

**PROJECT REPORT**  
**AND**  
**TECHNO-ECONOMIC FEASIBILITY REPORT**  
**ON**  
**HOSPITAL**  
**IN FAVOUR OF**  
**D. S. HEALTH CARE**



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## PROJECT HIGHLIGHTS

- |                              |                       |
|------------------------------|-----------------------|
| 1. NAME                      | D. S. HEALTH CARE     |
| 2. PROPOSED ACTIVITY         | HOSPITAL              |
| 3. NATURE OF CONCERN         | PARTNERSHIP           |
| 4. LOCATION OF UNIT          | MOOMIN ABAD, ANANTNAG |
| 5. TOTAL COST OF THE PROJECT | ₹ 682.63 LACS         |
| A. CAPITAL EXPENDITURE       | ₹ 623.66 LACS         |
| TERM LOAN                    | ₹ 350.00 LACS         |
| B. WORKING CAPITAL           | ₹ 58.97 LACS          |
| CASH CREDIT                  | ₹ 44.22 LACS          |



**Management:** Brief particulars of promoters/directors/ management are as under:

**The Firm has two partners :**

Junaid Altaf Dalal, aged, 32, graduate is the promoter. In past he had established a proprietary concern in the name of M/S ICE SEAS which deals with sale of Dairy Products and are main distributors of Verka Milk and Milk Products in south Kashmir.. He is having good contacts in Anantnag and in surrounding area. His contacts can be exploited for the marketing of proposed hospital.

Mr. Zaid altaf Dalal is a also Graduate and possesses extensive experience of business .He is also running a propriety cocern M/S Dalal Sons which are distributors of Pmark and verka products in south kashmir.

- 1) **Location:** The hospital is proposed to be set up at Mominabad(Asajipara)-Mouza Dialgam-Tehsil and Distt , Anantnag- Jammu and Kashmir. It is in centre of the city. Roads on two sides of the site. Easy access from all corners of the city. The location is well suited for the Hospital Activity.

The location of hospital is good as all the rural population can avail the health services from the said hospital as there is lack of private hospitals in the area and whole population of District Anantnag and District Kulgam are relying on Two Govt Hospitals (Govt Maternity Hospital Sherbagh Anantnag) and District Hopsital Janglatmandi Anantnag.

District Civil Hospital and Government Bus terminal are in the vicinity of the proposed site. The locational advantage and lack of adequate Health Services will always be there with the Project.

- 2) **Land & Building:**

The extant of land is 03 Kanal, acquired by Firm on lease basis for 20 years of lease.

The land area is adequate for the proposed hospital.

The proposed hospital building being constructed is Two Storey building. With total built up area of 7797 Sq Meter. The building is adequate for the proposed level of operations.

- 3) **WATER:**

The firm has adequate Water which is required for general as well as various applications in the Hospital. For this purpose, the firm will make an agreement with Jal Shakti Department. Thus sufficient water arrangement is available at the site.





- 4) **POWER & FUEL:** The unit requires power connection of 200 KVA (aprox.) load as per project report. The company is yet to be applied for the required load of power connection From KPDCL Kashmir power distribution corporation limited, requirement of electric connection of proposed unit appears to be adequate & in case enhancement is needed, the same is easily available.

In addition, Company is planning to have a stand-by DG set. In order to ensure continuity of power supply in case of power failure, all life-saving/critical equipment will be connected through UPS.

Presently they have power connection in the name of one of partner Mr Zaid Altaf as power is required to carry day to day work which was going on.

5) **5.1:-EFFLUENT TREATMENT PLANT:**

EP (Effluent Treatment Plant) is a process design for treating the hospital waste water for its reuse or safe disposal to the environment.

Need of ETP in hospitals is to clean hospital effluent and recycle it for further use, to reduce the usage of fresh/potable water in hospital, to cut expenditure on water procurement, to safeguard environment against pollution and contribute in sustainable development etc.

The company has constructed septic and soakage tank for 20KLD SP (sewage treatment plant) and ETP (Effluent treatment plant) and will install the same before commissioning.

### **Wastewater treatment plant design**

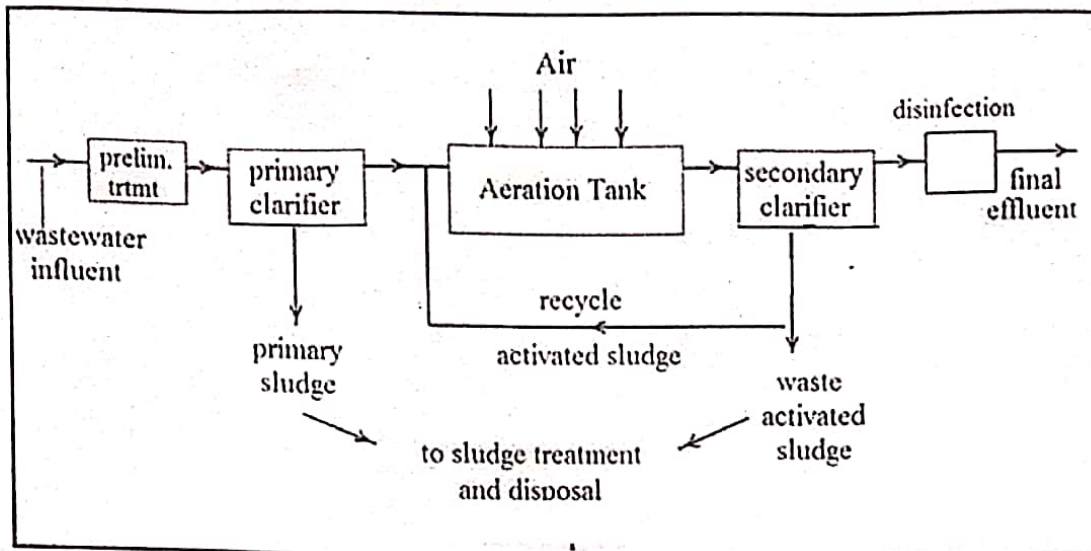
Wastewater treatment plant design is primary process in which untreated waste water is analysed and based on requirement of uses of treated effluent plant is designed. Also design of effluent treatment plan is highly site and industry specific.

Design of effluent treatment plant is to treat non-hazardous industrial waste water and should focus on cost-effective, minimal maintenance and requires minimal manpower etc.

Also these plants should include processes such as pH change, aerated lagoon, polishing/infiltration ponds and sedimentation/facultative basins etc.



## Design of Effluent treatment Plant



As specified above design of effluent treatment plant is highly depends on industry and site. Major points taken into consideration while designing effluent treatment plants are characteristics of site and wastewater. Untreated effluent standards and treated effluent standards are also taken into consideration in process of wastewater treatment plant design.

Also now coming to selection treatment process, it involves consideration of other multiple factors, Such as treatment efficiency, cost and reliability.

## Characteristic of Site in ETP Design

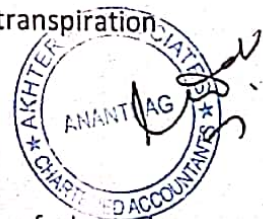
Characteristic of site like soils, topology, geology, hydrology, climate and land use are taken into consideration while designing ETP. Knowledge of Depth of rock layer and topography (it's the way where height and depth of land shown in green and yellow Color in map) also helps in designing of ETP for using gravity flow and burial of pipes which are most necessary.

Soil thickness, its content, its characteristic, organic, inorganic matter and permeability (capacity of holding water) are also taken into consideration in ETP design Process. ETP plant may affect land used in ETP construction.

Also precipitation is considered when infiltration is problem and evapotranspiration used when wastewater treatment includes process of evaporation.

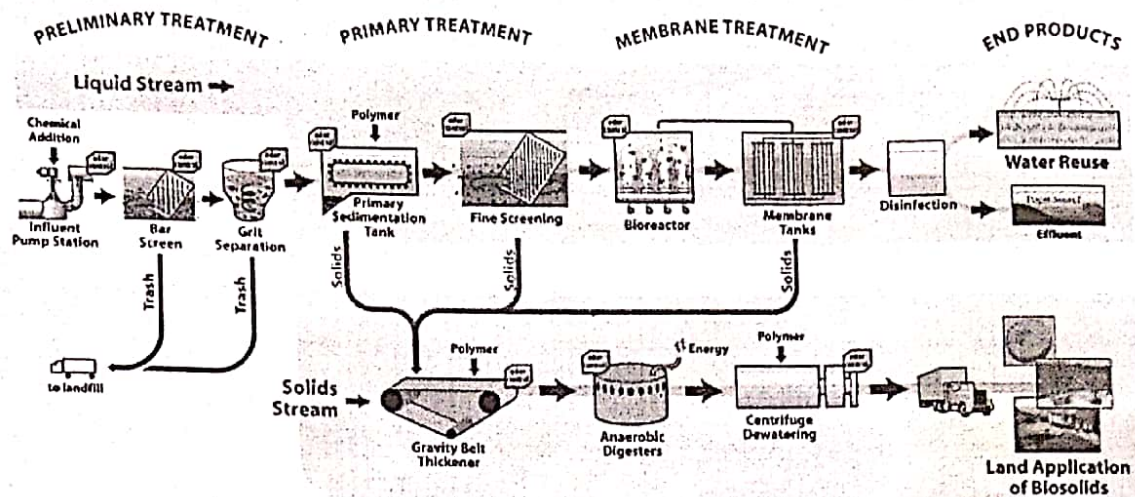
## Characteristic of Wastewater in ETP Design

Characteristic of wastewater must be taken into consideration in terms of physical, chemical and biological characteristic. Size of effluent treatment plant i.e. ETP is





depends upon its flow (measured in  $m^3$  / day). Flow of wastewater should be estimated correctly considering all possible reasons otherwise they will affect hydraulic computations, channels and pipes. Also if there is need to construct equalization pond due to temporary large flow (eg rainfall etc.) to maintain constant flow downstream treatment process. Equalization ponds also helps to reduce toxicity of wastewater.



Physical Characteristic of Wastewater include PH, Colour, odour, temperature. Suspended solids, grease, oil indicate highly polluted wastewater with very low turbidity. Presence of these matters indicate that need of pre-treatment before releasing to environment. Temperature is also major factor because higher the temperature higher the reaction rate.

Chemical characteristic of wastewater includes organic, inorganic in solutions and gases. Biological Oxygen demand (BOD) is indicator of amount of biological substances (proteins, fats, etc.) present in effluent. Comparison of BOD for untreated and treated gives idea about efficiency of Effluent treatment plant.

Chemical oxygen demand (COD) measures biodegradable and non-biodegradable organics. Also ratio between BOD and COD tells much more about ETP health.

Removal inorganic substances such as chlorine, nitrogen, heavy metals, cyanides phosphorous and sulphur from effluent is also important because Nitrogen and phosphorus prone to excessive algae growth and harmful heavy metals increase toxicity.

Due to microbiological actions in wastewater treatment methods produces various gases. The type of gases indicate whether aerobic or anaerobic degradation is taking place.

## 5.2:- BIOMEDICAL WASTE MANAGEMENT:

Bio-medical waste means any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biological.

The company will keep different color coded dustbins and sign boards for different waste categories.





The waste may be temporary stored at the central storage area of the hospital and from there it may be sent in bulk to the site of final disposal once or twice a day depending upon the quantum of waste.

The hospital management will ensure:

- 1) That waste bags/containers are properly sealed and labeled.
- 2) Manual handling of waste bags are be minimized to reduce the risk of needle prick injury and infection.
- 3) Waste bags and containers are removed daily from wards / OPDs or even more frequently if needed. Waste bags are transported in a covered wheeled containers or large bins in covered trolleys.

For final disposal and safe transportations of the waste the company will come up to an agreement with Kashmir Health Care (KHC) Lassipora Pulwama before commissioning.

### 5.3:- SOLID WASTE MANAGEMENT:

Solid waste generated in hospital is to be stored in different coloured dust bins/containers.

Storage is the system for keeping materials after they have been discarded and prior to collection and final disposal.

For collection and final safe disposal the hospital will come up to an agreement with Municipal Council Anantnag after paying dues.

### ENVIRONMENT AND POLLUTION ASPECTS:

Company has to obtain NOC from Pollution Control Board (PCB) for Consent to operate (CTO).

### 6) MEDICAL GASES:

Medical gas is critical to the function of hospitals and many other healthcare facilities.

Medical Air - used in the ICU and NICU areas, medical air is supplied by a specific air compressor to patient care areas.

Oxygen - a medical gas required in every healthcare setting, and is used for resuscitation and inhalation therapy.

Carbon Dioxide - used for less invasive surgeries

Nitrogen (Medical Liquid Nitrogen) - a medical gas used for cryosurgery removal of some cancers and skin lesions

Nitrous Oxide - a medical gas is used in numerous surgical procedures as both an anaesthetic and analgesic.

Each medical gas must be supplied from a separate system. It is essential that all parts of each system are gas specific to ensure that there is no possibility of cross-connection between systems





Firm has installed centralized gas pipeline system where oxygen and vacuum point is installed at every bed with proper manifold system.

#### ENVIRONMENT AND POLLUTION ASPECTS:

Company has to obtain NOC from Pollution Control Board (PCB) for Consent to operate (CTO). CTO to be obtained prior before commencement of operation of project.

7) Manpower: Though this hospital is being set up with latest medical facilities but the fact remains the reputation and economic viability of the hospital depends on the availability of renowned/ specialist doctors. firm states that they are in negotiation with reputed doctors for inducting them as full time doctors and as Visiting Doctor. It is learnt from the firm, that these doctors are showing interest to join the hospital.

- Doctors are broadly classified as Full Time Resident Doctor and Visiting/Consultant Doctor.

- Full Time Resident doctor are full time employees of the hospital, are present on the rolls and are tied to the hospital.
- Firm has 5 family doctors which will be full time resident doctors Brief particulars are given below.

Dr. Uzma Altaf (Sister of Partners) Gynecologist

Dr. Sarfaraz Jan (Brother in Law of partners) General and laparoscopic Surgeon

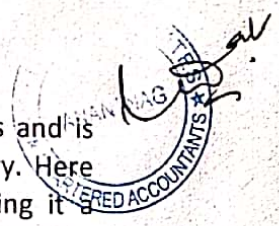
Dr. Tibrani Khan (Cousin of Partners) Medical Officer

Dr. Jan Sohail (Brother in law of partners) Radiologist

Dr. Babar Khan (Cousin) ENT

Dr. Zaffar Iqbal (Anaesthesia)

- Visiting/Consultant (star doctors) operates either on the sharing basis and is compensated on a commission basis and generally has no fixed salary. Here payment to doctors is linked to the surgery being performed, making it a variable component. The consultant gets some share of the total procedure (surgery) fee. In most cases, the share of the consultant is 50-60 per cent, while

A handwritten signature in blue ink is written over a circular blue stamp. The stamp contains the text "CHARTERED ACCOUNTANTS" around the perimeter and "FIRM" in the center.



the hospital retains 50-40 per cent (As per inquiries). Based on their contract they may be tied to one hospital or may consult with many.

Visiting doctors which are initially available on certain visiting hours depending on their schedule. The details are given below:

Dr. Fayaz Bhat (Physician)

Dr. Asif Iqbal (Gastrentrolgist)

Dr. Bashir Ahmad (Neurologist )

Dr. Saika (Radilogist)

Dr. Umar Bashir (Anaesthesia)

Dr Hashim Qadri (Anaesthesia)

Dr Manzoor Ahmad Latoo (ENT)

Dr Qurat ul ain (Gynacologist)

- Over reliance on star doctors poses a risk to corporate hospitals. The company proposes to strengthen their own brand and reduce dependence on star doctors.

The detail break up of manpower proposed by the company is as below:

Designation	2022	2023	2024	2025	2026
Doctors (Super spaciality)	4	6	7	7	7
Medical Officer	8	10	12	12	12
Nursing Staff	14	20	22	22	22
Technicians	6	8	8	8	8
Pharmacists	1	2	2	3	3
Allied health professionals	2	3	4	4	4
Admin/Other staff	13	15	18	20	20
Total	48	64	70	73	73

Looking at the proposed services, the company need the staff following departments.





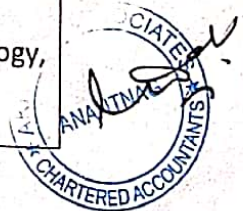
PRO
OT Technician / OT Coordinator
CSSD Technician
X-Ray Technician
CT Scan Technician
Echo & TMT Technician
Lab Technicians
Maintenance Incharge
Receptionist
Security Staff

The same is included in the Admin/other staff mentioned above. Some of the services are provided by UHC and their staff are not included in the list.

Typical number of employees per bed is about 3 employees per bed. 20% doctors, 30-35% nurses and 45% others. In initial years of operations the number is lower, hiring is done based on expected occupancy. The bed-to-staff ratio is the highest in case of multi-specialty and super-specialty hospitals. For list submitted above for 108 beds, bed to staff ratio comes to around 1:1 which is gradually increased to 1:2. The company informed that, in the initial period they propose minimum number of staff and once with the increase in level of operations, the man power will be increased. The same can be accepted as sourcing of other man power may not be a problem being located in the Gandhi Nagar town.

8) Hospital facilities and Salient features: The medical facilities provided in the Hospital are as follows:

Medical Facilities	Description
Hospital OPD Building and Administrative Building	Hospital has dedicated floor for different OPDs, it has 5 specialties OPD which including broad speciality as well super specialties, ENT, Gynecology, Radiology, Gastroenterology and neurology. Pathology – Hospital has dedicated Microbiology, Hematology and Biochemistry Pathology Laboratories.





	Administrative Block – Ground floor consisting of different admin chambers, room facilities for smooth administration
Emergency cum Trauma Unit	Hospital is situated on strategic location, nearest to Government hospital; hospital has provided 7 bedded trauma unit and minor OT facilities along with in-house 24x7 trauma surgeon and intensivist.
Operation Theatre, Complex	This complex has separate OT for General Surgery, Gynecology Bone & Joints (Orthopaedic), , Endoscopy, and Gastro Surgery along with minor O.T.
Other Amenities	Amenities like, USG, X-Ray, Pathology lab, and IP & OP Pharmacy are also to be provided.

## 23.4 IMPLEMENTATION SCHEDULE:

Sr.No	Particulars	Commencement (Month and Year)	Completion (Month and Year)
1	Acquisition of Land	November 2020 DS Health Care	
2	Building Plan Approval	09-09-2020	
3	Development of Land	November 2020	
4	Civil Works/ Building Construction	09-09-2020	31/03/2022
5	Plant & Machinery		
	Placement of order	Feb 2022	April 2022
	Delivery & Installation	Feb 2022	May 2022
6	Interior & Furnishing & Electrification	Oct 2021	May 2022
7	Arrangement for Power	Jan 2022	Feb 2022
8	Arrangement for Water	09-09-2021	
9	Appointment & Training of Personnel	May 2022	June/July 2022
10	Commercial Opening	June 2022	





**PROJECT COST SUMMARY**

The head wise breakup of the total project cost is given below:

S.No.	PARTICULARS	₹ in Lacs
1	Land & Building	150.00
2	Machinery	466.66
3	Misc. Fixed Expenses	0.00
4	Preliminary & pre-operative exp.	7.00
5	Working capital	58.97
	<b>Total</b>	<b>682.63</b>





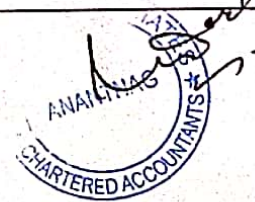
**OPERATING INCOME (PER ANNUM)**

NO OF BEDS	25
ACCUPANCY	100%
AVERAGE LENGTH OF STAY	3 DAYS
AVAILABEL BEDS IN A YEAR	9125
NO OF ADMISSIONS	3042
TOTAL LNO OF DAYS- INDOOR	365
TOTAL LNO OF DAYS-OPD	300

S.NO.	DESCRIPTION	PRODUCTIVITY		AVG. RATE ₹ PER CASE		INCOME (₹ in Lacs)		TOTAL ₹ in Lacs
		INDOOR	OPD	INDOOR	OPD	INDOOR	OPD	
1	IN PATIENT CONSULTATION	9125		300		27.375	0	27.38
2	GENERAL OPD		28800		200	0	57.6	57.60
3	SPECIAL OPD		14400		400	0	57.6	57.60
4	GENERAL SUEGERIES	600		35000		210	0	210.00
5	ADMISSION FEE	3042		100		3.042	0	3.04
6	PHARMACY	9125	43200	2000	500	182.5	216	398.50
7	MINOR PROCEDURES	0	900		8000	0	72	72.00
8	PATHOLOGY	9125	43200	1500	500	136.875	216	352.88
9	X RAY	3650	8640	220	200	8.03	17.28	25.31
10	SONOGRAPHY	1582	24000	550	500	8.701	120	128.70
11	ECG	973	1440	165	150	1.61	2.16	3.77
	TOTAL					578.13	758.64	1336.77
	LESS: DISCOUNTS ETC. 5%							66.84
	TOTAL							1269.93

**MISC INCOME**

S.NO.	DESCRIPTION	REVENUE	
		PA	₹ in Lacs
1	CANTEEN/KITCHEN IN HOUSE	730000	7.30
2	CERTIFICATE, PASSES ETC.	125000	1.25
3	AMBULANCE	1095000	10.95
	TOTAL	1950000	19.50





# FIXED CAPITAL

## 1. BUILDING

The unit has already constructing the building and is in the final stages of completion. The details of the building are as under:

S.No.	Particulars	(₹ in Lacs)
1	BUILDING -WIP(APPROX.)	150.00
	<b>Total</b>	<b>150.00</b>

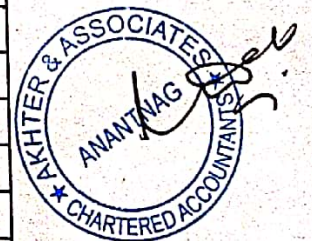
## 2. PLANT & MACHINERY

While arriving at the requirement of various types of equipments & machinery required for the plant due consideration has been given to the following points:

- Minimum wastage
- High productivity
- Maximum flexibility in operation
- Adequate standby provision wherever necessary

The Unit has to purchase following machinery:

S.No.	Description	Rate (₹ in Lacs)	₹ in Lacs
1	AIR CONDITIONING	50.00	50.00
2	PATIENT LIFT	20.00	20.00
3	MEDICAL EQUIPMENTS	200.00	200.00
4	MODULAR OT(2 Nos.)	40.00	40.00
5	LAPROSCOPE SYSTEM	40.00	40.00
6	TRANSPORT VAN	6.00	6.00
7	FURNITURE	45.00	45.00
8	EFFLUENT TREATMENT PLANT(ETP)	5.00	5.00
9	MEDICAL GAS PIPE LINE	15.00	15.00
10	ALUMINIUM COUNTER (2 Nos.)	0.58	0.58
11	OUTER SHOP GLAZING (4 SHOPS)	2.66	2.66
	<b>TOTAL</b>		<b>424.24</b>
	10% VARIANCE		42.42
	<b>TOTAL</b>		<b>466.66</b>





## WORKING CAPITAL (PER ANNUM)

### 1. EXPENSES DETAILS

#### DEPARTMENT EXPENSES

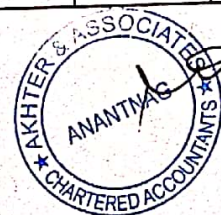
S.NO.	DESCRIPTION	INCOME	CONUMABLES	EXPENSES	DOCTORS CHARGES	Rate (₹)	₹ in Lacs
			% OF INCOME	₹ in Lacs	% OF INCOME		
1	IN PATIENT CONSULTATION	27.38	0%	0.00	85%	23.27	23.27
2	GENERAL OPD	57.60	0%	0.00	75%	43.20	43.20
3	SPECIAL OPD	57.60	0%	0.00	80%	46.08	46.08
4	GENERAL SUEGERIES	210.00	60%	126.00	76%	159.6	285.60
5	ADMISSION FEE	3.04	0%	0.00	0%	0	0.00
6	PHARMACY	398.50	60%	239.10	0%	0	239.10
7	MINOR PROCEDURES	72.00	15%	10.80	0%	0	10.80
8	PATHOLOGY	352.88	65%	229.37	0%	0	229.37
9	X RAY	25.31	40%	10.12	0%	0	10.12
10	SONOGRAPHY	128.70	15%	19.31	80%	102.9608	122.27
11	ECG	3.77	15%	0.56	20%	0.75309	1.32
				635.26		375.8626	1011.13
	<b>TOTAL</b>						

#### FOOD

S.NO.	DESCRIPTION	
1	BED DAY PER ANNUM	9125.00
2	FOOD COST PER DAY	60.00
	PER ANNUM Rs. In lacs	5.48
1	STAFF	33.00
2	FOOD COST PER DAY	30.00
	PER ANNUM Rs. In lacs	3.61

#### WATER, POWER & UTILITIES

S.NO.	DESCRIPTION	
1	WATER @ Rs. 5 PER 1000 LTRS.	0.05
2	MEDICAL GASES @ Rs. 0.50 LAC PM	6.00





3	POWER @ Rs. 6 PER UNIT @ 25 UNITS PER BED PER DAY	13.69
	PER ANNUM Rs. In lacs	19.74

**LAUNDRY**

S.NO.	DESCRIPTION	
1	BED PER DAY PER ANNUM	9125.00
2	IP PER BED COST PER DAY	12.00
3	PER ANNUM Rs. In lacs -IP PATIENTS	1.10
4	OT LINEN @AVG 4 PIECES/SURGERY	2400.00
5	PER PIECE COST PER DAY	10.00
6	PER ANNUM Rs. In lacs -OT LINEN	0.24
7	65% STAFF WASHING PER DAY	31.00
8	PER ANNUM Rs. In lacs - STAFF	1.12

**HOUSEKEEPING**

S.NO.	DESCRIPTION	
1	BED PER DAY PER ANNUM	9125.00
2	PER BED COST PER DAY	8.00
3	PER ANNUM Rs. In lacs - PATIENTS	0.73

**2. PERSONNEL EXPENSES**

The different class of workers has been considered for day to day routine work. As it is assumed that the unit will operate 300 working days per annum, the details of the manpower requirement per is given below:

PARTICULARS	Nos.	Rate (₹)	₹ in Lacs
ADMINISTRATION			
MANAGER-OPERATIONS	1	12000	1.44
ACCOUNTS MANAGER	1	10000	1.20
MANAGER-MARKETING	1	10000	1.20
BILLING EXECUTIVES	2	7000	1.68
RECEPTIONISTS	2	5000	1.20
SECURITY, PARKING, ATTENDANTS	6	5000	3.60

