDS); a technical document that provides detailed information on a controlled, or hazardous product.	
9	No. of security staff shift wise:	1 st Shift : 15 2 nd Shift: 9 3 rd Shift: 9	
10	Hospital beds capacity:	1000 Beds	
11	Hospital Specialty if any	Multi specialty Hospital	
12	Building height in Meters. Total built up area in Sq. Meters. Total built up area of each Floor Sq. Meters. (including Basement) No. of floors (e.g. Basement +Ground + Stilt + 3 Upper Floor)	Approximately 25000 Sq. ft.	
13	No of Internal Staircase: 1 Width of Internal Staircase : six feet No. of External staircase : 3	No of Internal Staircase: 1 Width of Internal Staircase: 6 feet	



	<p>Width of External Staircase : six feet No. of Ramps :2 Width of Ramp: 6 feet No. of Toilet blocks on each floor: Ground, First, Second, Third, Fourth Floor has 3 Ladies and 3 Gents Toilets Fifth and Sixth Floor has 2 Ladies and 2 Gents Toilets</p>	<p>No. of External staircase : 3 Width of External Staircase: six feet No. of Ramps: 2 Width of Ramps: 6 feet Number of Toilet Blocks on each floor: Ground: 1st Floor: 2nd Floor: 3rd Floor 4th Floor 5th & 6th Floor</p>
14	No. of Lifts with capacity- 3 Capacity: 780 Kg	Passenger Lift:2 Fire Lift: Stretcher Lift : 1
15	Annual maintenance contract	Yes
16	Implementation of suggestion, (if any)	-
17	Incinerator location (if any)	No waste material is burned, it is disposed.
18	Canteen/pantry/kitchen location and area —	In the same campus. 1000 Feet ² (approximately)
19	Burn Ward : if any – Capacity ICU Location and Capacity OT Location and Capacity	Burn Ward : if any –Capacity ICU Location and Capacity OT Location and Capacity
20	Storeroom Location, Area Type/details of material stored in storeroom (acids/alkalis/toxic/inflammable/ etc)	It is verified that all of the chemicals and any other flammable liquid materials are stored securely in glass bottles and plastic cans kept in a wooden cabinet, which is properly locked. Area of this cabinet is 800 square feet (approximately)
21	Spirit Storage details- all flammable material is stored appropriately?	It is Ensured that no unauthorized heat producing equipment is present in store room. Flammable material is stored appropriately.
22	Cylinders gas name, quantity, etc.: O ₂ =large, small CO ₂ =Small cylinders N ₂ = Cylinders	Materials must be stored appropriately.



23	Radiological material /machinery, I f any-name, qty, storing place, etc.	No										
24	No. of maximum patients accommodated in the building-	1000										
25	Type of pressurization and No. of change cycles	NO (A pressurization system is intended to prevent smoke leaking passed closed doors into stairs by injecting clean air into the stair enclosure such that the pressure in the stair is greater than the adjacent fire compartment.)										
26	Air conditioning Location (if central A/c) Air conditioning Location and Number for Split And Window air conditioners.	There are total 45 numbers of split type air conditioners. Outdoor units of the AC are kept in duct. Total AC tonnage is 440 TR. All the air-conditioners must be switched on with the help of MCB-switch socket instead of ordinary switch socket provided at present.										
28	Name of the service provider for AC maintenance : Mr. Amol Upashe Whether his personnel are qualified / skilled? : All are Skilled.	It is found that, annual maintenance contract has been signed for the preventive maintenance of AC.										
29	Location of the meter Room, Status of the panel, Inside Wiring	Meter room is located on the left of the building. Wiring in the panel found in good condition.										
30	Age of the Hospital : C	<table border="1"> <tr> <td>British Era Period</td> <td>i) A</td> </tr> <tr> <td>Post Independence</td> <td>ii) B</td> </tr> <tr> <td>Up to 1970</td> <td></td> </tr> <tr> <td>From 1970 -2008</td> <td>iii) C</td> </tr> <tr> <td>2008 Onwards</td> <td>IV) D</td> </tr> </table>	British Era Period	i) A	Post Independence	ii) B	Up to 1970		From 1970 -2008	iii) C	2008 Onwards	IV) D
British Era Period	i) A											
Post Independence	ii) B											
Up to 1970												
From 1970 -2008	iii) C											
2008 Onwards	IV) D											
31	Did hospital face any fire disaster in the past ? if yes submit action plan.	Hospital did not face any kind of fire disaster in past										
32	Whether fire fighting agency is recruited or not?	If yes, Name, United Sales										



		Telephone Number, other details.	Corporation, Shahupuri, Kolhapur. 9422049621.
33	Number and type of fire extinguishers Per floor, per dept.	6 Kg ,ABC type fire extinguishers are distributed in following manner: 42 on ground floor, 12 on first floor, 7 No. on second floor. 9 on third floor 6 on 4 th & 5 th Floor, 2 on 7 th 0 in Record room. 0 near DG set. -- Smoke detectors on Ground floor --Smoke detectors on first floor --Smoke detector on second floor	
34	Labels and conditions of the fire Extinguishers.	Pressure meter indicator is in green zone. *Last date of refilling	Labels on the fire extinguishers are properly visible. * 18/01/2021
35	Is every exit, exit access or exit discharge is continuously maintained free of all obstructions (4.2.3)	Yes, every exit, exit access or exit discharge is continuously maintained free of all type of obstructions.	
36	Emergency exit way, evacuation gathering points defined /provided ?	Emergency exit ways are defined, signs are also provided for the same. Emergency gathering point is not defined. --Place seems to be the suitable place for the same.	
37	Is every wall opening protected with fire-resisting doors having the fire rating of not less than 2 h (IS 3614-Part I), all doors opening	All the doors in the hospital are fire proof and are opening properly.	



	properly ?	
38	Sprinklers and smoke alarms are operational?	
39	All fire exit signs are illuminating properly?	--
40	Doors to materials rooms are closed locked ?	Yes
41	Doors are propped open appropriately ?	Yes
42	Stairways meet safety standards ?(mention Number of stairways) Free of obstacles? Step surfaces are not slippery Carpet intact (if applicable) Hand rails fixed and in good condition All aisles and floors are free of obstruction	This hospital has 1 internal and 3 external staircases. Internal staircases are of smooth black marble and external staircases are made by MS plates and pillars. External staircases are shaded and their rusting process is in progress. Painting and sheltering is required. Step surfaces are not slippery. Hand rails are fixed and found in good condition. All the aisles, staircases are free of obstructions
	Electrical Safety:	
43	General conditions of electrical panels, main switch, electric motor board and change over switch, A/Cs, water cooler, water filter, wiring cables etc. is good and all DBs, panels, switch boards are properly covered ?	Yes, Medical equipments are fitted in ordinary switch sockets , instead of switch socket with MCB. This change is very important.
44	Whether penalty is being imposed in electricity bills on account of higher load / poor power factor etc. (check Electricity bills of April, May, June, July month) Additional electrical load required if any from power distribution company)	No(penalty has been imposed for the reason of poor power factor, or for additional power requirement from the supplying agency other than contract demand.)
45	Whether preventive maintenance of electric installation and equipment is carried out by skilled licensed holder electricians / skilled technicians.	Yes
46	Whether MCCBs/MCBs/ELCBs are provided with proper ratings to cover the load ?	Yes All the MCBs are of proper rating and are in good



	Check all electrical outlets are in good condition	condition.
47	Is the emergency lighting system capable of continuous operation for a minimum duration of 1 hour?(or for the time suitable to Hospital)	Yes
48	Is the emergency lighting provided to be put on within 1 second of the failure of the normal lighting supply. (4.16.3)	Yes(ensure that lamps on operating table put on within one second of the mains failure, other lighting system recover within 10 seconds after DG Set get activated.)
49	Is emergency lighting powered from a source independent of that supplying the normal lighting as per IS 9583	Yes. Emergency lighting is provided by an inverter and DG Set.
50	Is emergency lighting system provided in the following location 1) Near each intersection of corridors 2) At each exit doors 3) Near each change of directions in the escape route. 4) Near each stair case, so that each flight of stairs receives direct light. 5) Near any other change of floor level. 6) Outside each final exit and close to it 7) Near each fire alarm call point. 8) Near fire fighting equipment.	1) Yes 2) Yes 3) Yes 4) Yes 5) Yes Near floor level change 6) Yes 7) Yes 8) Yes
51	Is the emergency lighting luminaries mounted 2 meters above the floor level ?	Yes
52	Is staircase and corridor lighting connected to alternate supply probably running on batteries which are continuously trickle charged by a charger ?	Yes. Alternate (standby) supply for staircase and corridor is on DG Set.
53	Whether water seepage is observed near any of the electrical panel, distribution boards, electrical equipments etc.?	No
54	Whether Earthing pits are provided and connected to the equipment body of the connected equipment?	Yes
55	Whether earthing pits are properly maintained?	Advised them to regularly



		pour 10 bucket full water +10 Kg salt in earth pit once a month.
56	Whether the contact numbers of persons, electricians, power distribution company, Generator service provider, vendor, UPS Vendor, A/C service provider/ fire fighting agency are available with Reception / Security guard and other staff and they are displayed in Electric room / Reception ?	No
57	Whether the power factor correcting panel of appropriate rating is installed?(APFC Panel)	Yes
58	Generator has capacity to meet 100% of demand? Verify that the generator begins to operate within seconds of the hospital losing power demands for the entire hospital, particularly in the emergency departments, ICU, sterilization department, operating theatres, etc.	Generator capacity is 500 KVA and 320 KVA) and sanctioned load for this hospital is 930KW. Generator has capacity to meet 100% demand. Verified that generator get started as soon as mains supply fails.
59	Regular tests of generator performance are carried out in critical areas ? Determine the frequency of generator performance tests that have satisfactory results.	DG set is activated only when mains fail. It should be activated even if mains is available after fix time interval, say once a week.
60	1) Maintenance of generator or UPS system is done by skilled person? 2) what is time interval between preventive maintenance	1) Yes 2) Preventive maintenance. Once in a month.
61	Is generator properly earthed? Supply cables are properly ducted? At least two 6 Kg ABC capacity fire extinguishers are placed near the DG set.	Yes. Generator is earthed by a Aluminum bus bar properly. ***6kg ABC type fire extinguisher(2 No.s) must be kept in this shed near DG Set.
	Water Supply System	
62	Water tank has permanent reserve that is sufficient to provide at least 300 liters daily per bed for 72 Hours.	At present, 80000liter capacity well for fire fighting and 75000liter capacity drinking water tank are present on the terrace



63	Water storage tanks are protected and in secure locations visit the water tanks to determine the safety of the installations and of the site	Verified that, water storage tanks are protected are kept in a secure place on the terrace.
64	Alternative water supply to major distribution network, identify the agency or mechanism to supply or restore water service to the hospital should the public water system fail	Other than municipal corporation's water supply, there is another alternative source is from well resided in this hospital.
65	Fuel tanks have at least 5 day capacity. Fuel tanks and cylinders are anchored and in a secured location safe location of fuel storage. Verify that tanks containing combustible liquids are accessible but at a safe distance from the hospital.	Yes Yes it is on the safe distance.
66	Sufficient medical gas storage for minimum of 15 days supply. Anchors for medical gas tanks, cylinders and related equipments. Appropriate location for storage of medical gas. Safety of medical gas distribution system (valves, pipes, connections) Protection of medical gas tanks and / or cylinders and related equipment.	Yes Yes Yes Yes
67	Medical equipment in operating theatres and recovery rooms: Verify that lamps, equipment for anesthesia, and surgical tables are operational and that table or cart wheels are locked. Condition and safety of radiology and imaging equipment: Verify that the X-ray and imaging equipment is in good condition and is secured. Condition and safety of medical equipment in emergency services unit Condition and safety of equipment in the	Yes Yes Good condition



	sterilization unit.	
68	Condition and safety of doors and entrances, Condition and safety of windows and shutters	Found in Good Condition
69	Organization of the Hospital Disaster Committee and the Emergency Operations Center. Whether Committee has been formally established to respond to major emergencies or disasters Each member is aware of his/her specific responsibilities.	Hospital Disaster Management committee is present, it's members are aware of their specific responsibilities.
70	Transport and logistics support: Confirm that the hospital has ambulances and other official vehicles.	Hospital is having Ambulance Facility
71	Food and snacks facility?	Yes
72	Solid waste management: The Hospital staff should provide the operations manual for solid waste management.	Solid waste created by hospital is handed over to Municipal Corporation regularly.

For Gawade Electricals

Sanjay P. Gawade
Proprietor
(Sanjay P. Gawade)

