GENERAL POLICY GUIDELINES

1. No Individual, company, or partners should open and/or operate private hospital unless prior approval and license has been duly acquired from the concerned Ministry of Health (MOH) departments as described hereafter.

2. The rules, regulations, and standards described in this document shall apply to all existing and new hospitals in the private sector (as per definition of the hospital established by virtue of this policy document).

3. The Committee for Private Hospitals at MOH-HQ, upon receiving the application from the owner and ascertaining compliance to all pre-requisites, shall issue the preliminary approval.

4. The hospital premises and services therein shall be licensed by the MOH-HQ upon completion of all necessary pre-requisites stated in this document.

5. It shall be mandatory for any private Hospital to ensure third party insurance against medical malpractice prior to licensing or renewal of license.

6. The owner and operator of the licensed facility shall be responsible to ensure the following
   a. Providing safe and adequate treatment to the individuals receiving the health care facility services.
   b. Encouraging, promoting, effecting quality improvement in all aspects of health care facility services.
   c. Providing appropriate access to health care facility services.
   d. Remaining updated with all relevant rules, regulations, codes of professional conduct & ethics, and policies of the Ministry of Health.
   e. Facilitating participation and compliance with all relevant national Health Care Programs.
   f. Ensuring that the private hospitals do not display any facilities/services/information, which is not licensed to them.
   g. Ensuring that the advertisements, promotional activities, and printing of prescriptions etc are undertaken only after due approval from the DPHE.

7. Ministry of Health reserves the right to alter/ amends / change the standards, rules and regulations governing the private hospitals, without any prior or advance notice.

8. Names of the duly licensed hospitals shall be published in the official gazette.
STANDARD PROCEDURES

1. APPLYING FOR NEW PRIVATE HOSPITAL

1.1. APPLICATIONS:

1.1a. The sponsor(s) / Owner(s) for the new proposed hospital shall apply to the Department of Private Health Establishment (DPHE), MOH-HQ on the printed application forms available at the Department of Private Health Establishments (DPHE), MOH.

1.1b. The application must include the following documents as enclosures:

   1.1.b.i. Ownership certificate.

   1.1.b.ii. General information about the hospital project e.g. locations, objectives, Number of beds, nature and extent of the clinical services, and expected staffing.

1.2. REGISTRATION:

1.2a. All applications for opening new private hospitals shall be received and registered by the Department of Private Health Establishments, MOH.

1.2b. The initial registration shall include the following:

   1.2.b.i. Date of application.

   1.2.b.ii. Registration number

   1.2.b.iii. List of documents received with the application.

1.3. APPROVAL:

1.3a. All applications, after ensuring completion shall be presented to the Private Hospital Committee for the Necessary Preliminary approval.

1.3b. The preliminary approval shall remain valid for a period of 6 months.
1.3c. On failure of owners to show physical progress towards completion of the project, the preliminary approval, on completion of six months shall become null and void.

1.3d. The Private Hospital Committee may accord the extension of the preliminary approval, provided the owners demonstrate physical progression towards completion of the project.

1.3e. The rejected applicants, on resolving the issues relevant to the previous rejection of application, shall retain the right to re-apply.

1.4. NOTIFICATION:

1.4a. The applicants shall be notified of the preliminary approval within 60 days of registration of the application at the DPHE.

1.4b. Failure to receive the preliminary approval within 60 days would not imply automatic approval.

1.4c. Precise reasons for rejection of the preliminary approval shall be furnished to the applicants.

2. LICENSING NEW PRIVATE HOSPITAL

The process of licensing shall be initiated from the time of preliminary approval for the proposed new private hospital and completed on issuing of the license for the premises and services on completion and confirmation of compliance to all rules, regulations, and standards established in this policy document.

The Private hospitals shall not start their operations before acquiring the license for their premises and services from the relevant departments of MOH.

2.1. APPLICATIONS:

2.1a. Duly filled application forms for the license shall be submitted to the DPHE, along with the following documents.

2.1a.i. Registration certificate from Ministry of Commerce

2.1a.ii. Detailed Drawings & Floor plans for the premises.

2.1a.iii. Precise Nature & Extent of the clinical services

2.1a.iv. Precise Manpower of the hospital

2.1a.v. Equipment list.
2.1.a.vi. Detailed arrangements for clinical support services, maintenance services, and other services.

2.2. LICENSING FEE:
Each application for licensing a new private hospital shall be accompanied by a non-refundable, non-returnable fee of RO 500/- made payable to the MOH treasurer.

2.3. INSPECTION:
2.3a. The applications for the license, along with all enclosures, shall be forwarded to the Private hospital committee.
2.3b. The Inspection team from the MOH-HQ, within 30 days of receipt of the completed application, shall arrange and inspect the hospital premises against the minimum basic standards in terms of Human resources, equipment, structural plans, and services provisions etc established in this document, and forward its recommendations to the committee accordingly.
2.3c. The inspection team shall forward its recommendations to the Private hospital committee.
2.3d. Every hospital shall be given a prompt notice by the private hospital committee of all deficiencies reported as a result of an inspection or investigations.
2.3e. The Dept. of Private Health Establishments shall maintain electronic records of all inspections for private hospitals for an unlimited period, and the paper records as per rules and regulations of the MOH.

2.4. LICENSE:
2.4a. On approval of the Private Hospital committee, the DPHE shall issue the license to the private hospital. Private hospital, only then, can start its operations.
2.4b. The Validity of License shall be for two (2) years from the date of issue of the License, and must be kept posted in a conspicuous place on the licensed premises.
2.4c. The privileges of specialty services practice in private hospitals shall be established by the committee against the minimum standards established for each specialty.
2.4d. The relevant departments of the Ministry of Health shall license the medical staff of the private hospital before they can start their clinical practice. The licensing process shall include licensing examinations by the Dept. of Hospital Affairs for the doctors and the paramedical staff, and the Dept. Nursing Affairs for the nurses, followed by issuance of
the License by the Dept. of Private Health Establishments, Darseit.

2.4e. DGPA & DC shall license the pharmacy of the hospital.

3. RENEWAL OF LICENSE OF PRIVATE HOSPITALS

3.1. APPLICATION:

3.1a. The renewal of License for the private hospitals shall be done through the dept. of Private Health Establishment, provided no change in the premises or services is proposed by the hospitals.

3.1b. The applications for the re-licensing should be submitted with the DPHE 30 days before the approaching date of expiry of the license.

3.2. LICENSE RENEWAL FEE:

3.2a. The fee structure for the re-licensing shall be as follows.

3.2.a.i. Fee for renewal of license shall be OMR 500/-.

3.2.a.ii. License should be renewed before the expiry date of the license in order to prevent legal liabilities.

3.2.a.iii. The license shall stand cancelled if not renewed within three months from the date of expiry.

3.3. LICENSE RENEWAL:

3.3a. The license for the Private hospital shall be considered cancelled unless it is renewed within 90 days of the expiry of the previous license.

3.3b. Hospitals with non-valid or absent license shall be liable for disciplinary/legal actions.

3.3c. Hospitals where none of the attributes below apply, shall be re-licensed directly by the DPHE.

3.3d. All applications for the renewal of License for the private hospitals with following attributes shall be forwarded to the private hospital committee, DGHA, MOH-HQ for necessary approval before renewal of license or implementation of the changes.

3.3.d.i. Structural expansion of the premises

3.3.d.ii. Expansion or addition of clinical services
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3.3.d.iii. Expansion of number of beds
3.3.d.iv. Change of ownership.
3.3.d.v. Change of Name.

3.4. VALIDITY:

The validity period of the renewed License shall be for two (2) years from the date of renewal of the licensing.

3.5. INSPECTIONS:

The Department of Private Health Establishments shall conduct periodic un-announced inspections to ensure compliance of the private hospitals with all relevant standards, rules and regulations of the MOH.

4. LICENSING OF ADDITIONAL STRUCTURES/SERVICES

4.1. In a duly licensed private hospital, following shall require additional prior approval and licensing from the MOH-HQ.
   4.1a. Structural expansion of the premises
   4.1b. Expansion or addition of clinical services
   4.1c. Expansion of number of beds
   4.1d. Change of ownership.

4.2. The owners / management of the private hospital shall apply in advance for approval of any structural changes and / or addition of clinical services to the DPHE.

4.3. The process of approval and licensing of additional structures / structural alterations / clinical services etc will include study of the proposed plans, feasibility study for additional equipment and manpower needs, and an inspection visit by the MOH team.

4.4. The actual work towards additional structures / alteration of structures/ and additional services etc shall be started only on getting the necessary approval from the Private Hospital Committee at MOH-HQ.
5. **DISCIPLINARY RULES AND REGULATIONS**

5.1. The MOH shall retain the right to deny, suspend, or revoke the license in following situations

5.2. Failure of the hospital to comply with the rules and regulations pertaining to licensing of private hospitals.

5.3. Failure to comply with the minimum basic requirements, or other requirements deemed necessary by the Private Hospital Committee.

5.4. Failure of services provided by the hospital to ensure public health, safety, or welfare of the patients.

5.5. Expired or absent license for the premises.

5.6. Expired or absent license for the services.

5.7. Expired or absent license for the medical staff.

5.8. The management of the private hospital shall be duly notified about the deficiencies, breach of disciplinary codes, rules, and regulations etc, and given a chance to represent their point of view and /or cover the deficiencies.

5.9. MOH, through the Dept. of Private Health Establishment and Private hospital committee may initiate a formal inquiry against any disciplinary breach.

5.10. Decision of the Private hospital committee after the formal inquiry shall be duly communicated to the management of the concerned private hospital.

5.11. The disciplinary actions may include, but not limited to,

5.11a. Advice

5.11b. Warning

5.11c. Monetary Penalty (not more than OMR 500/-)

5.11d. Suspension of License & registration (not more than one year)

5.11e. Cancellation of the license.

5.12. The management of the private hospital shall retain the right to appeal to HE the Minister, against the decision of the committee, within 30 days from the date of receipt of the decision.

5.13. HE the Minister shall retain the right to reject the appeal without further hearing, or order re-investigations through the committee.

5.14. The decision of HE the Minister for all appeal cases shall be final at the MOH level and binding on the private hospital committee and the appellant.

5.15. The concerned hospital on getting the notification shall return the license to the MOH.
6. DEFINITIONS:

6.1. HOSPITAL:

“Any health care establishment owned and operated by a person, partnership, or corporation which maintains and operates organized facilities and services for the medical diagnosis, treatment, and / or care of person over a period exceeding 24 hour’s, and has not less than six (6) licensed inpatient beds to accommodate patients requiring continuous & supervised clinical management”.

6.2. LICENSED HOSPITAL BEDS (Included in the bed complement):

“A bed which is installed & prepared for continuous 24 hour’s use by inpatients during their period of hospitalization, and is situated in areas of the hospital intended for use by inpatients”.

Accordingly, following beds shall be recognized as licensed inpatient beds.

6.2a. Beds in private rooms
6.2b. Beds in private wards
6.2c. Beds in special care units (ICU, CCU, SCBU)
6.2d. Beds in isolation rooms
6.2e. Incubators used for care of low birth weight infants

BEDS NOT CONSIDERED AS LICENSED HOSPITAL BEDS (not included in the bed complement)

- Beds if Labor & Delivery rooms
- Beds in Examination room
- Beds in Treatment rooms
- Beds in Physicians’ offices
- Beds in Recovery rooms
- Beds in Outpatient clinics
- Beds in Emergency room
- Beds in special diagnostic or therapeutic departments e.g.
  Radiology, Laboratory, blood bank, endoscopy room etc
- Beds in Physiotherapy department
- Beds in Dialysis unit.
- New-born cribs kept in wards to accommodate healthy babies
  of sick mothers.

7. MINIMUM GENERAL PROVISIONS

(Additional resources may be needed according to the nature of specialty
services and the work-load of the hospital)

7.1. MANPOWER:

7.1a. Administrator (preferably with Medical background)
7.1b. Administrative staff (Finance, personnel etc)
7.1c. Administrative support staff (coordinators, secretaries etc)
7.1d. Head of clinical services
7.1e. Head of Nursing services
7.1f. Licensed doctors
7.1g. Licensed nursing staff
7.1h. Licensed paramedical staff
7.1i. Clinical support staff (e.g. Medical Orderlies, Ambulance
  drivers etc)
7.1j. Other support staff (maintenance technicians, cleaners etc)

The need for general duty doctors and nursing staff shall be
established in accordance with the following general principles.

- One resident on-call doctor at any given time for 1 to 20 beds,
  and an additional 1 for every additional 20 beds.
- One Nurse for any given shift for every 6 beds and One assistant
  nurse for any given shift for every 3 beds.
  Or
- One Nurse for every 4 beds
7.2. **EQUIPMENT:**
as per attached list of equipment provided by DGEA.

7.3. **STRUCTURE:**
- 7.3a. OPD clinics
- 7.3b. Reception / registration area
- 7.3c. Inpatient ward(s) / Rooms
- 7.3d. Nursing station for inpatient area
- 7.3e. Administration section
- 7.3f. OPD Waiting area
- 7.3g. Admin waiting area
- 7.3h. Emergency room
- 7.3i. Dirty utility
- 7.3j. Clean utility
- 7.3k. Treatment room IPD
- 7.3l. Treatment room OPD
- 7.3m. Staff toilets
- 7.3n. *Patients toilets (1 in each single room, and 1 for each 5 bed ward)*
- 7.3o. Patient changing areas.
- 7.3p. Ramps & Patient bed Lifts (where applicable)
- 7.3q. Standby power generator
- 7.3r. UPS (if having OTS, ICU etc)
- 7.3s. Engineering room
- 7.3t. Space allocation as per equipment list specification
- 7.3u. Doctor’s duty room (s)
- 7.3v. Pantry (staff and Patients)
- 7.3w. Drug storage area.
- 7.3x. Consumables & linen storage room.
- 7.3y. Pharmacy
- 7.3z. DD cupboard with alarm system.
- 7.3aa. Water reservoir to store water for approx 1 week
- 7.3bb. AC / Ventilation system as per DGEA specifications
- 7.3cc. Fires safety alarm system
- 7.3dd. Emergency exit plan.
*All toilets to have fittings, fixtures, and special arrangements suited for disabled patients.

7.4. SERVICES:

7.4a. Emergency clinical management services.
7.4b. 24 hours cover by doctors for inpatient department
7.4c. 24 hours nursing services
7.4d. Cleaning services (in-house or out-sourced)
7.4e. Catering services (in-house or outsourced)
7.4f. Bio-medical Maintenance services (in-house or out-sourced)
7.4g. Civil Maintenance services (in-house or out-sourced)
7.4h. OPD and IPD Referral arrangements.
7.4i. Ambulance services
7.4j. Laboratory services
7.4k. Radiology services
7.4l. Sterilization Unit and facility (in-house mandatory)
7.4m. CSSD services (in-house or outsourced)
7.4n. Laundry services (in-house or outsourced)
7.4o. Garbage disposal services
7.4p. Hospital Waste disposal services
7.4q. Infected waste disposal services
7.4r. Blood product storage / services
7.4s. Isolation services (in-house)
7.4t. Medical gases provision
7.4u. Paper based or electronic medical records management.

7.5. ESSENTIAL COMBINATIONS WITH SPECIALTY SERVICES:

7.5a. The minimum basic requirements, in addition to above, shall vary with the nature and extent of the specialty services proposed for the private hospitals.
7.5b. The committee shall continue to develop this document further, incorporating specific minimum basic requirements for each clinical specialty service.
7.5c. As of now, following basic guidelines shall be deployed for specialty clinical services.
7.5.c.i. 24 hrs On-call Cover by one or more specialist level doctor.

7.5.c.ii. 24 hrs on-call cover with physical presence of by one MO for each 20 specialty beds.

7.5.c.iii. **With Delivery Services:**
- Paediatrics cover
- Minimum 1 delivery room
- Minimum 2 observation beds.
- Cold Chain & Immunization Arrangements.
- Incubator
- Ventilator
- Monitors

7.5.c.iv. **With OT Services:**
- Ventilation arrangements
- Ventilator
- Monitors

7.5.c.v. **With Cardiac Cath-Lab Services:**
- CCU arrangements
- Ventilator
- Monitors

7.5.c.vi. **With Renal Transplant Services:**
- Nephrology cover
- Urology cover
- ICU
- Renal dialysis services
- Isolation Services
8. SPECIFICATIONS FOR STRUCTURAL FACILITIES

8.1. PLANNING

As with any hospital the aim is to provide state of the art technology and facilities that are fit for purpose. This should include the clinical areas in which the patients are cared for and support facilities that are involved in the overall care.

The key aspects of planning the hospital are:
- Fit for purpose
- Appropriate access
- Quality environment
- Infection control
- Security
- Health & Safety
- Environmental pollution
- Risk management

In addition there are number of general principles to consider:
- User requirements
- Inter locational relationships of departments
- Views of users

8.2. PATIENT AREAS

8.2a. Inpatient Areas

8.2.a.i. Bed space is large enough to permit all clinical interventions and accommodate multiparameter monitoring and life support systems.

8.2.a.ii. Sufficient space to accommodate a patient chair and locker

8.2.a.iii. Space to enable staff to maneuver the patient and safety equipment

8.2.a.iv. Sufficient space for additional mobile equipment where necessary
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8.2.a.v. Critical care areas, if available, should be located with convenient access from other essential services like laboratory, radiology, resuscitation, respiration therapy etc.

8.2.a.vi. Direct or remote visual observation between nurse station and all patient beds in critical care areas.

8.2.a.vii. Each bed of critical care area should have equipment for continuous monitoring with display at the patient side and at the nurse station.

8.2.a.viii. Centrally located area for treatment of patient from more than one inpatient units in the same floor level.

8.2.a.ix. Visual and auditory privacy

8.2.a.x. Availability of natural daylight

8.2.a.xi. Adequate ventilation with proper control

8.2b. **Outpatient Areas**

8.2.b.i. Sufficient space, large enough to accommodate an examination table or other means for examining the patient and to permit all clinical interventions.

8.2.b.ii. Sufficient space to accommodate equipment for diagnosis or treatment in special clinics such as eye, ear, nose and throat examination.

8.2.b.iii. Space to enable staff to maneuver the patient and safety equipment.

8.2.b.iv. Sufficient space to accommodate the furniture for the clinician and patient

8.2.b.v. Visual and auditory privacy

8.2.b.vi. Treatment area for outpatients

8.2.b.vii. Availability of natural light and with supplementary light to work

8.2.b.viii. Adequate ventilation with appropriate control

8.2c. **Emergency Care Area**

8.2.c.i. *Conveniently accessible, well marked, illuminated, and covered area for transfer of patient from ambulance and/or other vehicles.*

8.2.c.ii. *Ramp for wheel chair and stretchers*

8.2.c.iii. Sufficient space, large enough to accommodate an examination table or other means for
examining and treating the patient and to permit all clinical interventions.

8.2.c.iv. Sufficient space to accommodate equipment for resuscitation, diagnosis or treatment
8.2.c.v. Space to enable staff to maneuver the patient and safety equipment.
8.2.c.vi. Visual and auditory privacy
8.2.c.vii. Availability of natural light and with supplementary light to work
8.2.c.viii. *Adequate ventilation with appropriate control*

8.2d. **Surgical (Operation Theatre) Areas:**

8.2.d.i. Should have sufficient pre-operative patient holding areas depending upon the number of theatres.
8.2.d.ii. Theatre should have sufficient space to accommodate the table, required equipment including portable x-ray unit, staff etc.
8.2.d.iii. Post operative recovery area with enough space, depending upon the number of theatres.
8.2.d.iv. Should have an attached provision for sterilization of equipment and instruments of immediate or emergency use
8.2.d.v. Availability of natural light and with supplementary light to work
8.2.d.vi. *Adequate ventilation with appropriate control*

8.2e. **Labor/ Delivery Areas**

8.2.e.i. Should have sufficient designated assessment and preparation area, depending upon the number of delivery units
8.2.e.ii. Delivery unit should have sufficient space to accommodate the delivery bed, essential equipment, staff etc
8.2.e.iii. Should have provision for Infant resuscitation
8.2.e.iv. Availability of natural light and with supplementary light to work
8.2.e.v. Adequate ventilation with appropriate control

8.2f. **Support facilities for family and friends**

In addition, facilities are required for patient relatives of critical ill patients such as
8.2.f.i. A welcoming reception
8.2.f.ii. A comfortable sitting room
8.2.f.iii. Beverage making facilities
8.2.f.iv. Designated toilets
8.2.f.v. Overnight accommodation
8.2.f.vi. Disable facilities

8.3. STAFF AREAS

8.3a. A working environment that reflects best practice
8.3b. Designated toilets, separate from patients
8.3c. A way in which to summon help from other staff
8.3d. Sufficient storage for essential supplies and equipment in each area
8.3e. Technical support services for urgent tests
8.3f. Space for privacy for exchange of information with other staff
8.3g. Appropriate facilities for changing, resting, eating and drinking
8.3h. Provision for teaching/educational activities

8.4. OFFICE ACCOMMODATION

It is important to provide a quiet environment where staff can deal with administrative tasks. Offices will be required for:

8.4a. Clinical Director
8.4b. Manager
8.4c. Clinical staff
8.4d. Administrative support staff
8.4e. Meeting facilities
8.5. **SERVICES AREAS**

8.5a. **Laboratory Services:**

- 8.5.a.i. Should have facilities for the performing of Haematology, clinical chemistry, microbiology etc.
- 8.5.a.ii. Should have sufficient space to keep the essential equipment.
- 8.5.a.iii. Should have separate area for collection of specimen.
- 8.5.a.iv. Should have sufficient storage facilities, including refrigeration, for reagents, standards and stained specimen etc.
- 8.5.a.v. Should have facilities and equipment for terminal sterilization of contaminated specimen.

8.5b. **Imaging Services:**

- 8.5.b.i. Should have provision for basic imaging services.
- 8.5.b.ii. Space and equipment shall be as necessary to accommodate the functional program.
- 8.5.b.iii. Imaging area to have specified radiation protection.
- 8.5.b.iv. Should have facilities for patient dressing.
- 8.5.b.v. Should have facilities for film storage, processing etc.

8.6. **GENERAL DESIGN CONSIDERATIONS**

All the space planning and facilities should be designed and comply with hospital building notes documents (HBN) from the UK as a minimum and where necessary adapted to the local requirements.

The hospital must have sufficient and appropriate access with roads and paths and the main entrance and emergency entrances should be clearly identified.

Sufficient provision must be allocated for patient and staff parking with consideration for patient relatives at visiting time.

Consideration should be given to internal finishes such as...
8.6a. **Floors**

- **8.6.a.i.** Floor surfaces that can be easily cleaned and shall be functional compatible with the need for comfort, cleanliness, movement of heavy loads and safety

- **8.6.a.ii.** Floor surfaces should be slip resistant

- **8.6.a.iii.** Carpets should not be used in clinical areas

- **8.6.a.iv.** In special areas such as ICU, SCBU and OT the floors should be anti static and structured with few joints

- **8.6.a.v.** Floors in waiting areas should be easily cleaned

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8.6b. **Walls**

- **8.6.b.i.** Wall finishes should be durable and be able to withstand wet cleaning and accidental impact by trolleys etc. Especially vulnerable surfaces should have additional protection.

- **8.6.b.ii.** Paint finishes should be chosen to give a pleasing environment

- **8.6.b.iii.** In ICU, SCBU and OT areas the paint finish shall be aseptic paint

- **8.6.b.iv.** Ceramic tiles should be used in wet areas such as kitchens, showers and toilets

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8.6c. **Ceilings**

- **8.6.c.i.** Acoustically absorbent ceilings shall be used to reduce noise. The choice of ceiling should be compatible with the use of the room and infection control requirements.

- **8.6.c.ii.** Care should be taken to ensure that the ceilings are high enough to allow all working practices and result in an acceptable interior appearance.

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8.6d. **Doors & Frames**

- **8.6.d.i.** Materials used for doors should be able to withstand frequent impact from mobile equipment.

- **8.6.d.ii.** All double –swing doors should incorporate vision panels.

- **8.6.d.iii.** The iron mongery should be chosen to suit the need of the doors ,such as hold open devices,
locks, automatic movers, magnetic retainers and kick plates.

8.6.d.iv. Due consideration shall be given to aid patient movement on beds through the area

8.6e. Windows

Consideration should be given to the following before selection of location and type:

- 8.6.e.i. Daylight needs
- 8.6.e.ii. Natural ventilation needs
- 8.6.e.iii. Noise insulation
- 8.6.e.iv. User comfort
- 8.6.e.v. Energy conversation
- 8.6.e.vi. Prevention of glare and heat
- 8.6.e.vii. All windows should be at least double glazed
- 8.6.e.viii. Windows shall be easily cleaned
- 8.6.e.ix. Blinds should be installed to provide blackout condition in some treatment areas
- 8.6.e.x. Windows in patient areas should be non-openable

8.6f. Signage

- 8.6.f.i. All the areas of the hospital should bear signage to allow patient, relatives and staff to find their way easily.

- 8.6.f.ii. The main lobby and central locations of various parts of the premises should bear sign boards offering directions for other parts/services venues.

- 8.6.f.iii. The hospital premises should have the emergency exits clearly marked as per civil defense standards.
8.7. SPECIFIC DESIGN REQUIREMENTS

8.7a. **Infection Control**

8.7.a.i. Hospital acquired infections is a major problem and therefore adherence to best practice is crucial.

8.7.a.ii. The design of the building should be with the specific purpose of reducing the risk of hospital acquired infection.

8.7.a.iii. Account should be taken of the use of innovative coatings, products for furnishings and fittings that help in the reduction of infections.

8.7b. **Fire Prevention & Emergency Escape**

8.7.b.i. Provision should be made for fire prevention devices, emergency lighting and adequate escape routes to allow horizontal staged evacuation of the inpatient areas by the use of fire zones and compartments.

8.7c. **Security**

8.7.c.i. Security measures are needed to control unauthorized access and to reduce the likelihood of thefts.

8.7.c.ii. The use of restricted entry systems and camera is recommended.

8.7.c.iii. No security measures should inhibit emergency escape.

8.7d. **Noise And Sound Attenuation**

8.7.d.i. Due care and consideration should be given to noise generation and abatement for the patient and staff comfort.

8.7e. **Lifts**

8.7.e.i. If there is a second story then adequate stairways and lifts facilities are required. These shall be design for bed and patient access and comply with all civil defense safety standards.
8.7f. **Kitchen**
   8.7.f.i. If in house catering is provided than appropriate kitchen facilities must be provided in accordance with HBN documents.

8.7g. **Laundry**
   8.7.g.i. If in house laundry services are provided than appropriate laundry facilities must be provided in accordance with HBN documents.

### 8.8. ENGINEERING REQUIREMENTS

All the engineering services should be designed and comply with Hospital technical memorandum documents (HTM) from the UK as a minimum and where necessary adapted to the local requirements.

In all aspects attention must be paid to space facilities for services, reliability, accessibility and maintainability of these services and emergency break up, energy efficiency, health & safety and management of risks related to these services.

Electrical power, data outlets and medical gases shall be provided throughout the areas as needed in sufficient numbers to allow adequate provision of the health care.

8.8a. **Electrical Supply**
   8.8.a.i. The electrical supply should comply with BS 7671 and HTM 2007 and the local regulations.
   8.8.a.ii. The electrical installation shall ensure compliance with codes of practice of electrical interference.

8.8b. **Emergency Electrical Supplies**
   8.8.b.i. The hospital shall have a back up power supply, normally and generator and/or interruptible power supply (UPS) distributed as recommended in HTM 2011.
   8.8.b.ii. The designers should carry out a risk assessment to identify the operational impact.
   8.8.b.iii. Any outlets connected to critical medical devices should be connected to the essential circuits and clearly identified.
8.8c. **Lighting**

- **8.8.c.i.** Lighting should comply with CIBSE lighting guide LG 2 UK.
- **8.8.c.ii.** The color finishes and selection of lights should be coordinated to achieve.
- **8.8.c.iii.** The required minimum lighting levels and technical specification welcoming and calm atmosphere.
- **8.8.c.iv.** Selection of lights shall be with appropriate color rendering lamps for critical diagnostic and treatment areas. Low glare lighting solutions shall be adopted.
- **8.8.c.v.** In bedded areas the number and location of lighting fittings should be above and behind the bed-head to achieve the appropriate level of illumination. Provision must be made for night lighting.
- **8.8.c.vi.** In corridors the location of lights shall comply with HBN 40.
- **8.8.c.vii.** Light fittings shall be manufactured according to BS 4533.
- **8.8.c.viii.** Emergency escape lighting should be provided to HTM 2011 & BS 5266.
- **8.8.c.ix.** Mobile examination lights should where provided operate on extra low voltage.

8.8d. **Power Outlets**

- **8.8.d.i.** Socket outlets at each bed space should be unswitched when connected to a medical device.
- **8.8.d.ii.** The sue of UPS should be considered to safeguard the loss of data and medical equipment.
- **8.8.d.iii.** Sufficient sockets shall be provided for portable appliances other than medical devices.
- **8.8.d.iv.** Electrical supply connections to all diagnostic equipment shall comply with BS EN60. Due care shall be paid to earthing terminations etc.

8.8e. **Ventilation**

- **8.8.e.i.** Provision should be made for mechanical ventilation.
- **8.8.e.ii.** Air movement should always be from clean to dirty areas. The designs should allow adequate flow of air into the space to achieve the
required minimum air changes per hour and pressure differentials as necessary.

8.8.e.iii. Mechanical ventilation should ensure that both the supply air and extract air are balanced taking into consideration infiltration.

8.8.e.iv. Fresh air should be introduced by low velocity systems and cooled and filtered as necessary. Diffusers should be located to achieve a uniform air distribution without causing discomfort to the patients.

8.8.e.v. Where surgery is to be undertaken, such as in a major treatment room or operating theatre suitable filtered and pressurized air supply is required designed and installed in accordance with HTM 2025.

8.8.e.vi. Areas dedicated for infected patients should have appropriate mechanical ventilation and pressure control to create a suitable environment to reduce infection risks.

8.8.e.vii. A separate extract system is required for “dirty” areas e.g. utility and sanitary areas. External discharge systems must be protected against back pressure and should be located away from air intakes or windows.

8.8.e.viii. The plant should be tested to comply with BS EN 779.

8.8f. **Air Conditioning**

8.8.f.i. Suitable systems shall be provided to control the temperature and humidity to achieve patient and staff environment comfort conditions.

8.8.f.ii. In special areas such as ICU, SCBU and operating theatres the air conditioning system shall be designed and controlled to achieve the environmental conditions needed for the procedures.

8.8g. **Telecommunications**

8.8.g.i. Telecommunications is an essential element of hospital management. A suitable system related to the hospital management policy should be selected that caters for the maximum anticipated traffic demand. Sufficient incoming and outgoing lines shall be provided to allow the public, patients and staff to communicate without finding the system busy.
Outlets should be provided for fixed payphones for staff and visitors. Payphones for staff and visitors should be located near waiting areas. One should be wheelchair accessible.

**Information Technology (IT).**

8.8.h. i. Sufficient data outlets and sufficient data hardware and software shall be provided to comply with the hospital management policy for data transfer and storage.

8.8.h. ii. All data wiring and data devices shall be separate from the electrical supplies and run in separate pathways.

**Medical Gases**

8.8.i. i. The whole system shall be design and installed in compliance with HTM 2022.

8.8.i. ii. The whole system should make due allowance for future needs.

8.8.i. iii. Outlets should be distributed to reflect clinical and nursing needs and provide with suitable back up facilities.

8.8.i. iv. All systems shall be tested for purity.

**Alarms & Communications**

8.8.j. i. Communication facilities such as intercom, pagers and/or nurse call system should be discussed and provided as needed to assist the patient care and staff communication especially in an emergency.

**Maintenance Facilities**

8.8.k. i. Adequate provision shall be made for qualified engineers and technicians to operate, maintain and manage the complete engineering services to ensure and adequate provision of support services to allow appropriate health care with no risk to patients and/or staff.

8.8.k. ii. In order to comply with this staff must be qualified and skilled to uptake the task and should be provided with sufficient space in terms of offices and workshops to carry out the necessary maintenance.
8.8i. **Lightening Protection**

8.8.i.i. Protection of the building against lighting shall be provided in accordance with HTM 2007 and BS 6651.

8.8m. **Cold & Hot Water Services**

8.8.m.i. Water services shall be provided in all areas to provide and adequate provision for health care with due consideration for infection control.

8.8.m.ii. The design of pipe work shall be to HTM standards and provided with sufficient valves etc to avoid disruption to the provision in the event of a pipe work leak.

8.8.m.iii. Sufficient storage shall be provided for 2 days incase of failure of supply. Due care shall be given to the water condition and treatment to avoid bacteria and legionellae according to HTM 2040.

8.8.m.iv. Hot water shall comply with safe hot water guide where the minimum outlet temperatures at heat generators is not less than 5 degrees centigrade. Adequate provision must be made to ensure sufficient storage capacities for peak demands.

8.8.m.v. Controls shall be provided to avoid scolding hot water temperature by using thermostatic mixing valves.

8.8n. **Drainage**

8.8.n.i. The internal drainage should comply to BS EN 12056-2 and HTM 2023 and CIBSE guide G.

8.8.n.ii. Sufficient provision shall be made for inspection, rodding and maintenance so that the hospital is disrupted if blockages occur.

8.8.n.iii. Effective provision shall be made on site for sewage storage and removal, away from the clinical areas.

8.8.n.iv. Due consideration be given to rain water drainage on road ways and off building roof to avoid collection that disrupts patient or staff access to the building.
9. LOCAL RULES AND REGULATION

The hospital must comply with all local regulations such as:

9.1. Muscat Municipality
9.2. MRME
9.3. MEW
9.4. ROP fire Department

10. COMPLIANCE WITH STANDARDS

The hospital must comply with all the relevant standards. These shall be checked by the MOH and if found to be non compliance the hospital management will have to make all the necessary changes for compliance at their own cost.
LIST OF RECOMMENDED EQUIPMENT IN PRIVATE HOSPITAL

**Department: Operation Theatre**

<table>
<thead>
<tr>
<th>A) Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Necessary Equipment similar to the following.</strong></td>
</tr>
<tr>
<td>Anesthesia Machine with Vital Signs Monitor &amp; Ventilator Complete</td>
</tr>
<tr>
<td>Diathermy Unit</td>
</tr>
<tr>
<td>OT Table</td>
</tr>
<tr>
<td>OT Light with atleast 130,000 to 140,000 Lux</td>
</tr>
<tr>
<td>Resuscitation Equipment including Defibrillator</td>
</tr>
<tr>
<td>Trolley OT Sterile Zone / Non-Sterile.</td>
</tr>
<tr>
<td>Suction - Mobile / Central.</td>
</tr>
<tr>
<td>Medical Gas - (O2, Air, N2O) supplies either Cylinder / Manifold / Central.</td>
</tr>
<tr>
<td>OT Instrument Sets</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room Should be with Positive Air Pressure</td>
</tr>
<tr>
<td>Separate Air Handling Unit for OT- To prevent Cross Contamination.</td>
</tr>
<tr>
<td>O.T. Room Size - 6 x 6.5 Meters approximately.</td>
</tr>
<tr>
<td>OT should have Preparation Room, Recovery Room, Changing room, Scrub, etc.</td>
</tr>
</tbody>
</table>

**Department: Laboratory**

<table>
<thead>
<tr>
<th>A) Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Necessary Equipment to carry out the necessary tests.</td>
</tr>
</tbody>
</table>
### Department: Radiology

1) **X-Ray Room**

<table>
<thead>
<tr>
<th>A) Equipment</th>
<th>The Necessary Equipment similar to the following.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Ray Machine - Fixed</td>
<td></td>
</tr>
<tr>
<td>X-Ray Processor - Manual / Automatic / daylight (according to the requirement).</td>
<td></td>
</tr>
<tr>
<td>X-Ray Machine Mobile, According to the size of the hospital.</td>
<td></td>
</tr>
<tr>
<td>Radiation Protection Equipment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building - Lead Lining or Equivalent concrete for room and Warning Signs for Radiation Protection as per international standard</td>
</tr>
<tr>
<td>Room Size - X-Ray approximately 5 x 6.25</td>
</tr>
<tr>
<td>Dark Room Size approximately 2.75 x 3.25 Meters</td>
</tr>
<tr>
<td>Room Size for X-Ray and OPG Machine approximately 7.5 x 6.5 Meters</td>
</tr>
</tbody>
</table>

2) **CT Room**

<table>
<thead>
<tr>
<th>A) Equipment</th>
<th>The Necessary Equipment similar to the following.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.T. Scan</td>
<td></td>
</tr>
<tr>
<td>Anesthesia Machine with Monitor &amp; Ventilator Complete</td>
<td></td>
</tr>
<tr>
<td>Resuscitation Equipment including Defibrillator</td>
<td></td>
</tr>
<tr>
<td>Radiation Protection Equipment</td>
<td></td>
</tr>
<tr>
<td>Printer / Processor</td>
<td></td>
</tr>
<tr>
<td>Patient Trolley</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building - Lead Lining or Equivalent concrete for room and Warning Signs for Radiation Protection as per international standard</td>
</tr>
<tr>
<td>C.T.Scan Room Size 6.25 x 7.5 Meters</td>
</tr>
</tbody>
</table>
### 3) Mammography

<table>
<thead>
<tr>
<th><strong>A)</strong> Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Necessary Equipment similar to the following.</strong></td>
</tr>
<tr>
<td>Mammography machine</td>
</tr>
<tr>
<td>Radiation Protection Equipment</td>
</tr>
<tr>
<td>Patient Trolley</td>
</tr>
<tr>
<td>Mammography Processor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>B)</strong> Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building - Lead Lining and Warning Signs for Radiation Protection (or Equivalent concrete for room) - As per International Standards</td>
</tr>
<tr>
<td>Mammography Room Size - 5 x 5 Meters approximately.</td>
</tr>
</tbody>
</table>

### 4) MRI

<table>
<thead>
<tr>
<th><strong>A)</strong> Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Necessary Equipment similar to the following.</strong></td>
</tr>
<tr>
<td>MRI Machine</td>
</tr>
<tr>
<td>Anesthesia Machine with Monitor &amp; Ventilator Complete - MRI Compactable.</td>
</tr>
<tr>
<td>Trolley - MRI Compactable</td>
</tr>
<tr>
<td>Resuscitation Equipment including Defibrillator - MRI Compactable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>B)</strong> Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRI Room Size Approximately 6.9 x 10.4 Meters</td>
</tr>
</tbody>
</table>

### Department: A&E

<table>
<thead>
<tr>
<th><strong>A)</strong> Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Necessary Equipment similar to the following.</strong></td>
</tr>
<tr>
<td>Patient Monitor - Portable</td>
</tr>
<tr>
<td>ECG Machine - 12 Lead / 3 Lead</td>
</tr>
<tr>
<td>Nebulizer</td>
</tr>
<tr>
<td>Ventilator Transport</td>
</tr>
<tr>
<td>Trolley Resuscitation</td>
</tr>
<tr>
<td>Suction - Mobile / Central.</td>
</tr>
</tbody>
</table>
Medical Gas - (O2, Air) supplies either Cylinder / Manifold.
Resuscitation Equipment including Defibrillator
Examination Light - at least 30,000 Lux
A&E Instrument Sets
Patient Trolley with Transfer Slide.
General Medical Equipment like Infusion Pump, Syringe Pump etc.

**B) Room Details**
Building - Door Should be Sliding / Big enough to transfer the trolley.
Size for 1 Cubic - at least 3.5 x 2.5 Meters

**Department: Physiotherapy**

**A) Equipment**
All Necessary Equipment to carry out the required treatment.

**Department: Intensive Care Unit / Coronary Care Unit**

**A) Equipment**
The Necessary Equipment similar to the following.
- Patient Beds
- ECG Machine
- Patient Monitors
- Suction - Mobile / Central.
- PMG Items O2, Air
- Resuscitation Equipment including Defibrillator
- Patient Ventilators
- General Medical Equipment like Infusion Pump, Syringe Pump etc.

**B) Room Details**
ICU / CCU Size for 1 Bed approximately 3.25 x 3.25 Meters
### Department: Cardiology

#### 1) Echo Cardiography Room

<table>
<thead>
<tr>
<th>A) Equipment</th>
<th>The Necessary Equipment similar to the following.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Echo Cardiography System, Adult Applications.</td>
</tr>
<tr>
<td></td>
<td>Emergency Trolley with Defibrillator Monitor</td>
</tr>
<tr>
<td></td>
<td>Any Other Equipment required for the Clinic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room Size Approximately 3.75 x 3.25 Meters</td>
</tr>
</tbody>
</table>

#### 2) Treadmill Room

<table>
<thead>
<tr>
<th>A) Equipment</th>
<th>The Necessary Equipment similar to the following.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Treadmill, Exercise System</td>
</tr>
<tr>
<td></td>
<td>ECG Machine 12 Channel</td>
</tr>
<tr>
<td></td>
<td>Trolley, Emergency, With Monitor / Defibrillator</td>
</tr>
<tr>
<td></td>
<td>Suction – Mobile / Central.</td>
</tr>
<tr>
<td></td>
<td>Medical Gas – (O2) supplies either Cylinder / Manifold.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room Size Approximately 3.75 x 3.25 Meters</td>
</tr>
</tbody>
</table>

### Department: OBG Department

#### 1) Delivery Suite

<table>
<thead>
<tr>
<th>A) Equipment</th>
<th>The Necessary Equipment similar to the following.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bed Delivery</td>
</tr>
<tr>
<td></td>
<td>Light – Celing Mounted or Mobile</td>
</tr>
<tr>
<td></td>
<td>Delivery Instrument Set Complete</td>
</tr>
<tr>
<td></td>
<td>Anginox unit if required.</td>
</tr>
<tr>
<td></td>
<td>CTG Machine.</td>
</tr>
<tr>
<td></td>
<td>General medical equipment like monitoring / warmers, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery Suite Room Size 5.75 x 3.5 Meters</td>
</tr>
</tbody>
</table>
2) New Born Resuscitation

A) Equipment

<table>
<thead>
<tr>
<th>The Necessary Equipment similar to the following.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baby Resuscitation Equipment.</td>
</tr>
<tr>
<td>Monitor Vital Signs, Neonatal</td>
</tr>
<tr>
<td>Trolley Resuscitation Infant</td>
</tr>
<tr>
<td>Suction – Mobile / Central.</td>
</tr>
<tr>
<td>PMG Items O2, Air</td>
</tr>
</tbody>
</table>

B) Room Details

Room Size 3.75 x 3 Meters Approximately

3) Sonography Room

A) The Necessary Equipment similar to the following.

<table>
<thead>
<tr>
<th>Machine Ultrasound Gyne Application System Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Other Equipment required for the Clinic</td>
</tr>
</tbody>
</table>

B) Room Details

Room Size – 3.75 x 3.25 Meters Approximately

Department: Special Care Baby Unit

A) Equipment

<table>
<thead>
<tr>
<th>The Necessary Equipment similar to the following.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Monitors for infants.</td>
</tr>
<tr>
<td>Infant Warmers</td>
</tr>
<tr>
<td>Phototheraphy Units</td>
</tr>
<tr>
<td>Incubator for babies</td>
</tr>
<tr>
<td>Suction - Mobile / Central.</td>
</tr>
<tr>
<td>Medical Gas - (O2, Air) supplies either Cylinder / Manifold / central.</td>
</tr>
<tr>
<td>Ventilator Neonatal</td>
</tr>
<tr>
<td>Pump, Breast - Manual/ Electric</td>
</tr>
<tr>
<td>General Medical Equipment like Infusion Pump, Syringe Pump etc.</td>
</tr>
<tr>
<td>Trasport Incubator for babies</td>
</tr>
</tbody>
</table>

B) Room Details

Thr required space for each bed is approximately 3.75 x 3 Meters
### Department: Renal Dialysis Unit

<table>
<thead>
<tr>
<th>A) Equipment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Necessary Equipment similar to the following.</strong></td>
<td></td>
</tr>
<tr>
<td>Machine Renal Dialysis</td>
<td></td>
</tr>
<tr>
<td>Chair Renal Dialysis</td>
<td></td>
</tr>
<tr>
<td>Medical Gas - (O2) supplies either Cylinder / Manifold / Central</td>
<td></td>
</tr>
<tr>
<td>Resuscitation Equipment including Defibrillator</td>
<td></td>
</tr>
<tr>
<td>Chair Weighing Scale</td>
<td></td>
</tr>
<tr>
<td>General Medical Equipment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RDU Room Size for 1 station approximately 2.5 x 3 Meters</td>
<td></td>
</tr>
</tbody>
</table>

### Department: Ward (10 Beded)

#### 1) Ward

<table>
<thead>
<tr>
<th>A) Equipment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Necessary Equipment similar to the following.</strong></td>
<td></td>
</tr>
<tr>
<td>Patient Beds</td>
<td></td>
</tr>
<tr>
<td>Suction Machine</td>
<td></td>
</tr>
<tr>
<td>Medical Gas - (O2, Air) supplies either Cylinder / Manifold / Central.</td>
<td></td>
</tr>
<tr>
<td>General Medical Equipment for monitoring, etc.</td>
<td></td>
</tr>
<tr>
<td>Emergency Trolley with Defibrillator monitor</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Room Size for 10 Bed Approximately 12 x 7 Meters</td>
<td></td>
</tr>
<tr>
<td>Toilet - 2 Nos</td>
<td></td>
</tr>
</tbody>
</table>

#### 2) Treatment Room

<table>
<thead>
<tr>
<th>A) Equipment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Necessary Equipment similar to the following.</strong></td>
<td></td>
</tr>
<tr>
<td>Examination Couch</td>
<td></td>
</tr>
<tr>
<td>Nebulizer</td>
<td></td>
</tr>
<tr>
<td>ECG Machine</td>
<td></td>
</tr>
<tr>
<td>Suction - Mobile / Central.</td>
<td></td>
</tr>
</tbody>
</table>
Medical Gas - (O2) supplies either Cylinder / Manifold/ Central.

Resuscitation Equipment including Defibrillator

Any other equipment required for the treatment room. General Medical Equipment like Infusion Pump, Syringe Pump etc.

**B) Room Details**

Room Size Approximately 3.75 x 3.25 Meters

### 3) Clean Utility

**A) Items**

_The Necessary Equipment similar to the following._

- Bin Pedal
- Trolley Linen Changing
- Other Items Required

### 4) Dirty Utility

**A) Equipment**

_The Necessary Equipment similar to the following._

- Flusher Disinfector
- Trolley Dirty Linen
- Other Items required

### Department - Dental

**A) Equipment**

_The Necessary Equipment similar to the following._

- Dental Unit
- Autoclave Bench Top with vacuum
- Amalgamator
- Curing Light
- Dental X-Ray
- Electronic Pocket dosimeter for radiation protection.

**B) Room Details**

Dental Room Size for one chair is approximately 3.75 x 3.25 Meters
### Department: Dermatology Clinic

<table>
<thead>
<tr>
<th>A) Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Necessary Equipment similar to the following.</strong></td>
</tr>
<tr>
<td>Dermatology Light</td>
</tr>
<tr>
<td>Dermatology, Cryo Cautery Complete</td>
</tr>
<tr>
<td>Dermatology, Diathermy Unit</td>
</tr>
<tr>
<td>Dermojet</td>
</tr>
<tr>
<td>Glass Magnifying with Light</td>
</tr>
<tr>
<td>Lamp Woods (UV Theraphy)</td>
</tr>
<tr>
<td>Any Other Equipment required for the Clinic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermatology Room Size aproximately 3.75 x 3.25 Meters</td>
</tr>
</tbody>
</table>

### Department: Ophthalmology

<table>
<thead>
<tr>
<th>A) Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Necessary Equipment similar to the following.</strong></td>
</tr>
<tr>
<td>Board, Eye Test, Snellen's</td>
</tr>
<tr>
<td>Chair Examinatin, Eye Patients</td>
</tr>
<tr>
<td>Chart, Refraction for Children (English Arabic)</td>
</tr>
<tr>
<td>Chart, Vision Test, Near Vision Arabic</td>
</tr>
<tr>
<td>Cylinder, Cross 0.25 &amp; 0.50</td>
</tr>
<tr>
<td>Lens Meter for Measurement of Opthalmic Lens</td>
</tr>
<tr>
<td>Perimeter Computerized</td>
</tr>
<tr>
<td>Projection Autochart</td>
</tr>
<tr>
<td>Refractometer Cum Keratometer</td>
</tr>
<tr>
<td>Screem, Hess, Set</td>
</tr>
<tr>
<td>Trail Lens + Frame Set</td>
</tr>
<tr>
<td>Ophthalmoscope, Indirect</td>
</tr>
<tr>
<td>Ophthalmoscope, Specialist</td>
</tr>
<tr>
<td>Retinoscope, Streak / Slit Type.</td>
</tr>
<tr>
<td>Any Other Equipment required for the Clinic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B) Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ophthalmology Room Size approximately 3.75 x 3.25 Meters</td>
</tr>
</tbody>
</table>
**Department: ENT Clinic**

<table>
<thead>
<tr>
<th>A)</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Necessary Equipment similar to the following.</td>
<td></td>
</tr>
<tr>
<td>Autoclave, Electric Instruments with Vacuum</td>
<td></td>
</tr>
<tr>
<td>Auroscope, Specialist Use</td>
<td></td>
</tr>
<tr>
<td>ENT Examination Unit Complete</td>
<td></td>
</tr>
<tr>
<td>Microscope, ENT Examination</td>
<td></td>
</tr>
<tr>
<td>Ear Examination Set</td>
<td></td>
</tr>
<tr>
<td>Nasal Examination Set</td>
<td></td>
</tr>
<tr>
<td>Nasal / Post Nasal Examination Set</td>
<td></td>
</tr>
<tr>
<td>Throat Examination Set</td>
<td></td>
</tr>
<tr>
<td>Any Other Equipment required for the Clinic</td>
<td></td>
</tr>
<tr>
<td>Audiometer, Clinical Diagnostic</td>
<td></td>
</tr>
<tr>
<td>Tympanometer, Complete Unit</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B)</th>
<th>Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT Clinic Room Size aproximately 3.75 x 3.25 Meters.</td>
<td></td>
</tr>
</tbody>
</table>

**Department: Kitchen & Laundary**

<table>
<thead>
<tr>
<th>A)</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>All necessary kitchen equipment to carry out cooking.</td>
<td></td>
</tr>
<tr>
<td>Washing Machine - The Qty and size depends upon the size of the Hospital</td>
<td></td>
</tr>
<tr>
<td>Dryer - The Qty and size depends upon the size of the Hospital</td>
<td></td>
</tr>
<tr>
<td>Ironer - The Qty and size depends upon the size of the Hospital</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B)</th>
<th>Room Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of the room will depend on the size of the Hospital &amp; Equipment used.</td>
<td></td>
</tr>
</tbody>
</table>
Department: C.S.S.D

A) Equipment

<table>
<thead>
<tr>
<th>The Necessary Equipment similar to the following.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoclave (For 100 Bede- 135 Ltrs-2 Nos, 20-30 Bed - 65 Ltrs)</td>
</tr>
<tr>
<td>Washer Disinfector ((200 Ltrs )</td>
</tr>
<tr>
<td>Dryer</td>
</tr>
<tr>
<td>Any other Items Required for Sterilization..</td>
</tr>
</tbody>
</table>

B) Room Details

Size of the room will depend on the size of the Hospital & Equipment used.

General Requirement

<table>
<thead>
<tr>
<th>Patient Lift to take a Patient Trolley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Alarm System</td>
</tr>
<tr>
<td>Generator for backup Power Supply</td>
</tr>
<tr>
<td>Uninterrupted Power Supply (UPS)</td>
</tr>
<tr>
<td>Exist &amp; Warning Sign Boards</td>
</tr>
<tr>
<td>Ambulance with required Medical Equipment like Monitoring, Ventilator, Suction &amp; Defibrillator, etc.</td>
</tr>
</tbody>
</table>