

**MINIMUM STANDARD REQUIREMENTS FOR  
THE MEDICAL COLLEGE  
FOR 150 ADMISSIONS ANNUALLY  
REGULATIONS, 1999**



**(AMENDED – UP TO JANUARY 2018)**

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29<sup>TH</sup> APRIL 1999)

**MEDICAL COUNCIL OF INDIA**  
**New Delhi, dated the 30<sup>th</sup> March 1999**

No. MCI 35(1)98-Med (iii) In exercise of the powers conferred by section 33 of the Indian Medical Council Act, 1956 (102 of 1956), the Medical Council of India with the previous sanction of the Central Government, hereby makes the following regulations namely:-

1. **Short title and commencement:**

(i) These regulations may be called the “Minimum Requirements for 150 M.B.B.S. Admissions annually Regulations, 1999.

(ii) They shall come into force on the date of their publication in the Official Gazette.

2. **Objective :-** The objective of these regulations is to prescribe for a medical college and Medical Institution approved for One Hundred Fifty admissions of MBBS students annually, the minimum requirements of accommodation in the college and its associated teaching hospitals, staff (teaching and technical both) and equipment in the college departments and hospitals.

3. Every medical college and Medical Institution for 150 M.B.B.S admissions annually shall have the following departments, namely :-

- (1) HUMAN ANATOMY
- (2) HUMAN PHYSIOLOGY\*

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India DELETED “Including Biophysics”.**

- (3) BIOCHEMISTRY
- (4) PATHOLOGY (INCLUDING BLOOD BANK)
- (5) MICROBIOLOGY
- (6) PHARMACOLOGY
- (7) FORENSIC MEDICINE INCLUDING TOXICOLOGY
- (8) COMMUNITY MEDICINE
- (9) MEDICINE
- (10) PAEDIATRICS
- (11) PSYCHIATRY
- (12) DERMATOLOGY, VENEREALOGY AND LEPROSY
- (13) TUBERCULOSIS AND RESPIRATORY DISEASES
- (14) SURGERY \*

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India DELETED “Including Paediatric Surgery”**

- (15) ORTHOPAEDICS
- (16) RADIO-DIAGNOSIS
- (17) RADIOTHERAPY
- (18) OTO-RHINOLARYNGOLOGY

- (19) OPHTHALMOLOGY
- (20) OBSTETRICS AND GYNAECOLOGY
- (21) DENTISTRY

Point no. 3 shall be substituted as under:-

“Every medical college and Medical Institution for 150 M.B.B.S. admissions annually shall have the following departments, namely:-

- 1. HUMAN ANATOMY
- 2. HUMAN PHYSIOLOGY
- 3. BIOCHEMISTRY
- 4. PATHOLOGY (INCLUDING BLOOD BANK)
- 5. MICROBIOLOGY
- 6. PHARMACOLOGY
- 7. FORENSIC MEDICINE INCLUDING TOXICOLOGY
- 8. COMMUNITY MEDICINE
- 9. MEDICINE
- 10. PAEDIATRICS
- 11. PSYCHIATRY
- 12. DERMATOLOGY, VENEREALOGY AND LEPROSY
- 13. TUBERCULOSIS AND RESPIRATORY DISEASES
- 14. SURGERY
- 15. ORTHOPAEDICS
- 16. RADIO-DIAGNOSIS
- 17. RADIOTHERAPY (OPTIONAL)
- 18. OTO-RHINOLARYNGOLOGY
- 19. OPHTHALMOLOGY
- 20. OBSTETRICS AND GYNAECOLOGY
- 21. ANAESTHESIOLOGY
- 22. PHYSICAL MEDICINE AND REHABILITATION(OPTIONAL)
- 23. DENTISTRY

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

Beside the above-said departments the Medical colleges and Medical institution running Postgraduate degree/diploma courses in various specialties may have other departments to meet teaching needs of the college or Medical Institution and healthcare needs of the public.

- 4. Every Medical college and Medical institution and its associated teaching hospitals for 150 MBBS admissions annually shall have the accommodation for teaching and technical staff and equipment for each department as given in the Schedule-I, II, III respectively annexed with these regulations.

## SCHEDULE I

### ACCOMMODATION IN THE MEDICAL COLLEGE AND ITS ASSOCIATED TEACHING HOSPITALS

#### A-COLLEGE

##### A.1 GENERAL:

##### A.1.1 Campus

The medical college or medical institution shall be housed in a unitary campus near its teaching hospital having room for future expansion. However the existing medical colleges shall make efforts to have their teaching hospital within a radius of five kilometer of the campus.

\*Companies registered under Company Act may also be allowed to open medical colleges. Permission shall be withdrawn if the colleges resort to commercialization.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

*\*The medical college or medical institution shall be housed in a unitary campus of not less than 20 acres of land except in metropolitan and A class cities (Ahmedabad, Hyderabad, Pune, Bangalore and Kanpur). However, this may be relaxed in a place especially in Urban areas where the population is more than 25 lakhs (\*\*other than the nine cities mentioned in the Clause), hilly areas, notified tribal areas, North Eastern States, Hill states and Union Territories of Andaman & Nicobar Islands, Daman & Diu & Dadra & Nagar Haveli \*\*and Lakshadweep, where the land shall not be in more than two pieces and the distance between the two pieces shall not be more than 10 kms. The hospital, college building including library and hostels for the students, interns, PGs/Residents and nurses shall be in one piece of land which shall not be less than 10 acres. Other facilities may be housed in the other piece of land. Proper landscaping should be done.*

*However, in metropolitan cities and “A” class cities (Ahmedabad, Hyderabad, Pune, Bangalore and Kanpur), the permissible FAR/FSI would be the criterion for allowing the medical colleges provided that the total built up area required for adequate infrastructure including medical college, hospital, hostels, residential quarters, and other infrastructure required as per Minimum Standard requirement Regulations is made available in an area of not less than 10 acres based upon the permissible FAR/FSI allowed by the competent authority.*

**\*As per the terms of Notification published on 13.11.2009 in the Gazette of India.**

**\*\*As per the terms of Notification published on 02.02.2010 in the Gazette of India.**

**\*The following proviso be inserted in Clause A.1.1 in Schedule.**

*Provided that the built-up area required for the total infrastructure of a medical institute – i.e. college, affiliated teaching hospital and residential complex with regard to amendments in “Minimum Requirements for the Medical College for 150 Admissions Annually Regulations, 1999” as amended in 2008/2009 as shown in separate table appended herewith is made available by the institute in mega cities (Mumbai, Kolkata, New Delhi and Chennai) and ‘A’ class cities (Ahmedabad, Hyderabad, Pune, Bangalore and Kanpur) based upon permissible FAR/FSI allowed by the competent authority in a plot of an area of not less than 10 acres.”*

**See Appendix-**

**As per the terms of Notification published on 26.02.2010 in the Gazette of India**

**Note: Land requirement and Hospital Requirement shall be as per Establishment of Medical College Regulations as amended from time to time.**

#### **A.1.2 Administrative block.**

Accommodation shall be provided for – Principal/Dean’s office (36 Sq.m.), staff room (54 Sq.m.), college council room (80 Sq.m.) office superintendent’s room (10 Sq.m.), Office (150 Sq.m.), record room (100 Sq.m.), separate common room for male and female students with attached toilets (\*150 Sq.m.each), cafeteria (\*300 Sq.m.).

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India. “Examination Hall (400 Sq.m.) has been “DELETED”.**

#### **A.1.3 College Council:**

Every medical college or Medical Institution shall have a College Council comprising of the Head of departments as members and Principal/Dean as Chairperson. The Council shall meet at least 4 times in a year to draw up the details of curriculum and training programme, enforcement of discipline and other academic matters. The Council shall also organise interdepartmental meetings like grand rounds, statistical meetings and clinico pathological meetings including periodical research review in the Institution regularly.

#### **A.1.4. Central library**

\*There shall be an air-conditioned Central Library (2400 Sq.m) with seating arrangement for at least 300 students for reading and having good lighting and ventilation and space for stocking and display of books and journals. There shall be one room for 150 students inside and one room for 150 students outside. It

should have not less than 11000 text and reference books. In a new medical college the total number of books should be proportionately divided on yearly basis in five years. The number of journals shall be 100 out of which one-third shall be foreign journals and subscribed on continuous basis. The number of copies of textbooks in each subject of undergraduate teaching shall be ten.

There shall be provision for –

- a. Staff reading room for 30 persons;
- b. Rooms for librarian and other staff;
- c. Journal room;
- d. Room for copying facilities;
- e. Video and Cassette room (desirable);
- f. Air-conditioned Computer room with Medlar and Internet facility with minimum of 40 nodes.

Medical colleges should have skill labs and adopt information technology in teaching medicine. There shall be provision for e-library also.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

#### **A.1.5 \*Lecture theatres**

There shall be a minimum of five lecture theatres preferably air conditioned, of gallery type in the Institution out of which four will be of seating capacity for 180 students and one will be of capacity for 350 students each. Lecture theatre shall be provided with necessary independent audio-visual aids including overhead projector, slide projector, LCD projector and a microphone. These lecture theatres shall be shared by all the departments in a programmed manner. There shall be provision for E-class. Lecture halls must have facilities for conversion into E-class/Virtual class for teaching.

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

*# The above clause shall be substituted with the following: -*

*“There shall be minimum of four lecture theatres preferably air conditioned, of gallery type in the Institution for seating capacity for 180 students each and one in the hospital of capacity for 200 students. Lecture theatre shall be provided with necessary independent audio-visual aids including overhead projector, slide projector, LCD projector and a microphone. These lecture theatres shall be shared by all the departments in a programmed manner. There shall be provision for E-class. Lecture halls must have facilities for conversion into E-class/Virtual class for teaching.”*

**# As per the terms of Notification published on 03.07.2015 in the Gazette of India.**

#### **A.1.6 \*Auditorium/Examination Hall (Multi-purpose):**

There shall be an auditorium-cum-examination hall of 1200 sq.m. area in not more than three levels.

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

*# The above clause shall be substituted with the following: -*

#### **A.1.6. Examination Hall**

*There shall be two Examination Hall of capacity 250 with area of 250 sq.m. each which should be of flat type and should have adequate chairs with desks/writing benches in such a manner that there would be sufficient space between two students.*

**# As per the terms of Notification published on 03.07.2015 in the Gazette of India.**

#### **A.1.7 Central Photographic Section:**

There shall be Central photographic and audiovisual sections with accommodation for studio, dark room, enlarging and photostat work. Accommodation shall be provided for Artist and Medical Illustrators and Modellers etc. Facilities for microphotography and mounting shall be provided.

#### **A.1.8. Central Workshop:**

There shall be central workshop having facilities for repair of mechanical, electrical and electronic equipments of college and the hospitals. It shall be manned by qualified personnel.

#### **A.1.9. \*Animal house:**

Department animal house may be maintained by the department of Pharmacology. In addition to the animal house, experimental work on animals can be demonstrated by Computer Aided Education.

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

*\*For teaching Physiology and Pharmacology in UG curriculum, the required knowledge and skills should be imparted by using computer assisted module. Only an animal hold area, as per CPCSEA Guidelines is required.*

**\*As per the terms of Notification published on 19.03.2014 in the Gazette of India.**

#### **A.1.10 \*Central Incineration Plant**

An incinerator Plant commensurate with hospital bed strength may be provided. Alternatively any other system approved by the respective State Pollution Control Board may be provided.

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

**A.1.11 Gas Plant: “\*DELETED” as per the terms of Notification published on 15.07.2009 in the Gazette of India.**

**A.1.12 Statistical Unit: “\*DELETED” as per the terms of Notification published on 15.07.2009 in the Gazette of India.**

**A.1.13 Medical Education Unit** – There shall be a Medical Education Unit or Department for faculty development and providing teaching or learning resource material.

**A.1.14 Research work:**

Space as indicated in the concerned departments shall be provided in each department, duly furnished and equipped for research work and further expansion of its activities.

**A.1.15 Intercom Network:**

Intercom network including paging and bleep system between various sections, hospitals and college shall be provided for better services, coordination and patient care.

**A.1.16 Playground and Gymnasium:**

There shall be a playground and Gymnasium for the staff and students. A qualified physical education instructor shall look after the sports activities and maintenance.

**A.1.17 Electricity:**

There shall be continuous electricity supply, as well as standby UPS or Generator.

**A.1.18 Sanitation and water supply:**

Adequate sanitary facilities (toilets and bathrooms separately for women) and safe continuous drinking water facilities must be provided for the teaching staff, students, technical and other staff in all sections as required. \* Arrangements must be made so that plumbers are available round the clock.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

**A.1.19 (a) \* Laboratories:**

There shall be 6 laboratories (225 Sq.m.area each) which will be provided with continuous working tables. Every seat shall be provided with stainless steel wash basin. Every working table shall have drawer or steam proof top, and individual lighting. One preparation room each of 15 Sq.m. area shall be provided with all the laboratories.

There shall be two laboratories of 90 Sq.m. area each.



All of these laboratories may be used in common with various departments e.g. Histology and Histopathology; Biochemistry and Clinical Pharmacology; Heamatology and Pathology; Microbiology and Community Medicine.

**A.1.19 (b) \*Central Research Laboratory**

There shall be one well-equipped Central Research Laboratory in the medical college, which will be under the control of the Dean of the college. Each medical college shall have Pharmaco-Vigilance Committee.

**\*A.1.20 Training of teacher in Medical Education Unit.**

The period of training of a teacher in a Medical Education Unit shall be increased from one week to two weeks.

**\*A.1.21 Rural Health Training Centre**

Every medical college shall have one rural health training centre under Administrative control of Dean of the college for training of students in community oriented primary health care and rural based health education for the rural community attached to it. This health centre shall be within a distance of 30 km. or within one hour of commuting distance from the medical college. Separate residential arrangements for boys, girls and interns with mess facilities shall also be provided. Adequate transport (both for staff and students) shall be provided for carrying out field work and teaching and training activities by the department of Community Medicine.

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

Clause A.1.21 under the heading “Rural Health Training Centre”, shall be substituted as under:-

*“Every medical college shall have one Rural Health Training Center affiliated to it from 2<sup>nd</sup> batch (1<sup>st</sup> renewal) onwards. This Rural Health Training Center shall be owned by the college or it should be affiliated to Government owned Health Center. Academic control shall be with the Dean of the college for training of students and interns in community oriented primary health care and rural based health education for the rural community attached to it. This Health Center shall be within a distance of 30 kms. except in Urban agglomeration Class A cities specified in Establishment of Medical College Regulations, 1999 as amended where it should be within 50 kms. Separate residential arrangements for boys, girls and interns with mess facilities shall also be provided. Hostel accommodation shall be provided for 10% of annual intake. Adequate transport (both for staff and students) shall be provided for carrying out field work and teaching and training activities by the department of Community Medicine.”*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

*The following to be added, as under:*

*\*A.1.22 A Day Care Center should be established in the medical college with adequate facilities for taking care of the infants and the children of female students/working personnel and patients.*

*\* As per the terms of Notification published on 26.02.2010 in the Gazette of India.*

*The following shall be added in terms of Notification published in the Gazette of India dated 30.01.2017*

*A1.23(a)The Council shall install biometric fingerprint attendance machine in all the Medical Colleges for capturing faculty attendance, using Online Faculty Attendance Monitoring Systems (OFAMOS) under the Digital Mission Mode Project (DMMP) of the Council. The central application shall have the connectivity with AADHAR platform of UIDAI for verification. All the faculty members of medical colleges shall be registered in OFAMOS as a onetime activity, for which the respective medical colleges shall provide the following:-*

- 1. Identification of a secured and easily accessible location for installing the biometric devices.*
- 2. One electric plug point with uninterrupted power supply to the biometric device.*
- 3. Ensuring availability of all faculty members of the college during the registration process.*
- 4. Availability of the faculty data along with AADHAR Card details, for the purpose of verification at the time of registration.*
- 5. Convenient room with basic infrastructure like: tables, chairs, power connection etc. for carrying out the registration process of faculty for OFAMOS.*

*The upkeep of the OFAMOS devices shall be the responsibility of the Medical College for which they shall submit an undertaking ensuring about the up-keep of OFAMOS devices and also ensure that no physical damage shall occur to the devices.*

*The financial burden arising on account of registration verification of the faculty with AADHAR platform of UIDAI and the monthly rental of OFAMOS device SIM Card, shall be borne by the respective medical colleges.*

*A.1.23(b) Every medical college shall have Close-Circuit Televisions (CCTV) system in the medical college and shall provide live streaming of both classroom teaching and patient care in the teaching hospital, to enable the Council to maintain a constant vigil on the standard of medical education/ training being imparted.*

*The live streaming of both classroom teaching and teaching hospital, shall be integrated as a part of the “Digital Mission Mode Project” (DMMP) of the Council.*

## **A.2. DEPARTMENTS**

### **(1) DEPARTMENT OF ANATOMY**

- (A) Lecture theatre – As per Item A.1.5
- (B) Demonstration Room – there shall be two demonstration rooms (60 sq.mt.each) fitted with strip chairs, Over Head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75 to 100 students.
- (C) Dissection Hall – There shall be a dissection hall (325 sq.mt.) to accommodate at least 150 students at a time. It shall be well lit, well-ventilated with exhaust fans and preferably centrally air-conditioned. There shall be an ante-room for students with lockers and fifteen Wash basins. There shall be adequate teaching aids in the hall. In addition, there shall be an embalming room (12 sq.m.area), space for 3 storage tanks (one of 3 sq.m. & two of 1.5 sq.m.each) and cold storage room with space for 15-18 dead bodies (18 sq.m.area) or cooling cabinets.
- (D) Histology- There shall be Histology Laboratory (200sq.mt.) with accommodation for work benches fitted with water taps, sinks, cupboards for microscope storage and electric points for 90 students. There shall be a preparation room (18 sq. mt.) for technicians and storage of equipment.
- (E) Research- There shall be one research laboratory (50 sq.m.area) for research purposes.
- (F) Museum-There shall be a museum (200 sq.m.)-provided with racks and shelves for storing and proper display of wet and dry specimen and embryological sections, models, revolving stands for skiagrams, CT scan, MRI and trolley tables, X-ray view boxes shall be multistand type to take 4 plates standard size 3 boxes (3 view boxes for 150 students). Adequate seating accommodation for 35 students to study in the museum shall be provided. There shall be two attached rooms (15 sq.mt. each) for the preparation of models/specimens and for artists and modellers.
- (G) Departmental Library- There shall be a Departmental library-cum-seminar room (30 sq.m. area) with at least 80-100 books. However, not more than two copies of any one book shall be counted towards computation of the total number of books.
- (H) Accommodation for Staff- Accommodation shall be provided for the staff as under namely;
  - 1. Professor & Head of the Department- (18 Sq.m.area);
  - 2. Associate Professor/Reader-Two rooms (15 Sq.m.area each);
  - 3. Asstt. Professor/Lecturers (Three)-One room (20 Sq.m.area );
  - 4. Tutor/Demonstrators-One room (15 Sq.m. area)
  - 5. Department office cum Clerical room - one room (12 Sq.m.area); and
  - 6. Working accommodation for non-teaching staff (12sq.m. area)

### **(2) DEPARTMENT OF PHYSIOLOGY**

- (A) Lecture Theatre – As per Item A.1.5.

- (B) Demonstration Room-There shall be two demonstration rooms (60 sq.mt.) fitted with strip chairs, Over head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75-100 students

*The above clause has been modified in terms of notification dated 10.03.2017 as under:*

*“Demonstration Room - There shall be one demonstration rooms (60 sq.mt.) fitted with strip chairs, Over head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75-100 students. The Demonstration Rooms may also be shared between departments.”*

- (C) Practical rooms- The following laboratories with adequate accommodation shall be provided to accommodate 90 students.

(i) Amphibian laboratory (one)-(200 sq.m.area) shall be provided with continuous working tables. Every seat shall be provided preferably with stainless steel washbasin. Every workings table shall have one drawer and one cupboard, an electric point and with fire/steam proof top. One preparation room (14 Sq.m. area) shall be provided with the amphibian laboratory.

(ii) Mammalian laboratory (one)-(80 Sq.m.area) shall be provided with six tables (2m X 0.6m) with stainless steel top and operating light. The laboratory shall have attached instrument rack, two large size wash-basins (stainless steel) and cupboards for storing equipments. One preparation room (14 sq.m. area) shall be provided with the Mammalian laboratory.

(iii) Human Laboratories:

a) Haematology Lab. (200 Sq.m.area) provided with continuous working tables. Every seat shall be provided preferably with stainless steel wash basin. Every working table shall have one drawer and one cupboard, an electric point and with fire/steam proof top including provisions of light sources on each table. One preparation room (14 Sq.m.area) shall be provided with this laboratory.

b) There shall be a Clinical Physiology Laboratory (90Sq.m.area) provided with 10 tables (height 0.8 m.) with mattresses and adjustable hand-end.

- (D) Departmental Library-There shall be a Departmental library-cum-seminar room (30Sq.m.area) with at least 80-100 books. However, not more than two copies of anyone book shall be counted towards computation of the total number of books.

- (E) Research - There shall be one research laboratory (50 Sq.m.area) for research purposes.

- (F) Accommodation shall be provided for the staff as under:-

1. Professor & Head of the Department- (18 Sq.m.area);
2. Associate Professor/Reader-Two rooms (15 Sq.m.area each);

3. Asstt. Professor/Lecturers (Three)-One room (20 Sq.m.area );
4. Tutor/Demonstrators-One room (15 Sq.m.area)
5. Department office cum Clerical room – (one) (12Sq.m.area); and
6. Working accommodation for non-teaching staff (12sq.m. area)

### **(3) DEPARTMENT OF BIOCHEMISTRY**

- (A) Lecture theatre - As per Item A.1.5.
- (B) Demonstration Room-There shall be two demonstration rooms (60 sq.mt.) fitted with strip chairs, Over head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75-100 students.

*The above clause has been modified in terms of notification dated 10.03.2017 as under:*

*“Demonstration Room - There shall be one demonstration rooms (60 sq.mt.) fitted with strip chairs, Over head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75-100 students. The Demonstration Rooms may also be shared between departments.”*

- (C) Practical class room-  
There shall be a laboratory (200 Sq.m.) with benches fitted with shelves and cupboards, water taps, sinks, electric and gas connections so as to accommodate 90 students. Two Ante rooms (14 Sq.m. area) each for technicians, stores, preparation room, balance and distillation apparatus shall also be provided.
- (D) Departmental library- There shall be a Departmental library-cum-seminar room (30Sq.m.area) with at least 80-100 books. However, not more than two copies of any one book shall be counted towards computation of the total number of books.
- (E) Research - There shall be one research laboratory (50 Sq.m.area) for research purposes.
- (F) Accommodation shall be provided for the staff as under:-
  1. Professor & Head of the Department- (18 Sq.m.area);
  2. Associate Professor/Reader-Two rooms (15 Sq.m.area);
  3. Asstt. Professor/Lecturers (four)-Two rooms (12 Sq.m.area each);
  4. Tutor/Demonstrators-One room (15 Sq.m.area)
  5. Department office cum Clerical room – (one) (12 Sq.m.area); and
  6. Working accommodation for non-teaching staff (12 sq.m. area)

### **(4) DEPARTMENT OF PATHOLOGY**

- (A) Lecture theatre - As per Item A.1.5.

- (B) Demonstration room-There shall be two demonstration rooms (60 Sq. mt.) fitted with Over Head Projector, Slide projector, Television Video and other audiovisual aids, to accommodate at least 75-100 students.

*The above clause has been modified in terms of notification dated 10.03.2017 as under:*

*“Demonstration Room - There shall be one demonstration rooms (60 sq.mt.) fitted with strip chairs, Over head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75-100 students. The Demonstration Rooms may also be shared between departments.”*

- (C) There shall be Practical Laboratories for Morbid Anatomy and Histopathology/ Cytopathology (200 Sq.mt. area) and for clinical Pathology/Haematology (200 sq.mt.area) with preparation room (14 sq.mt.area) with benches, fitted with shelves cupboards, sinks, water taps, light for microscopy and burners for 90 students to carry out exercises.
- (D) There shall be a separate service laboratory each (30 Sq.mt.) for histopathology, cytopathology, Haematology and other specialised work in the hospital suitably equipped.

In addition there shall be a balance room (14 Sq. mt.), store room (14 sq.mt.) and special room for high speed centrifuge (14 sq.mt.) and a wash room (14 sq.mt.) with continuous water supply.

- (E) Museum-There shall be a museum (90 Sq.mt.) for specimens, charts, models with a sitting capacity of atleast 40 students. All the specimens shall be labelled and at least 15 copies of catalogues for student use be provided. In addition, there shall be an ante room.
- (F) Autopsy Block- There shall be an Autopsy room (approx. 400 sq.mt. area) with facilities for cold storage, for cadavers, ante-rooms, washing facilities, with an accommodation capacity of 30-40 students, waiting hall and office. The location of mortuary and autopsy block should be either in the hospital or adjacent to the hospital in a separate structure and may be shared with the department of Forensic Medicine.
- (G) Departmental library-
- There shall be a Departmental library-cum-seminar room (30 sq.m. area) with at least 80-100 books. However, not more than two copies of anyone book shall be counted towards computation of the total number of books.
- (H) Research-There shall be one research laboratory (50 Sq.m. area) for research purposes..
- (I) Accommodation shall be provided for the staff as under, namely:
1. Professor & Head of the Department- (18 Sq.m.area);
  2. Associate Professor/Reader-four rooms (15 Sq.m.area each);

3. Asstt. Professor/Lecturers (five)-Three rooms (14 Sq.m.area each);
4. Tutor/Demonstrators-Three room (15 Sq.m.area each)
5. Department office cum Clerical room - one (12 Sq.m.area); and
6. Working accommodation for non-teaching staff (12 sq.m. area)

**(J) BLOOD BANK.**

There shall be an air conditioned Blood Bank (100 Sq. mt. Area) and shall include-

- (a) Registration and Medical Examination Room and selection of donors room with suitable furniture and facilities.
- (b) Blood collection room.
- (c) Room for Laboratory for Blood Group serology;
- (d) Room for Laboratory for Transmissible diseases like hepatitis, syphilis, Malaria, HIV antibodies etc;
- (e) Sterilisation and washing room;
- (f) Refreshment room; and
- (g) Store and Records room.

The equipment and accessories etc. shall be provided as prescribed in Part XII-B in Schedule F to the Drugs and Cosmetics Rules, 1940 as amended from time to time.

**(5) DEPARTMENT OF MICROBIOLOGY**

- (A) Lecture Theatre-as per item A.1.5.
- (B) Demonstration room-There shall be two demonstration rooms (60 Sq. mt.) fitted with strip chairs, Over Head Projector, Slide projector, Television, Video and other audiovisual aids, to accommodate at least 75-100 students.

*The above clause has been modified in terms of notification dated 10.03.2017 as under:*

*“Demonstration Room - There shall be one demonstration rooms (60 sq.mt.) fitted with strip chairs, Over head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75-100 students. The Demonstration Rooms may also be shared between departments.”*

- C) Practical laboratories-There shall be a Practical laboratory (200 Sq.mt. Area) with benches fitted with shelves cupboards, sinks, water taps, light for microscopy and burners for 90 students (200 sq.m. area) with laboratory benches, gas, water and electric points, microscopes and light with a preparation room (14 sq.m.area).
- D) There shall be a separate service laboratory each for (1) Bacteriology including Anaerobic; (2) Serology; (3) Virology; (4) Parasitology; (5) Mycology; (6) Tuberculosis; and (7) immunology.

Area for each service laboratory shall be 35 Sq.m. Separate accommodation for (1) Media preparation and storage (20 Sq.m.area) (2) Auto Claving (12 Sq.m. area) (3)

Washing & drying room with regular and continuous water supply (12 sq.m.area) for contaminated culture plates, test tubes and glassware shall be provided.

- E) Museum- There shall be a museum (80 Sq. mt.) for specimens, charts, models, with a sitting capacity of atleast 40 students. All the specimens shall be labelled and atleast 15 copies of catalogues for students use be provided.
- F) Departmental Library - There shall be a Departmental library-cum-seminar room (30Sq.m.area) with at least 80-100 books. However, not more than two copies of anyone book shall be counted towards computation of the total number of books.
- (G) Research: There shall be one research laboratory (50 Sq.m.area) for research purposes.
- (H) Accommodation shall be provided for the staff as under:
  - 1. Professor & Head of the Department- (18 Sq.m.area);
  - 2. Associate Professor/Reader-One room (15 Sq.m.area);
  - 3. Asstt. Professor/Lecturers -Two rooms (12 Sq.m.area each);
  - 4. Tutor/Demonstrators-two rooms (15 Sq.m.area each)
  - 5. Department office cum Clerical room - one (12 Sq.m.area); and
  - 6. Working accommodation for non-teaching staff (12 sq.m. area)

#### **(6) DEPARTMENT OF PHARMACOLOGY**

- A) Lecture theatre- As per Item A. 1.5.
- B) Demonstration room-There shall be two demonstration rooms (60 sq.mt.area) fitted with strip chairs, Over Head Projector, Slide projector, Television, Video and other audiovisual aids, to accommodate at least 75-100 students.

***The above clause has been modified in terms of notification dated 10.03.2017 as under:***

***“Demonstration Room - There shall be one demonstration rooms (60 sq.mt.) fitted with strip chairs, Over head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75-100 students. The Demonstration Rooms may also be shared between departments.”***

- C) Practical Laboratories – There shall be a Practical Laboratory with accommodation for 75-100 students for the following namely:
  - i) Experimental Pharmacology (200 Sq.m. area) with ante-room (14 Sq. m. area for smoking and varnishing of kymograph papers.
  - ii) Clinical pharmacology and pharmacy (200 Sq.m. area) with one ante-room (14 Sq.m. area) for technicians, storage of equipment and appliances and preparation room.
- (D) Museum- There shall be a museum (125sq.mt.) for specimens, charts, models, with a separate section depicting “ History of Medicine”, with a seating capacity of at least



40 students. All the specimens shall be labeled and at least 15 copies of catalogues for student use be provided.

(E) Department Library-

There shall be a Departmental library-cum-seminar room (30sq.m.area) with at least 80-100 books. However, not more than two copies of any one book shall be counted towards computation of the total number of books.

(F) Research- There shall be one research laboratory (50 Sq.m.area) for research purposes.

(G) Accommodation shall be provided for the staff as under:-

1. Professor and Head of the Department- (18 Sq.m.area);
2. Associate Prof./Reader-Two rooms (15 sq.m. area);
3. Asst. Professor/Lecturers- Two rooms (12 sq.m. area)
4. Tutors/ Demonstrators- Two rooms (15 Sq.m. area);
5. Department office cum Clerical room one (12 Sq.m. area); and
6. Working accommodation for non-teaching staff (12 Sq.m. area)

**(7) DEPARTMENT OF FORENSIC MEDICINE INCLUDING TOXICOLOGY**

(A) Lecture theatre- As per item A.1.5.

(B) Demonstration room - There shall be two demonstration rooms at least (60 sq.mt.) fitted with strip chairs, Over Head Projector, Slide projector, Television, Video and other audiovisual aids, to accommodate at least 75-100 students.

*The above clause has been modified in terms of notification dated 10.03.2017 as under:*

*“Demonstration Room - There shall be one demonstration rooms (60 sq.mt.) fitted with strip chairs, Over head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75-100 students. The Demonstration Rooms may also be shared between departments.”*

(C) There shall be a museum (175 Sq.m. area) to display medico-legal specimens charts, models, prototype fire arms, wax models, slides, poisons, photographs etc. with seating arrangements for 40-50 students. All the specimens shall be labelled and at least 15 copies of catalogues for student use be provided.

(D) There shall be a laboratory (200 Sq.m.area) for examination of specimens, tests and Forensic histopathology, Serology, anthropology and toxicology.

(E) Autopsy Block - There shall be an autopsy room (approx. 400 Sq. mt.area) with facilities for cold storage, for cadavers, ante-rooms, washing facilities, with an accommodation capacity of 40-50 students, waiting hall, office etc. The location of

mortuary or autopsy block should be either in the hospital or adjacent to the hospital in a separate structure and may be shared with the department of Pathology.

(F) Departmental Library-

There shall be a Departmental library-cum-seminar room (30 Sq.m.area) with at least 80-100 books. However, not more than two copies of anyone book shall be counted towards computation of the total number of books.

(G) Research-There shall be one research laboratory (50 Sq.m.area) for research purposes.

(H) Accommodation shall be provided for the staff as under, namely:-

1. Professor & Head of the Department- (18 Sq.m.area);
2. Associate Professor/Reader-Two rooms (15 Sq.m.area each);
3. Asstt. Professor/Lecturers -One room (12 Sq.m.area );
4. Tutor/Demonstrators-One room (15 Sq.m.area)
5. Department office cum Clerical room - one (12 Sq.m.area); and
6. Working accommodation for non-teaching staff (12 sq.m. area)

### **(8) DEPARTMENT OF COMMUNITY MEDICINE**

(A) Lecture theatre – As per Item A.1.5

(B) Demonstration room-There shall be two demonstration rooms (60 sq.mt.) fitted with strip chairs, Over Head Projector, Slide projector, Television Video and other audio-visual aids, to accommodate at least 75-100 students.

*The above clause has been modified in terms of notification dated 10.03.2017 as under:*

*“Demonstration Room - There shall be one demonstration rooms (60 sq.mt.) fitted with strip chairs, Over head Projector, Slide Projector, Television, Video and other audiovisual aids, so as to accommodate at least 75-100 students. The Demonstration Rooms may also be shared between departments.”*

(C) There shall be a laboratory (200 Sq.m.area) with facilities for purposes of demonstration of various laboratory practicals.

(D) Museum-There shall be a museum (125 Sq.m.area) for the display of models, charts, specimens and other material concerning communicable diseases, Community Health, Family Welfare planning, Biostatics, Sociology, National Health Programmes, Environmental Sanitation etc.

(E) Departmental Library-

There shall be a Departmental library-cum-seminar room (30 Sq.m.area) with at least 80-100 books. However, not more than two copies of anyone book shall be counted towards computation of the total number of books.

(F) Research - There shall be one research laboratory (50 Sq.m.area) for research purposes.

(G) Accommodation shall be provided for the staff as under, namely:-

1. Professor & Head of the Department- (18 Sq.m.area);
2. Associate Professor/Reader-Two rooms (15 Sq.m.area each);
3. Asstt. Professor/Lecturers -One room (15 Sq.m.area );
4. Statistician cum Lecturer-One room (12 Sq.m.area)
5. Epidemiologist cum Lecturer-One room (12 Sq.m.area)
6. Tutor/Demonstrators-Two rooms (15 Sq.m.area each)
7. Department office cum Clerical room - one (12 Sq.m.area); and
8. Working accommodation for non-teaching staff (15 sq.m. area)

(H) Primary Health Centre/Rural Health Training Centre

Every medical college shall have three primary health centres/rural health training centres for training of students in community oriented primary health care and rural based health education for the rural community attached to it. Out of these one primary health centre shall be within a distance of 30 km. or within one hour of commuting distance from the medical college. Separate residential arrangements for boys and girls, interns and undergraduates with mess facilities shall also be provided in at least one of the primary health centres/rural health training centres which shall be under the full administrative jurisdiction of the medical college. Adequate transport shall be provided for carrying out field work, teaching and training activities by the department of Community Medicine and other departments (both for staff and students).

Clause A.2(8)(H) under the heading "Primary Health Centre/Rural Health Training Centre" shall be substituted as under: -

*Every medical college shall have one Rural Health Training Center affiliated to it from 2<sup>nd</sup> batch(1<sup>st</sup> renewal) onwards. This Rural Health Training Center shall be owned by the college or it should be affiliated to Government owned Health Center. Academic control shall be with the Dean of the college for training of students and interns in community oriented primary health care and rural based health education for the rural community attached to it. This Health Center shall be within a distance of 30 kms. except in Urban agglomeration Class A cities specified in Establishment of Medical College Regulations, 1999 as amended where it should be within 50 kms. Separate residential arrangements for boys, girls and interns with mess facilities shall also be provided. Hostel accommodation shall be provided for 10 % of annual intake. Adequate transport (both for staff and students) shall be provided for carrying out field work and teaching and training activities by the department of Community Medicine.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

- (I) Urban Health Training Centre- it shall be under the administrative control of Deptt. of community Medicine. Adequate transport shall be provided for commuting the staff and students.

Clause A.2(8)(I) under the heading "Urban Health Training Centre" shall be substituted as under: -

*Every medical college shall have one Urban Health Training Center affiliated to it from 2<sup>nd</sup> batch(1<sup>st</sup> renewal) onwards. This Urban Health Training Center shall be owned by the college or it should be affiliated to Government owned Health Center. Academic control shall be with the Dean of the college for training of students and interns in community oriented primary health care and rural based health education for the rural community attached to it. Adequate transport (both for staff and students) shall be provided for carrying out field work and teaching and training activities by the department of Community Medicine.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

## **B. TEACHING HOSPITAL**

### **B.1 GENERAL REMARKS**

- \*B.1. 1 A functional teaching hospital with 700 beds having a minimum of 60% indoor bed occupancy shall be available at the time of submission of application to Medical Council of India, at the time of inception of the hospital by Medical Council of India and upto 2<sup>nd</sup> renewal of the medical college. There shall be a minimum of 75% bed occupancy at the time of inspection for third renewal and thereafter for subsequent renewals and recognition.

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

Lifts for the patients and ramp for fire protective services and for handicapped persons shall be provided in the hospital at the time of letter of permission. An electric generator of not less than 700 KVA shall be provided. A play area including T.V., Music, Toys, Books, etc. shall be provided for Paediatric patients. All the teaching hospitals shall be under the academic, administrative and disciplinary control of the Dean/ Principal/Director who shall not be concurrently Head of Department but can be a component of teaching faculty in the concerned respective department.

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

***The first para shall be substituted, as under:***

***A functional teaching hospital with 300 beds having a minimum of 60% bed occupancy shall be available at the time of submission of application to Medical Council of India, at the time of inception of the hospital by the Medical Council of India and upto 2<sup>nd</sup> renewal of the medical college.. There shall be minimum of***

**75% bed occupancy at the time of inspection for third renewal and thereafter for subsequent renewals and recognition.**

**\*As per the terms of Notification published on 03.11.2010 in the Gazette of India.**

**# The above clause shall be substituted with the following: -**

**“B.1.1 A functional teaching hospital with 300 beds having a minimum of 60% indoor bed occupancy shall be available at the time of submission of application to Medical Council of India, at the time of inception of the hospital by Medical Council of India and upto 2nd renewal of the medical college. There shall be a minimum of 75% bed occupancy at the time of inspection for third renewal and thereafter for subsequent renewals and recognition.”**

**# As per the terms of Notification published on 03.07.2015 in the Gazette of India.**

Clause B.1.1. shall be substituted as under:

*A fully functional teaching hospital with 300 beds with all necessary infrastructure like OPD, Indoor wards, OT, ICU, Casualty, Labour Room, Laboratories, Blood Bank, CSSD, Kitchen etc. having minimum 60 % indoor bed occupancy shall be available at time of submission of application to the Central Government. This shall be increased to 650 beds in phasewise manner as prescribed. The indoor bed occupancy shall be increased to 75 % at time of assessment for III renewal of permission and thereafter and also at time of assessment for recognition. 300 teaching beds shall include 120 beds for Medicine and allied, 140 beds for Surgery and allied , 40 beds for Ob-Gy.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

B.1.2 Accommodation shall be provided for Dean (36 Sq.mt.) and Medical Superintendent (36 Sq.mt.) and hospital offices for the supportive staff, Nursing Superintendent's room and office \*along with computer and internet facility in each department, waiting space for visitors. There shall also be accommodation for:

- (a) Enquiry office,
- (b) Reception area (400 Sq.mt.) including facilities for public telephone, waiting space for patients and visitors, drinking water facility with nearby toilet facilities.
- (c) Store rooms.
- (d) Central Medical Record Section (250 Sq.m.)
- (e) Linen Rooms.
- (f) Hospital and Staff Committee room (80 Sq.mt.)

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

B.1.3 One Central lecture theatre of gallery type with a seating capacity of 200 persons and audio-visual aids shall be provided in the hospital \*in addition to those in medical college/institution.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

B.1.4 Central Registration and statistics department with computer facilities shall be provided.

B.1.5 Intercom network alongwith paging and bleep system between various sections, hospitals and college shall be provided for better service, coordination and patient care.

B.1.6 Residential accommodation shall be provided in the hospital campus for interns, Jr.Residents, Senior Residents,\* etc.

**\*Registrar "DELETED" As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

**# The above clause shall be substituted with the following: -**

***B.1.6 Residential accommodation shall be provided in the hospital campus for interns, Jr.Residents, Senior Residents,\* etc @100% of total number prescribed."***

**# As per the terms of Notification published on 03.07.2015 in the Gazette of India.**

B.1.7 \*There shall be a minimum OPD attendance of 4 patients (old & new) per day per student intake of the subjects of Undergraduate curriculum at the time of Letter of Permission. This should be increased in such a manner that at the end of fourth year it comes to 8 patients (old & new) per day per student intake.

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

B.1.8 ***\*Indoor beds occupancy-Average occupancy of indoor beds shall be a minimum of 75% per annum.***

**\*As per the terms of Notification published on 03.11.2010 in the Gazette of India.**

Clause B.1.8 shall be substituted as under:-

*Indoor beds occupancy should increase to 75% at the time of IIIrd renewal of permission and thereafter till the time of recognition.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

B.1.9. Clinical Departments in the Hospital.

Requirement of Beds and units: This shall be as under:

***\*"The number of beds required for 150 admissions annually is \*700. They may be distributed for the purposes of clinical teaching as under, namely: -***

**\*(i) MEDICINE AND ALLIED SPECILITIES:-**

No. of beds and units required

	<b>Beds/units</b>
General Medicine	150/6
Paediatrics	90/3
Tuberculosis and Respiratory Diseases	30/1
Dermatology, Venereology and Leprosy	15/1
Psychiatry	<u>15/1</u>
	<u>300/12</u>

Note: (1) There shall be well equipped and updated intensive Care Unit (I.C.U.), Intensive Coronary Care Unit (I.C.C.U.) Intensive Care Paediatric beds and preferably Intensive care in Tuberculosis and Respiratory Disease.

(2) Wherever possible, the facilities available in larger tuberculosis and chest diseases hospitals, infectious diseases hospitals and mental hospitals may be utilised for training in these specialties. However, if these hospitals are not under the total administrative control of the Medical College, the required beds in these specialties shall have to be provided in the attached teaching hospital itself.

**\*(ii) SURGERY AND ALLIED SPECIALITIES:**

No. of beds/units required

1. General surgery	150/6
2. Department of Orthopaedics	90/3
3. Department of Ophthalmology	30/1
4. Oto-Rhinolaryngology	<u>30/1</u>
	<u>300/11</u>

Note: There shall be well-equipped and updated intensive Care Burn Unit and Surgical post operative critical care Unit.

**\*As per the terms of Notification published on 03.11.2010 in the Gazette of India.**

**\*(iii) OBSETETRICS AND GYNAECOLOGY**

No. of beds and units required

1. Obstetrics	60
2. Gynaecology	40
	100/3

(iv) **GRAND TOTAL** **700/26**

**\*As per the terms of Notification published on 03.11.2010 in the Gazette of India.**

# The above clause shall be substituted with the following: -

**B.1.9. Clinical Departments in the Hospital.**

**Requirement of Beds and units:**

“The number of beds required for 150 admissions annually is 650. They may be distributed for the purposes of clinical teaching as under, namely: -

**MEDICINE AND ALLIED SPECIALITIES:-**

	<i>No. of beds and units required</i>
<i>Beds/units</i>	
<i>General Medicine</i>	<i>150/5</i>
<i>Paediatrics</i>	<i>90/3</i>
<i>Tuberculosis and Respiratory Diseases</i>	<i>20/1</i>
<i>Dermatology, Venereology and Leprosy</i>	<i>15/1</i>
<i>Psychiatry</i>	<i>15/1</i>
	<i>290/11</i>

*Note: (1) There shall be well equipped and updated intensive Care Unit (I.C.U.), Intensive Coronary Care Unit (I.C.C.U.) Intensive Care Paediatric beds and preferably Intensive care in Tuberculosis and Respiratory Disease.*

*(2) Wherever possible, the facilities available in larger tuberculosis and chest diseases hospitals, infectious diseases hospitals and mental hospitals may be utilised for training in these specialties. However, if these hospitals are not under the total administrative control of the Medical College, the required beds in these specialities shall have to be provided in the attached teaching hospital itself.*

**(ii) SURGERY AND ALLIED SPECIALITIES:**

	<i>No. of beds/units required</i>
<i>1. General surgery</i>	<i>150/5</i>
<i>2. Department of Orthopaedics</i>	<i>90/3</i>
<i>3. Department of Ophthalmology</i>	<i>15/1</i>
<i>4. Oto-Rhinolaryngology</i>	<i>15/1</i>
	<i>270/10</i>

*Note: There shall be well-equipped and updated intensive Care Burn Unit and Surgical post operative critical care Unit.*

**(iii) OBSTETRICS AND GYNAECOLOGY**

	<i>No. of beds and units required</i>
<i>1. Obstetrics</i>	<i>60/2</i>
<i>2. Gynaecology</i>	<i>30/1</i>
	<i>90/3</i>



**# As per the terms of Notification published on 03.07.2015 in the Gazette of India.**

- Note : (1) In case a super speciality is developed, it shall necessitate creation of extra beds alongwith additional staff over and above the minimum requirement stated hereinabove in accordance with the provisions of the Postgraduate Medical Education Regulations, 1971.
- (2) The teaching hospital may provide additional beds in any speciality depending upon their patients load.

\*B.1.10 Dean, Medical Superintendent and each department shall have independent computer and printer facility.

\*B.1.11 Each and every college /institute shall have its own website wherein the following details updated in the first week of every month shall be provided:-

- a. Details of Dean, Principal and Medical Supdt. including their name, qualification complete address with telephone and STD code, fax and E-mail etc.
- b. Teaching as well as non-teaching staff.
- c. Details of the sanctioned intake capacity of various courses UG as well as PGs by the MCI.
- d. List of students admitted merit-wise category-wise (UG & PG) for the current and previous year.
- e. Any research publications during the last one year.
- f. Details of any CME programmes, conferences and/or any academic activities conducted by the institution.
- g. Details of any awards and achievement received by the students or faculty.
- h. Details of the affiliated university and its Vice-Chancellor and Registrars.
- i. Result of all the examinations of last one year.
- j. Detailed status of recognition of all the courses.
- k.. Details of clinical material in the hospital.

**\* As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

## B.2 CLINICAL DEPARTMENTS-INDOOR

B.2.1. \*The following accommodation shall be available with each ward, namely:-

1. Accommodation in a General Ward shall not exceed 30 patients/hall and distance between the two beds shall not be less than 1.5m.
2. Nurses Duty Room/Nursing Station.
3. Ward should be constructed in such a way that the Nurse from her Nursing Station is able to have an overview of all the patients in the wards.
4. Examination and Treatment room.
5. Ward Pantry.
6. Store room for linen and other equipment.
7. Resident Doctors and students Duty Room.
8. Clinical Demonstration Room.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

B.2.2. \*The following additional accommodation shall be provided for each of the departments, namely:-

1. Offices for Heads of Departments and Heads of Units.
2. Accommodation for other unit staff.
3. Clinical demonstration rooms (at least one for each department).- **Deleted \* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**
4. **\*\*Departmental Library-cum-Seminar room (30sq.mt.) with a seating capacity of 50 students - DELETED” as per the terms of Notification published on 15.07.2009 in the Gazette of India.**

**\*,\*\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

Note: The size and number of staff rooms shall be as per the guidelines in the pre and para clinical departments for the prescribed number of staff members in a department.

**B.2.3 RESEARCH LABORATORIES: - “DELETED” as per terms of Notification published on 15.07.2009 in the Gazette of India.**

**B.2.4. OPERATION THEATRE UNIT:**

The Operation Theatre Unit shall have the following facilities; namely:-

1. Waiting room for patients.
2. \*Pre-anaesthetic/preparation room – at least 4 beds.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

3. Operation theatre.
4. Post-operative recovery room (minimum of 10 beds).

5. Soiled Linen room.
6. Instrument room.
7. Sterilisation room.
8. Nurses rooms.
9. Surgeon's and Anaesthetist's room (separate for male and female).
10. Assistant's room.
11. Observation gallery for students.
12. Store rooms
13. Washing room for Surgeons and Assistants; and
14. Students washing up and dressing up room.

\*Three such units may be provided for General Surgery, one for ENT; one for Orthopaedics; one for Ophthalmology and two for Obstetrics and Gynaecology and one for septic cases.

Other surgical specialities shall have independent separate OT.

Additional space need to be provided for various Endoscopy procedures.

Minor Operation Theatre – one minor operation theatre in addition to above shall be provided for surgical departments in casualty/emergency unit and one such theatre in O.P.D.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

Points no. 2 & 4 shall be substituted as under:-

*"2. Preoperative beds – 1 bed / O.T. Unit*

*4. Postoperative beds – 2 beds / O.T. Unit"*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

### **B.2.5 CENTRAL STERILISATION SERVICES:**

There shall be an independent Central Sterilization unit capable of taking the total working load of operation theatres, laboratories close to or in the operation theatre block itself. It shall have adequate equipment like bulk sterilize with separate ends for loading unsettle material, unloading sterile, cold sterilize, Ethylene oxide sterilize, Freon ethylene instruments and mattress sterilizer, sterile racks, mixers, and trays for instruments.

This department shall work round the clock and all materials, instruments, trays, and dressing material etc. shall be supplied round the clock.

### **B.2.6 LAUNDRY**

The Central Mechanical laundry shall be provided with bulk washing machine, Hydro-Extractor, flat rolling machine. Laundering of hospital linen shall satisfy two basic considerations, namely, cleanliness and disinfection. The hospital could be

provided with necessary facilities for drying, pressing and storage of soiled and cleaned linens.

\*The physical facilities for housing the laundry equipment shall be provided in the campus. However, services can be handed over to any agency but with overall supervision of Hospital Administrator.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

**B.2.7. \*DEPARTMENT OF RADIO-DIAGNOSIS:**

- (1) The staff of Radio-Diagnosis department shall be covered by Personal Monitoring System of BARC.

Accommodation shall be provided for the following namely:

- (a) Room for 300mA, 500mA, 600mA. I.I.T.V. System, Fluoroscopy System (36 sq.m.).

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

*Subclause I (a) shall be further amended/substituted as under:*

***\*a) Room for 300mA, 500mA, 800mA, I.I.T.V. System, Fluoroscopy System (36 Sq.m.)***

**\* As per the terms of Notification published on 02.02.2010 in the Gazette of India.**

- (b) Ultrasound Room (15 sq.m.)  
(c) Room for 60 mA Mobile X-ray system (15 sq.m)  
(d) Accommodation for CT Scan system. There shall be three equipment rooms, (examination room, control room and computer room). In addition, a service room for Electrical Panels, UPS and Servo Stabilizer shall be provided. The total area requirement is 80 sq.m.  
(e) There shall be preferable a Magnetic Resonance Imaging (MRI) system. The space requirement shall be according to the standard specifications.  
(f) Store room for X-Ray films related material (15 sq.m)  
(g) Museum (25 sq.m.)  
(h) Waiting room for patient, enquiry office and staff rooms for Professor & HOD, Assoc. Profs., Asstt. Profs., Residents, Tutor shall be provided as per requirement.  
(i) Accommodation for demonstration room shall be provided.

**# The above clause 1(a) & 1(c) shall be substituted with the following: -**

***“1(a) Accommodation shall be provided for the following namely:  
Room for 300mA, 600 mA, 800mA, I.I.T.V.System, Fluoroscopy System (36 sq.m.)”***

*1(c) Room for 60 mA and 100 mA mobile x-ray system (15 sq.m.)*

**# As per the terms of Notification published on 03.07.2015 in the Gazette of India.**

- (2) The room sizes for various Diagnostic Imaging Systems shall be as per the following provision of the Atomic Energy Regulatory Board Safety Code, namely:

The room size of the room housing X-ray equipment must not be less than 25 Sq.m. for a general purpose X-Ray machine. In case of diagnostic X-Ray equipment operating at 125kV or above the control panel must be installed in separate control room located outside but contiguous to the X-Ray room. Rooms housing fluoroscopy equipment must be so designed that adequate darkness can be achieved conveniently when desired. Patient waiting areas must be provided outside the X-ray room and a dark room must be provided.

## **B 2.8 DEPARTMENT OF ANAESTHESIOLOGY**

Accommodation for the department of Anaesthesia shall be provided for staff on duty in operation theaters in that block itself as far as possible in addition to following accommodation; namely:-

1. Offices for Heads of Departments and Heads of Units.
2. Accommodation for the other unit staff.
3. Clinical demonstration rooms (at least two for each department); and
4. Departmental Library-cum-Seminar room (30 Sq.m.) with a seating capacity of 50 students.

Point no. 3, shall be substituted as under: -

*3. Clinical Demonstration Room: One.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

## **OPTIONAL DEPARTMENTS**

### **B.2.9 DEPARTMENT OF RADIOTHERAPY:**

The department needs to be planned in such a way that there is a minimum movement of Radio-active sources through the general corridors of the Hospital. It is therefore desirable that the outpatient wing, treatment wing, dosimetry/planning equipments, wards, operation theatre and other facilities are located in the same block, may be on two floors. It should be closely connected with the rest of the hospital to facilitate free interaction of the facilities of various disciplines for multidisciplinary management of the patients. Separate rooms should be provided for Teletherapy Unit (100 Sq.m.area), intracavitary treatment room (50 sq.m.area) interstitial, endocavitary, surface mould therapy room (50 sq.m.area), planning room (50sq.m.area), rooms for metalling treatment planning equipments, mould room (50

sq.m.area), record room (100sq.m.area), medical physics laboratory (50sq.m.area) outpatient waiting room (200 sq.m.area), indoor beds (at least 40 beds and an isolation ward) (200 sq.m.area), day care ward for short chemotherapy/radiotherapy procedures etc. (70 sq.m.area). The minimum floor area shall be 2000-2500 sq.m. Prior BARC approval of the radiation therapy rooms/plan alongwith complete layout of the entire department is mandatory.

### **B.2.10 DEPARTMENT OF PHYSICAL MEDICINE AND REHABILITATION:**

Accommodation (2000 sq.meter) shall be provided for professor and other teaching staff, paramedical personnel and non-medical staff, evaluation room, physiotherapy, Electrotherapy, Hydrotherapy, Occupational Therapy, Speech therapy, separately, as far as possible.

### **B 3 CLINICAL DEPARTMENTS-OUT DOOR**

B 3.1 Accommodation shall be provided for:-

1. Waiting/reception space rooms for patients and attendants,
2. Enquiry and record room.
3. Four examination rooms (cubicles) and case demonstration rooms to be provided for each department in the outdoor in self-contained blocks with their sub-sections. Each clinical unit in the out-patient department shall be provided with examination cubicles.

Point no. 3, shall be substituted as under: -

*3. Four examination rooms, suitably equipped, shall be provided for departments of General Medicine, Paediatrics, General Surgery, Orthopaedics and Obstetrics & Gynaecology and two examination rooms, suitably equipped, shall be provided for the rest of the departments. Each department shall also have 1 Demonstration room of capacity 15-20 students*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

4. Dispensary.
5. The following additional accommodation shall be provided in the departments specified below:-
  - (a) In Surgery & its specialities:  
Dressing room for men and women patients respectively.  
Operation theatre for out patient surgery.
  - (b) In Ophthalmic Section:  
Refraction rooms, dark rooms, dressing rooms etc.
  - (c) In Orthopaedics Section:  
Plaster room, Plaster-cutting room, out-patient X-ray desirable.
  - (d) In ENT Section:  
Sound proof audiometry Room, ENG laboratory and speech therapy facilities.

- (e) In Paediatrics:  
Child Welfare including Immunization Clinic  
Child Guidance Clinic  
Child Rehabilitation Clinic including facilities for speech therapy and occupational therapy.
- (f) In obstetrics and Gynaecology:  
Antenatal Clinic, Family Welfare Clinic  
Sterility Clinic  
Cancer Detection Clinic.

There shall be an additional students duty room (separately for males and females) attached to the labour room.

- (g) In Dental Section:  
Accommodation for Dental Surgery and Prosthetic dentistry.

B 2.2 Reception and Waiting Hall for Patients.

B. 2.3. A seminar room for students.

**B.4 CENTRAL LABORATORIES:**

There shall be well-equipped and updated central laboratories preferably alongwith common collection entire for all investigations in histopathology, cytopathology, haematology, immunopathology, microbiology, biochemistry and other specialized work if any.

**B.5 CENTRAL CASUALTY DEPARTMENT**

\* There shall be well equipped and updated intensive care unit (I.C.U) -5 beds, Intensive Coronary Care Unit (I.C.C.U.)-5 beds, Intensive Care Paediatric/Neonatal Unit -5 beds and preferably Intensive Care in Tuberculosis and Respiratory Diseases. The number of beds in casualty trauma unit shall be 25. ICU should be located near casualty. These shall be functional at the time of inception of the college.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

The following shall be added as under:-

*Accommodation for Resuscitation Services including Oxygen supply, ventilators, defibrillator and two fully equipped disaster trolleys (emergency trolleys), Emergency X-ray, investigative facilities, Operation theatre etc., shall be provided. These shall all be fully equipped.*

*Adequate sanitary arrangements (toilet and bathrooms) & drinking water facilities for patients, their attendants and the staff of the department shall be provided in the respective blocks.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

## B.6 \*CENTRAL HOSPITAL PHARMACY

It shall have qualified pharmacist incharge and other staff certified by statutory authorities to dispense the drugs.

*The following shall be added, as under:*

### 1. Space Requirement -

*Dispensary : 2000 Sq.ft. (It should include all areas of dispensing services available in wards and OPDs, patient counseling, Inventory, staff and all stores).*

#### Drug and poison information services

*They are being provided by the Pharmacology Department as a part of MBBS curriculum & should be continued as such.*

### 2. Staff requirement –

*As per existing Regulations of Minimum Standard Requirements for the Medical College for 150 Admissions Annually Regulations, 1999 under point number B6 “Central Hospital Pharmacy” – the Incharge of central hospital pharmacy should be a qualified pharmacist. He should be preferably B. Pharma from a recognized university/D.Pharma from a recognized body. He/she may be Head of the central hospital pharmacy and should work under the supervision of Medical Superintendent.*

*Other staff certified by statutory authorities should be available to dispense the drugs.*

### 3. Infrastructural Requirements (Numbers may vary as required) -

<i>Refrigerators</i>	<i>:</i>	<i>02</i>	
<i>Tables</i>	<i>:</i>	<i>10</i>	
<i>Chairs</i>	<i>:</i>	<i>15</i>	
<i>Dispensing tables (2x8 ft)</i>	<i>:</i>	<i>05</i>	
<i>Computers(depending on the need)</i>	<i>:</i>	<i>05</i>	
<i>Computer chairs</i>	<i>:</i>	<i>05</i>	
<i>File cabinets</i>	<i>:</i>	<i>02</i>	
<i>Text book racks</i>	<i>:</i>	<i>02</i>	
<i>Computer tables</i>	<i>:</i>	<i>05</i>	
<i>Telephone facilities</i>			
<i>Printing facilities</i>			
<i>Internet facilities (high speed)</i>			

*The above numbers are minimum requirement. However the actual number may vary as per requirement of the hospital.*

### 4. Resources required for Drug information



*Pharmacopoeias/National Formularies & important text books & journals should be available in Central library as per recommendation of Prof. & HOD, Pharmacology department.*

**\* As per the terms of Notification published on 26.02.2010 in the Gazette of India.**

#### **B.7 CENTRAL KITCHEN**

The Central Kitchen shall be commodious, airy, sunny, clean with proper flooring with exhaust system. The cooking should be done either by electricity or by gas. It should be provided with proper and clean working platforms. A separate store area with proper storage facilities should also be provided. The services trolleys for food should be hot and closed stainless steel ones.

#### **B.8 INCINERATING PLANT /\*HOSPITAL WASTE MANAGEMENT**

\*Facilities for hospital waste management, commensurate with the State Regulatory Authorities etc. shall be provided.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

#### **B.9 CENTRAL DISINFECTION PLANT- *“DELETED”* as per terms of Notification published on 15.07.2009 in the Gazette of India.**

#### **B.10 STAFF QUARTERS**

B10.1 \*There shall be sufficient number of quarters for covering 100 per cent of the total Sr. Residents and Jr. Residents as required.

B.10.1, shall be substituted as under: -

*There shall be accommodation for 100 % of Senior Residents & Junior Residents. It shall be mandatory for all Senior & Junior Residents to stay in Residents' Hostel / Quarters in the campus where hospital is located.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

B10.2 \*There shall be sufficient number of quarters for covering at least 20% each of the Nurses, teaching and non-teaching staff.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

#### **B. 11 CENTRAL HOSPITAL STORES**

There shall be a central hospital stores for stocking & supply of drugs, equipments etc.

#### **B.12 HOSTELS FOR STUDENTS**

\*The College/Institution should have at least provision for 75% of the total intake of students at a given time. Each hostel room shall not have more than three occupants. The size of such room shall not be less than 27 sq.mt. Each student shall be provided with an independent and separate furniture which shall include chair, table, bed and full size cupboard at the least. In case of single seated room it should be at least 9 sq. mt. Area. Each hostel shall have a visitor room, a study room with facilities for computer and internet and should be air-conditioned. There shall be a recreational facility room having T.V., Music, Indoor games etc. and messing facilities for the students.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

“Hostels for Students”, shall be substituted as under: -

*The college/institution shall have provision of student hostel for at least 60 % of total intake of students at a given time. Each hostel room shall not have more than three occupants. The size of room shall be 9 sq.m. / student. Each student shall be provided with an independent and separate furniture which shall include chair, table, bed and full size cupboard. Each hostel shall have a Visitors' room and a Study room with Computer & Internet. Both these rooms shall be air-conditioned. There shall be recreational room having T.V., Music, Indoor games and messing facilities.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

After clause B.12, the following shall be added as under: -

**B.13.** *The college/institution shall have provision for Interns' Hostel for at least 50 % of total intake of students at time of assessment for recognition. Each hostel room shall not have more than three occupants. The size of room shall be 9 sq.m./intern. Each intern shall be provided with an independent and separate furniture which shall include chair, table, bed and full cupboard. Each hostel shall have a Visitors' room and a Study room with Computer & Internet. Both these rooms shall be air-conditioned. There shall be recreational room having T.V., Music, Indoor games and messing facilities.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

## **GENERAL REMARKS**

### **Schedule - II - STAFF REQUIREMENTS**

1. Emphasis in medical education being on practical instruction and demonstration in small groups. The number of teachers must be as per provisions of this Schedule adequate to enable such instruction to be imparted effectively.
2. The teaching staff of all departments of medical college shall be full-time.

3. \*These regulations cover the minimum requirements of under graduate medical education. Additional teaching and non-teaching staff shall also be required in OPD, Indoors, Operation theatres and Intensive Care areas where the work load involved in emergency patient care, clinical laboratory work/field work is heavy or is of a specialized nature

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

4. To ensure the exposure of undergraduate students to experienced teachers, it is essential to provide adequate number of higher posts (Professors/Readers) in every department of teaching.
5. In department of Anatomy, Physiology, Biochemistry, Pharmacology and Microbiology, non-medical teachers may be appointed to the extent of 30% of the total number of posts in the department. A non-medical approved medical M.Sc. qualification shall be a sufficient qualification for appointment as lecturer in the subject concerned but for promotion to higher teaching post a candidate must require Ph.D. degree qualification or equivalent qualification. However, in the department of Biochemistry, non-medical teachers may be appointed to the extent of 50% of the total number of posts in the department. In view of the paucity of teachers in non-clinical departments, relaxation upto the Head of the department may be given to non-medical persons in case a suitable medical teacher in the particular non-clinical speciality is not available for the said appointment in said department. However, all such appointments will be made only with the prior approval of the Medical Council of India. However, a non-medical person cannot be appointed as Director/Principal/Dean/Medical Superintendent or equivalent of an institution in any case. In the department of Community medicine, Statistician cum Lecturer in Statistics should possess M.A./M.Sc. qualification in that particular subject from a recognised university. These requirements are as per the Teacher Eligibility Qualification Regulations.

Last four lines of point no. 5 shall be substituted as under: -

*In the department of Community Medicine, Statistician cum Tutor shall possess M.Sc. qualification from a recognized University. These requirements are as per the Teacher Eligibility Qualification Regulations.*

Hostels for Students", shall be substituted as under: -

*The college/institution shall have provision of student hostel for at least 60 % of total intake of students at a given time. Each hostel room shall not have more than three occupants. The size of room shall be 9 sq.m. / student. Each student shall be provided with an independent and separate furniture which shall include chair, table, bed and full size cupboard. Each hostel shall have a Visitors' room and a Study room with Computer & Internet. Both these rooms shall be air-conditioned. There shall be recreational room having T.V., Music, Indoor games and messing facilities.*

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

6. Teacher in higher specialities like Cardiology, neurology, Neuro-Surgery shall not be counted against the complement of teachers required for under graduate medical education.

## DEPARTMENTWISE STAFF REQUIREMENTS-NON-CLINICAL

### (1) \*DEPARTMENT OF ANATOMY Staff Strength Required

1.	Professor	1
2.	Assoc. Prof./Reader	2
3.	Asstt. Prof. /Lecturer	3
4.	Tutors/Demonstrators	4
5.	Technician	1
6.	Dissection Hall Attendants	4
7.	Store Keeper cum Clerk-cum Computer Operator	1
8.	Sweepers	2

### (2)\* DEPARTMENT OF PHYSIOLOGY Staff Strength Required

1.	Professor	1
2.	Assoc. Prof/Reader	2
3.	Asstt. Prof./Lecturer	3
4.	Tutors/Demonstrators	4
5.	Technician	1
6.	Store Keeper cum clerk cum Computer operator	1
7.	Sweepers	2

### (3) \*DEPARTMENT OF BIOCHEMISTRY Staff Strength Required

1.	Professor	1
2.	Assoc. Prof. /Reader	1
3.	Asstt. Prof. /Lecturer	2
4.	Tutors/Demonstrators	4
5.	Technical Asstt./Technician	2
6.	Store-Keeper cum clerk cum Computer operator	1
7.	Sweepers	2
8.	Lab Attendant	1

### (4)\* DEPARTMENT OF PATHOLOGY Staff Strength Required

1.	Professor	1
2.	Assoc. Prof. /Reader	3
3.	<b>Asstt. Prof. /Lecturer</b>	<b>3**</b>
4.	<b>Tutors/Demonstrators</b>	<b>5**</b>
5.	Technical Asstt./Technician	4
6.	Lab. Attendants	2
7.	Steno cum Computer Operator	1
8.	Store Keeper cum Record Keeper	1
9.	Sweepers	2

**\*\*As per the terms of Notification published on 03.11.2010 in the Gazette of India.**

**(5) \*DEPARTMENT OF MICROBIOLOGY** **Staff Strength Required**

1.	Professor	1
2.	Assoc. Prof. /Reader	2
3.	Asstt. Prof. /Lecturer	2
4.	Tutors/Demonstrators	4
5.	Technical Asstt./Technician	7
6.	Lab. Attendants	2
7.	Store Keeper cum Record clerk	1
8.	Steno cum Computer Operator	1
9.	Sweepers	2

**(6)\* DEPARTMENT OF PHARMACOLOGY** **Staff Strength Required**

1.	Professor	1
2.	Assoc. Prof. /Reader	2
3.	Asstt. Prof./Lecturer	2
4.	Tutors/Demonstrators	3
5.	Laboratory Attendants	2
6.	Store Keeper cum clerk cum Computer operator.	1
7.	Sweepers	2

**(7) \*DEPARTMENT OF FORENSIC MEDICINE** **Staff Strength Required**

1.	Professor	1
2.	Assoc. Prof/Reader	1
3.	<b>Asstt. Prof./Lecturer</b>	<b>1**</b>
4.	Tutors/Demonstrators	3
5.	Technical Asstt./Technician	2
6.	Laboratory Attendants	2
7.	Steno Typist	1
8.	Store Keeper cum clerk cum Computer Operator	1
9.	Sweepers	4

**\*\*As per the terms of Notification published on 03.11.2010 in the Gazette of India.**

Note:- In case of postmortem work of more than 500 annually, two additional Tutors/Demonstrators shall be provided.

**(8)\* DEPARTMENT OF COMMUNITY MEDICINE** **Staff Strength Required**

1.	Professor	1
2.	Assoc. Prof./Reader	2
3.	Asstt. Prof. /Lecturer	3
4.	Epidemiologist-cum-Assistant Professor	1
5.	Statistician-cum-Assistant Professor	1
6.	Tutors/Demonstrators	4
7.	Medical Social Worker	1
8.	Technical Asstt./Technicians	1
9.	Stenographers	1

10.	Record keeper cum clerk cum Computer Operator	1
11.	Store Keeper	1
12.	Sweepers	1

**STAFF FOR RURAL TRAINING HEALTH CENTRE (INCLUDING FIELD WORK AND EPIDEMIOLOGICAL STUDIES.)**

1.	Medical Officer of Health-cum-lecturer/ Assistant Professor.	1
2.	Lady Medical Officer	1
3.	Medical Social Workers	2
4.	Public Health Nurse	1
5.	Health Inspector/Health Assistant (Male)	1
6.	Health Educator	1
7.	Technical Asstt./Technician	1
8.	Peon	1
9.	Van Driver	1
10.	Store Keeper cum Record Clerk	1
11.	Sweepers	2

**\*URBAN TRAINING HEALTH CENTRE**

1.	Medical officer of Health-cum-Lecturer/ Assistant Professor	1
2.	Lady Medical Officer	1
3.	Medical Social Workers	2
4.	Public Health Nurse	1
5.	Health Inspectors	2
6.	Health Educator	1
7.	Technical Assistant/Technicians	2
8.	Peon	1
9.	Van Driver	1
10.	Store Keeper	1
11.	Record Clerk	1
12.	Sweepers	2

Note: The Urban and Rural Training Health Centres should be under the direct administrative control of the Dean/Principal of the college.

**\*As per the terms of Notification published on 15.07.2009 in the Gazette of India.**

**C. DEPARTMENT WISE STAFF REQUIREMENTS-CLINICAL DEPARTMENTS**

**(1) GENERAL**

1. Each department shall have a Head of the Department of the rank of full time Professor who shall have overall control of the Department.
2. The Staffing pattern of the departments shall be organised on the basis of units.
3. A Unit shall have not more than 30 beds in its charge. However, in departments of Tuberculosis & respiratory diseases, Dermatology, Venereology & Leprosy,

Psychiatry, Ophthalmology & ENT one unit shall be of MCI sanctioned strength for that speciality even if the total number of beds is less than 30.

4. The minimum staff complement of each unit shall consist of the following, namely:-

(a)	Professor/Reader	1
(b)	Lecturer.	1
(c)	Senior Resident/Tutor/Registrar	1
(d)	Junior Residents	3 to 4

In addition to the above staff, additional Sr. Residents and Junior Residents shall be provided according to the load in Burn Ward ICU, emergency, ICCU, Nursery, Labour Room and in other critical/intensive care unit/units for providing services round the clock.

## (2) GENERAL MEDICINE

The Number of units, beds and staff for each department shall be as follows;

### (a) GENERAL MEDICINE

No. of units/beds:		6/150
		Staff strength required
1.	Professor	1
2.	Assoc.Prof./Reader	5
3.	Lecturer	6
4.	<b><i>Tutor / Registrar/Sr. Resident*</i></b>	<b><i>9***</i></b>
5.	Junior Residents	18

\*With three years Resident experience.

### (b) TUBERCULOSIS & RESPIRATORY DISEASES

No. of units/beds:		1/30
		Staff strength required
1.	Professor	1
2.	Assoc.Prof./Reader	}
3.	Asst.Prof./ Lecturer	
4.	<b><i>Tutor / Registrar/Sr. Resident*</i></b>	<b><i>2***</i></b>
5.	Junior Residents	3

\* With three years Resident experience.

### (c) DERMATOLOGY VENEREOLOGY & LEPROSY

No. of units/beds:		1/15
		Staff strength required
1.	Professor	1
2.	Assoc.Prof./Reader	



3.	Asst.Prof./urer	1
<b>4.</b>	<b>Tutor / Registrar/Sr. Resident*</b>	<b>2***</b>
5.	Junior Residents	3

\* With three years Resident experience.

**(d) PSYCHIATRY**

No. of units/beds:		1/15
		Staff strength required
1.	Professor	1
2.	Assoc.Prof./Reader	
3.	Asst.Prof./Lecturer	1
<b>4.</b>	<b>Tutor / Registrar/Sr. Resident*</b>	<b>2***</b>
5.	Junior Residents	3

\* With three years Resident experience.

The following ancillary staff shall be provided.

*Staff Strength required*

1.	E.C.G. Technician	1
2.	Technical Asstt./Technician	3
3.	Lab. Attendants	4
4.	Store Keeper	1
5.	Steno Typist	1
6.	Record clerks	2
7.	T.B. and Chest Diseases Health Visitors	2
8.	Psychiatric Social Workers	2

**DEPARTMENT OF PAEDIATRICS**

No. of units/beds:		3/90
		Staff strength required
1.	Professor	1
2.	Assoc.Prof./Reader	3
3.	Asst.Prof./Lecturer	2
<b>4.</b>	<b>Tutor / Registrar/Sr. Resident*</b>	<b>5***</b>
5.	Junior Residents	9

\*with three years Resident experience

The following ancillary staff shall be provided.

1.	Child Psychologist	1
2.	Health Educator	1
3.	Technical Asstt./Technician	1
4.	Lab attendant	1
5.	Store Keeper	1
6.	Steno Typist	1

7.	Record clerks	1
8.	Social worker	1

**(4) DEPARTMENT OF GENERAL SURGERY**

No. of units/beds:		6/150
		Staff strength required
1.	Professor/	1
2.	Assoc.Prof./Reader	5
3.	Asst.Prof.Lecturer	6
<b>4.</b>	<b><i>Tutor / Registrar/Sr. Resident*</i></b>	<b><i>9***</i></b>
5.	Junior Residents	18

\* With three years Resident experience.

The following ancillary staff shall be provided.

1.	Technical Assistant/Technicians	3
2.	Laboratory Attendants	4
3.	Store keeper	1
4.	Steno-Typist	1
5.	Record Clerks	2

**(5) DEPARTMENT OF ORTHOPAEDICS**

No. of units/beds:		3/90
		Staff strength required
1.	Professor/	1
2.	Assoc.Prof./Reader	2
3.	Asst.Prof./Lecturer	3
<b>4.</b>	<b><i>Tutor / Registrar/Sr. Resident*</i></b>	<b><i>5***</i></b>
5.	Junior Residents	9

\* with three years resident experience.

The following ancillary staff shall be provided.

1.	Technical Assistant/Technicians	1
2.	Laboratory Attendants	1
3.	Store keeper	1
4.	Steno-Typist	1
5.	Record Clerks	1

**(6) DEPARTMENT OF OTO-RHINO-LARYGOLOGY**

No. of units/beds:		1/30
		Staff strength required
1.	Professor	1
<b>2.</b>	<b><i>Assoc.Prof./Reader</i></b>	<b><i>1**</i></b>

- |    |  |             |
|----|--|-------------|
| 3. | <i>Asst.Prof./Lecturer</i>             | <b>1**</b>  |
| 4. | <i>Tutor / Registrar/Sr. Resident*</i> | <b>2***</b> |
| 5. | Junior Residents                       | 3           |

\* with three years resident experience.

The following ancillary staff shall be provided.

- |    |                                 |   |
|----|---------------------------------|---|
| 1. | Technical Assistant/Technicians | 1 |
| 2. | Laboratory Attendants           | 1 |
| 3. | Store keeper                    | 1 |
| 4. | Steno-Typist                    | 1 |
| 5. | Record Clerks                   | 1 |
| 6. | Audiometry Technician           | 1 |
| 7. | Speech Therapist                | 1 |

### (7) DEPARTMENT OF OPHTHALMOLOGY

- |                    |  |             |
|--------------------|--|-------------|
| No. of units/beds: | 1/30                                   |             |
|                    | Staff strength required                |             |
| 1.                 | Professor                              | 1           |
| 2.                 | <i>Assoc.Prof./Reader</i>              | <b>1**</b>  |
| 3.                 | <i>Asst.Prof./Lecturer</i>             | <b>1**</b>  |
| 4.                 | <i>Tutor / Registrar/Sr. Resident*</i> | <b>2***</b> |
| 5.                 | Junior Residents                       | 3           |

\* with three years resident experience.

The following ancillary staff shall be provided.

- |    |                                |   |
|----|--------------------------------|---|
| 1. | Technical Assistant/Technician | 1 |
| 2. | Lab Attendant                  | 1 |
| 3. | Stenotypist                    | 1 |
| 4. | Store keeper                   | 1 |
| 5. | Record Clerk                   | 1 |
| 6. | Refractionist                  | 1 |

### (8) DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

- |                    |  |             |
|--------------------|--|-------------|
| No. of units/beds: | 3/100                                  |             |
|                    | Staff strength required                |             |
| 1.                 | Professor                              | 1           |
| 2.                 | <i>Assoc.Prof./Reader</i>              | <b>3**</b>  |
| 3.                 | <i>Asst.Prof./Lecturer</i>             | <b>5**</b>  |
| 4.                 | <i>Tutor / Registrar/Sr. Resident*</i> | <b>5***</b> |
| 5.                 | Junior Residents                       | 9           |

The following ancillary staff shall be provided.

1.	Antenatal Medical officer-cum-lecturer/ Assistant Professor	1
2.	Maternity and Child Welfare Officer- cum-lecturer/ Assistant Professor	1
3.	Social Worker	2
4.	Technical Asstt./Technicians	2
5.	Lab Attendants	2
6.	Stenographer	1
7.	Record Clerk	1
8.	Store Keeper	1

#### (9) DEPARTMENT OF RADIO-DIAGNOSIS

1.	Professor	1
2.	<i>Assoc.Prof./Reader</i>	<i>1**</i>
3.	<i>Asst.Prof./Lecturer</i>	<i>1**</i>
4.	<i>Tutors/Registrars</i>	<i>5***</i>
5.	Radiographic technicians	8
6.	Dark room assistant	4
7.	Stenographers	1
8.	Storekeeper	1
9.	Record clerk	1

#### (10) DEPARTMENT OF RADIO-THERAPY (OPTIONAL)

1.	Professor	1
2.	Assoc.Prof./Reader	}
3.	Asst.Prof./Lecturer	
4.	Tutors/Registrars	2
5.	Physicist	1
6.	Radiotherapy technicians (for every treatment unit)	2
7.	Dark room assistant	1
8.	Stenographer	1
9.	Storekeeper	1
10.	Record clerk	2

#### (11) DEPARTMENT OF ANAESTHESIOLOGY

Staff strength required

1.	Professor	1
2.	Assoc.Prof./Reader	3
3.	Asst.Prof./Lecturer	4
4.	<i>Tutors/Registrars/Senior Residents</i>	<i>11***</i>

The staff in the department shall consist of :

1.	Technical Asstt. Technicians	8
2.	Stenotypist	1
3.	Record clerk	1
4.	Store keeper	1

**(12) DEPARTMENT OF PHYSICAL MEDICINE AND REHABILITATION  
(OPTIONAL)**

Staff Strength required

1.	Professor/	1
2.	Assoc.Prof./Reader	
3.	Asst.Prof./Lecturer	1
4.	Senior Residents	2
5.	House Surgeon/Junior Resident	1

The staff in the department shall consists of :

1.	Physiotherapists	2
2.	Occupational Therapists	2
3.	Speech Therapists	1
4.	Prosthetic and Orthotic Technicians	2
5.	Workshop Workers	6
6.	Clinical Psychologist	1
7.	Medico-social Worker	1
8.	Public Health Nurse/Rehabilitation Nurse	1
9.	Vocational Counsellor	1
10.	Multi-rehabilitation Workers/(MRW)/ Technician/Therapist	4
Non-medical Personnel		
	Stenographer	1
	Record Clerk	1
	Store keeper	1
	Class IV workers	4

**(13) DEPARTMENT OF DENTISTRY**

Staff Strength required

1.	Professor	1
2.	Assoc.Prof./Reader	1
3.	Asst.Prof./Lecturer	1
4.	<b>Tutor/Registrar/Sr. Resident</b>	<b>5***</b>
5.	Dental Technicians	4
6.	Store Keeper cum clerk	1

**\*\*As per the terms of Notification published on 03.11.2010 in the Gazette of India.**

**\*\*\*As per the terms of Notification published on 04.11.2010 in the Gazette of India.**

Note: Where Dental College or Dental wings of medical Colleges exist, the services of teachers of these may be utilized in the instruction of medical students in Dentistry and no separate staff in the Medical College shall be necessary.

# *The above Schedule II – “Staff Requirements” under the heading “Department-wise Staff Requirements - Non-Clinical and Clinical departments the “Staff Strength Required” for the following departments shall be substituted as under: -*

**DEPARTMENTWISE STAFF REQUIREMENTS-NON-CLINICAL**

**(1) \*DEPARTMENT OF ANATOMY** *Staff Strength Required*

<i>1. Professor</i>	<i>1</i>
<i>2. Assoc. Prof.</i>	<i>1</i>
<i>3. Asstt. Prof.</i>	<i>2</i>
<i>4. Tutors/Demonstrators</i>	<i>3</i>
<i>5. Technician</i>	<i>1</i>
<i>6. Dissection Hall Attendants</i>	<i>4</i>
<i>7. Store Keeper cum Clerk-cum Computer Operator</i>	<i>1</i>
<i>8. Sweepers</i>	<i>2</i>

**(2)\* DEPARTMENT OF PHYSIOLOGY** *Staff Strength Required*

<i>1. Professor</i>	<i>1</i>
<i>2. Assoc. Prof.</i>	<i>1</i>
<i>3. Asstt. Prof.</i>	<i>2</i>
<i>4. Tutors/Demonstrators</i>	<i>3</i>
<i>5. Technician</i>	<i>1</i>
<i>6. Store Keeper cum clerk cum Computer operator</i>	<i>1</i>
<i>7. Sweepers</i>	<i>2</i>

**(3) \*DEPARTMENT OF BIOCHEMISTRY** *Staff Strength Required*

<i>1. Professor</i>	<i>1</i>
<i>2. Assoc. Prof.</i>	<i>1</i>
<i>3. Asstt. Prof.</i>	<i>2</i>
<i>4. Tutors/Demonstrators</i>	<i>4</i>
<i>5. Technical Asstt./Technician</i>	<i>2</i>
<i>6. Store-Keeper cum clerk cum Computer operator</i>	<i>1</i>
<i>7. Sweepers</i>	<i>2</i>
<i>8. Lab Attendant</i>	<i>1</i>

**(4)\* DEPARTMENT OF PATHOLOGY** *Staff Strength Required*

<i>1. Professor</i>	<i>1</i>
<i>2. Assoc. Prof.</i>	<i>3</i>
<i>3. Asstt. Prof.</i>	<i>3</i>
<i>4. Tutors/Demonstrators</i>	<i>5</i>
<i>5. Technical Asstt./Technician</i>	<i>4</i>

6. Lab. Attendants	2
7. Steno cum Computer Operator	1
8. Store Keeper cum Record Keeper	1
9. Sweepers	2

(5) \*DEPARTMENT OF MICROBIOLOGY Staff Strength Required

1. Professor	1
2. Assoc. Prof.	1
3. Asstt. Prof.	2
4. Tutors/Demonstrators	4
5. Technical Asstt./Technician	7
6. Lab. Attendants	2
7. Store Keeper cum Record clerk	1
8. Steno cum Computer Operator	1
9. Sweepers	2

(6)\* DEPARTMENT OF PHARMACOLOGY Staff Strength Required

1. Professor	1
2. Assoc. Prof.	1
3. Asstt. Prof.	2
4. Tutors/Demonstrators	3
5. Laboratory Attendants	2
6. Store Keeper cum clerk cum Computer operator.	1
7. Sweepers	2

(7) \*DEPARTMENT OF FORENSIC MEDICINE Staff Strength Required

1. Professor	1
2. Assoc. Prof.	1
3. Asstt. Prof.	1
4. Tutors/Demonstrators	3
5. Technical Asstt./Technician	2
6. Laboratory Attendants	2
7. Steno Typist `	1
8. Store Keeper cum clerk cum Computer Operator	1
9. Sweepers	4

Note:- In case of postmortem work of more than 500 annually, two additional Tutors/Demonstrators shall be provided.

(8)\* DEPARTMENT OF COMMUNITY MEDICINE Staff Strength Required

1. Professor	1
2. Assoc. Prof.	2
3. Asstt. Prof.	3
4. Epidemiologist-cum-Assistant Professor	1
5. Statistician-cum-Tutor	1
6. Tutors/Demonstrators	4
7. Medical Social Worker	1
8. Technical Asstt./Technicians	1
9. Stenographers	1
10. Record keeper cum clerk cum Computer Operator	1

<i>11. Store Keeper</i>	<i>1</i>
<i>12. Sweepers</i>	<i>1</i>

**STAFF FOR RURAL TRAINING HEALTH CENTRE (INCLUDING FIELD WORK AND EPIDEMIOLOGICAL STUDIES.)**

<i>1. Medical Officer of Health-cum-lecturer/ Assistant Professor.</i>	<i>1</i>
<i>2. Lady Medical Officer</i>	<i>1</i>
<i>3. Medical Social Workers</i>	<i>2</i>
<i>4. Public Health Nurse</i>	<i>1</i>
<i>5. Health Inspector/Health Assistant (Male)</i>	<i>1</i>
<i>6. Health Educator</i>	<i>1</i>
<i>7. Technical Asstt./Technician</i>	<i>1</i>
<i>8. Peon</i>	<i>1</i>
<i>9. Van Driver</i>	<i>1</i>
<i>10. Store Keeper cum Record Clerk</i>	<i>1</i>
<i>11. Sweepers</i>	<i>2</i>

**\*URBAN TRAINING HEALTH CENTRE**

<i>1. Medical officer of Health-cum-Lecturer/ Assistant Professor</i>	<i>1</i>
<i>2. Lady Medical Officer</i>	<i>1</i>
<i>3. Medical Social Workers</i>	<i>2</i>
<i>4. Public Health Nurse</i>	<i>1</i>
<i>5. Health Inspectors</i>	<i>2</i>
<i>6. Health Educator</i>	<i>1</i>
<i>7. Technical Assistant/Technicians</i>	<i>2</i>
<i>8. Peon</i>	<i>1</i>
<i>9. Van Driver</i>	<i>1</i>
<i>10. Store Keeper</i>	<i>1</i>
<i>11. Record Clerk</i>	<i>1</i>
<i>12. Sweepers</i>	<i>2</i>

*Note: The Urban and Rural Training Health Centres should be under the direct administrative control of the Dean/Principal of the college.*

**C. DEPARTMENT WISE STAFF REQUIREMENTS-CLINICAL DEPARTMENTS**

**(1) GENERAL**

- 1. Each department shall have a Head of the Department of the rank of Professor except in the departments of Dermatology, Venereology & Leprosy, Psychiatry & Dentistry where Associate Professor may be the Head of the Department who shall have overall control of the Department.*
- 2. The Staffing pattern of the departments shall be organised on the basis of units.*
- 3. A Unit shall have not more than 30 beds in its charge. However, in departments of Tuberculosis & respiratory diseases, Dermatology, Venereology & Leprosy, Psychiatry, Ophthalmology & ENT one unit shall be of MCI sanctioned strength for that speciality even if the total number of beds is less than 30.*



4. The minimum staff complement of each unit shall consist of the following, namely:-

- (a) Professor / Assoc.Prof. 1
- (b) Assistant Prof. 1
- (c) Senior Resident 1
- (d) Junior Residents 2

In addition to the above staff, additional Sr. Residents and Junior Residents shall be provided according to the load in Burn Ward ICU, emergency, ICCU, Nursery, Labour Room and in other critical/intensive care unit/units for providing services round the clock.

§ **C. DEPARTMENTWISE STAFF REQUIREMENTS - CLINICAL DEPARTMENTS**

**(1) GENERAL**

1. Each department shall have a Head of the Department of the rank of Professor except in the departments of Dermatology Venereology and Leprosy, Psychiatry and Dentistry where Associate Professor may be the Head of the Department who shall have overall control of the Department.

2. The Staffing pattern of the departments shall be organized on the basis of units.

3. A Unit shall have not more than 30 beds in its charge. However, in departments of Tuberculosis & Respiratory Diseases, Dermatology Venereology & Leprosy, Psychiatry, Ophthalmology & ENT one unit shall be of MCI sanctioned strength for that speciality even if the total number of beds is less than 30.

4. The minimum staff complement of each unit shall consist of the following, namely:-

- (a) Professor / Assoc. Prof. - 1
- (b) Assistant Prof. - 1
- (c) Senior Resident - 1
- (d) Junior Residents (JR) - 2 (Except in the departments of Tuberculosis & Respiratory, Psychiatry and Dermatology Venereology & Leprosy, Otorhino-laryngology and Ophthalmology where JR is one per unit)

In addition to the above staff, additional Sr. Residents and Junior Residents shall be provided according to the load in Burn Ward ICU, emergency, ICCU, Nursery, Labour Room and in other critical/intensive care unit/units for providing services round the clock.

**(2) MEDICINE & ALLIED SPECIALITIES**

The Number of units, beds and staff for each department shall be as follows;

**(a) GENERAL MEDICINE**

No. of units/beds:

5/150

Staff strength required

1. Professor

1

2. Assoc.Prof.	4
3. Lecturer	5
4. Sr. Resident*	5
5. Junior Residents	10

*\*With three years Resident experience in a teaching institute in the department of General Medicine with or without PG qualification.*

**(b) TUBERCULOSIS & RESPIRATORY DISEASES**

No. of units/beds: 1/20

*Staff strength required*

1. Professor	1
2. Assoc.Prof.	0
3. Asst.Prof.	1
4.Sr. Resident*	1
5. Junior Residents	1

*\*With three years Resident experience in a teaching institute in the department of TUBERCULOSIS & RESPIRATORY DISEASES with or without PG qualification.*

**(c) DERMATOLOGY VENEREOLOGY & LEPROSY**

No. of units/beds: 1/15

*Staff strength required*

1. Professor	0
2. Assoc.Prof.	1
3. Asst.Prof.	1
4. Sr. Resident *	1
5. Junior Residents	1

*\*With three years Resident experience in a teaching institute in the department of DERMATOLOGY VENEREOLOGY & LEPROSY with or without PG qualification.*

**(d) PSYCHIATRY**

No. of units/beds: 1/15

*Staff strength required*

1. Professor	0
2. Assoc.Prof.	1
3. Asst.Prof.	1
4. Sr. Resident*	1
5. Junior Residents	1

*\*With three years Resident experience in a teaching institute in the department of PSYCHIATRY with or without PG qualification.*

*The following ancillary staff shall be provided.*

*Staff Strength required*

<i>1. E.C.G. Technician</i>	<i>1</i>
<i>2. Technical Asstt./Technician</i>	<i>3</i>
<i>3. Lab. Attendants</i>	<i>4</i>
<i>4. Store Keeper</i>	<i>1</i>
<i>5. Steno Typist</i>	<i>1</i>
<i>6. Record clerks</i>	<i>2</i>
<i>7. T.B. and Chest Diseases Health Visitors</i>	<i>2</i>
<i>8. Psychiatric Social Workers</i>	<i>2</i>

#### ***DEPARTMENT OF PAEDIATRICS***

*No. of units/beds:*

*3/90*

*Staff strength required*

<i>1. Professor</i>	<i>1</i>
<i>2. Assoc.Prof.</i>	<i>2</i>
<i>3. Asst.Prof.</i>	<i>3</i>
<i>4. Sr. Resident*</i>	<i>3</i>
<i>5. Junior Residents</i>	<i>6</i>

*\*With three years Resident experience in a teaching institute in the department of PAEDIATRICS with or without PG qualification.*

*The following ancillary staff shall be provided.*

<i>1. Child Psychologist</i>	<i>1</i>
<i>2. Health Educator</i>	<i>1</i>
<i>3. Technical Asstt./Technician</i>	<i>1</i>
<i>4. Lab attendant</i>	<i>1</i>
<i>5. Store Keeper</i>	<i>1</i>
<i>6. Steno Typist</i>	<i>1</i>
<i>7. Record clerks</i>	<i>1</i>
<i>8. Social worker</i>	<i>1</i>

#### ***4) DEPARTMENT OF GENERAL SURGERY & ALLIED SPECIALITES***

##### ***(a) DEPARTMENT OF GENERAL SURGERY***

*No. of units/beds:*

*5/150*

*Staff strength required*

<i>1. Professor</i>	<i>1</i>
<i>2. Assoc.Prof.</i>	<i>4</i>
<i>3. Asst.Prof.</i>	<i>5</i>
<i>4. Sr. Resident *</i>	<i>5</i>
<i>5. Junior Residents</i>	<i>10</i>

*\*With three years Resident experience in a teaching institute in the department of GENERAL SURGERY with or without PG qualification.*

*The following ancillary staff shall be provided.*

1. <i>Technical Assistant/Technicians</i>	3
2. <i>Laboratory Attendants</i>	4
3. <i>Store keeper</i>	1
4. <i>Steno-Typist</i>	1
5. <i>Record Clerks</i>	2

**(b) DEPARTMENT OF ORTHOPAEDICS**

*No. of units/beds:* **3/90**  
*Staff strength required*

1. <i>Professor</i>	1
2. <i>Assoc.Prof.</i>	2
3. <i>Asst.Prof.</i>	3
4. <i>Sr. Resident*</i>	3
5. <i>Junior Residents</i>	6

*\*With three years Resident experience in a teaching institute in the department of ORTHOPAEDICS with or without PG qualification.*

*The following ancillary staff shall be provided.*

1. <i>Technical Assistant/Technicians</i>	1
2. <i>Laboratory Attendants</i>	1
3. <i>Store keeper</i>	1
4. <i>Steno-Typist</i>	1
5. <i>Record Clerks</i>	1

**(c) DEPARTMENT OF OTO-RHINO-LARYGOLOGY**

*No. of units/beds:* **1/15**  
*Staff strength required*

1. <i>Professor</i>	1
2. <i>Assoc.Prof.</i>	1
3. <i>Asst.Prof.</i>	1
4. <i>Sr. Residents*</i>	1
5. <i>Junior Residents</i>	1

*\*With three years Resident experience in a teaching institute in the department of OTO-RHINO-LARYGOLOGY with or without PG qualification.*

*The following ancillary staff shall be provided.*

1. <i>Technical Assistant/Technicians</i>	1
2. <i>Laboratory Attendants</i>	1
3. <i>Store keeper</i>	1
4. <i>Steno-Typist</i>	1
5. <i>Record Clerks</i>	1
6. <i>Audiometry Technician</i>	1
7. <i>Speech Therapist</i>	1

**(d) DEPARTMENT OF OPHTHALMOLOGY**

*No. of units/beds:* **1/15**

*Staff strength required*

<i>1. Professor</i>	<i>1</i>
<i>2. Assoc.Prof.</i>	<i>1</i>
<i>3. Asst.Prof.</i>	<i>1</i>
<i>4.Sr. Resident *</i>	<i>1</i>
<i>5. Junior Residents</i>	<i>1</i>

*\*With three years Resident experience in a teaching institute in the department of OPHTHALMOLOGY with or without PG qualification.  
The following ancillary staff shall be provided.*

<i>1. Technical Assistant/Technician</i>	<i>1</i>
<i>2. Lab Attendant</i>	<i>1</i>
<i>3. Stenotypist</i>	<i>1</i>
<i>4. Store keeper</i>	<i>1</i>
<i>5. Record Clerk</i>	<i>1</i>
<i>6. Refractionist</i>	<i>1</i>

*(5) DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY*

*No. of units/beds: 3/90*  
*Staff strength required*

<i>1. Professor</i>	<i>1</i>
<i>2. Assoc.Prof.</i>	<i>2</i>
<i>3. Asst.Prof.</i>	<i>3</i>
<i>4. Sr. Resident*</i>	<i>3</i>
<i>5. Junior Residents</i>	<i>6</i>

*\*With three years Resident experience in a teaching institute in the department of OBSTETRICS AND GYNAECOLOGY with or without PG qualification.*

*The following ancillary staff shall be provided.*

<i>1. Antenatal Medical officer-cum-lecturer/ Assistant Professor</i>	<i>1</i>
<i>2. Maternity and Child Welfare Officer-cum- lecturer/ Assistant Professor</i>	<i>1</i>
<i>3. Social Worker</i>	<i>2</i>
<i>4. Technical Asstt./Technicians</i>	<i>2</i>
<i>5. Lab Attendants</i>	<i>2</i>
<i>6. Stenographer</i>	<i>1</i>
<i>7. Record Clerk</i>	<i>1</i>
<i>8. Store Keeper</i>	<i>1</i>

*(6) DEPARTMENT OF RADIO-DIAGNOSIS*

<i>1. Professor</i>	<i>1</i>
<i>2. Assoc.Prof.</i>	<i>1</i>
<i>3. Asst.Prof.</i>	<i>1</i>
<i>4. * Sr. Residents</i>	<i>3</i>

5. Radiographic technicians	8
6. Dark room assistant	4
7. Stenographers	1
8. Storekeeper	1
9. Record clerk	1

*\*With three years Resident experience in a teaching institute in the department of RADIO-DIAGNOSIS with or without PG qualification.*

**(7) DEPARTMENT OF RADIO-THERAPY (OPTIONAL)**

1. Professor	1
2. Assoc.Prof.	0
3. Asst.Prof.	1
4.* Sr. Residents	2
5. Physicist	1
6. Radiotherapy technicians (for every treatment unit)	2
7. Dark room assistant	1
8. Stenographer	1
9. Storekeeper	1
10. Record clerk	2

*\*With three years Resident experience in a teaching institute in the department of RADIO-THERAPY with or without PG qualification.*

**(8) DEPARTMENT OF ANAESTHESIOLOGY**

*Staff strength required*

1. Professor	1
2. Assoc.Prof.	3
3. Asst.Prof.	5
4. Senior Residents *	3
5. Jr.Residents	6

*\*With three years Resident experience in a teaching institute in the department of ANAESTHESIOLOGY with or without PG qualification.*

*The staff in the department shall consist of :*

1. Technical Asstt. Technicians	8
2. Stenotypist	1
3. Record clerk	1
4. Store keeper	1

**(9) DEPARTMENT OF PHYSICAL MEDICINE AND REHABILITATION (OPTIONAL)**

*Staff Strength required*

1. Professor	1
2. Assoc.Prof.	0
3. Asst.Prof.	1
4. Senior Residents	2
5. House Surgeon/Junior Resident	1

*\*With three years Resident experience in a teaching institute in the department of PHYSICAL MEDICINE AND REHABILITATION with or without PG qualification.*

*The staff in the department shall consists of :*

<i>1. Physiotherapists</i>	<i>2</i>
<i>2. Occupational Therapists</i>	<i>2</i>
<i>3. Speech Therapists</i>	<i>1</i>
<i>4. Prosthetic and Orthotic Technicians</i>	<i>2</i>
<i>5. Workshop Workers</i>	<i>6</i>
<i>6. Clinical Psychologist</i>	<i>1</i>
<i>7. Medico-social Worker</i>	<i>1</i>
<i>8. Public Health Nurse/Rehabilitation Nurse</i>	<i>1</i>
<i>9. Vocational Counsellor</i>	<i>1</i>
<i>10. Multi-rehabilitation Workers/(MRW)/ Technician/Therapist</i>	<i>4</i>
<i>Non-medical Personnel</i>	
<i>Stenographer</i>	<i>1</i>
<i>Record Clerk</i>	<i>1</i>
<i>Store keeper</i>	<i>1</i>
<i>Class IV workers</i>	<i>4</i>

**(10) DEPARTMENT OF DENTISTRY**

	<i>Staff Strength required</i>
<i>1. Professor</i>	<i>1</i>
<i>2. Assoc.Prof.</i>	<i>1</i>
<i>3. Asst.Prof.</i>	<i>1</i>
<i>4. Jr. Resident</i>	<i>1</i>
<i>5. Dental Technicians</i>	<i>4</i>
<i>6. Store Keeper cum clerk</i>	<i>1</i>

*Note: Where Dental College or Dental wings of medical Colleges exist, the services of teachers of these may be utilized in the instruction of medical students in Dentistry and no separate staff in the Medical College shall be necessary.*

**# As per the terms of Notification published on 03.07.2015 in the Gazette of India.**

**§ In terms of Notification published on 10.03.2017 in the Gazette of India**

**D. STAFF REQUIREMENT FOR-ANCILLARY SERVICES**

**I CENTRAL RECORD SECTION**

The staff of the section shall consist of

1.	Medical Record Officer	1
2.	Statistician	1
3.	Coding Clerks	4
4.	Record Clerks	6
5.	Daftaries	2
6.	Peons	2
7.	Stenotypist	1

## II. CENTRAL ANIMAL HOUSE

The staff shall consist of :

1.	Veterinary Officer	1
2.	Animal Attendants	2
3.	Technicians for animal operation room	1
4.	Sweepers	2

## III CENTRAL LIBRARY

The staff in library shall consist of:

1.	Librarian with a degree in Library Science	1
2.	Deputy Librarian	1
3.	Documentalist	1
4.	Cataloguer	1
5.	Library Assistants	4
6.	Daftaries	2
7.	Peons	2

## IV. CENTRAL PHOTOGRAPHIC CUM AUDIOVISUAL UNIT

1.	Photographers	1
2.	Artist Modellers	1 each
3.	Dark Room Assistant	1
4.	Audiovisual Technician	1
5.	Store Keeper cum Clerk	1
6.	Attendant	1

## V. MEDICAL EDUCATION UNIT

1.	Officer In-charge	1 (Principal/Dean)
2.	Coordinator	1 (Head of a deptt. nominated by Principal/Dean.)
3.	Faculty	5-6 motivated teachers from the college Faculty on part time basis.

Supportive Staff:

1.	Stenographer	1
2.	Computer Operator	1
3.	Technicians in Audio-visual aids, Photography and Artist	2

## VI. CENTRAL STERLIZATION SERVICES DEPARTMENT

1.	Matron	1
2.	Staff Nurse	4
3.	Technical Assistant	8
4.	Technician	8



5.	Ward Boys	8
6.	Sweeper	4

#### **VII. LAUNDRY**

1.	Supervisor	2
2.	Dhobi/Washerman/Women	12
3.	Packer	12

#### **VIII. BLOOK BANK**

1.	Professor /Reader	1
2.	Lecturer	1
3.	Technicians	6
4.	Laboratory Attendants	6
5.	Store Keepers	6
6.	Record Clerks	2

#### **IX. CENTRAL CASUALTY SERVICES**

The staff in the department shall consist of :

1.	Casualty Medical Officer	4
2.	Operation Theatre staff to function on 24 Hours round the clock basis.	As required
3.	Stretcher bearers	6
4.	Receptionist-cum-clerks	2
5.	Ward boys	6
6.	Nursing and Para-medical staff	6
7.	Clinical staff for casualty Beds.	As required.

#### **X. CENTRAL WORKSHOP**

1.	Superintendent – who shall be a qualified engineer	1
2.	Senior Technicians	4 (Mechanical, Electrical, Electronic, Refrigeration)
3.	Junior Technicians	2
4.	Carpenter	1
5.	Blacksmith	1
6.	Attendants	4

#### **XI. OTHER HOSPITAL STAFF**

1. NURSING STAFF: The nursing staff shall be provided as per the following recommendations of the Nursing Council:

#### **RECOMMENDED NORMS FOR HOSPITAL NURSING SERVICE**

**(STAFF)**

**(TEACHING HOSPITAL)**

Staffing:

1. Nursing Superintendent 1  
(for minimum of 150 beds)
2. Deputy Nursing Superintendent 1
3. Asstt. Nursing Superintendent 2  
(for every additional 50 beds one more Assistant Nursing Superintendent)

Staff Nurse	Sister	Department Senior/Astt. Nursing Supdt.
Medical Ward.	1:3	1:25 Each Shift 1 for 3-4 wards
Surgical Ward	1:3	1:25 " -do-
Orthopaedic ward	1:3	1:25 " -do-
Paediatric ward	1:3	1:25 " -do-
Gynaecology ward	1:3	1:25 " -do-
Maternity ward	1:3	1:25 " -do-
(Including new borns)		
Intensive Care Unit	1:1 (24 Hrs.)	1 each shift 1 Departmental Sister/ Asst. Nursing Supdtd. for 3-4 units.
Coronary Care Unit		
Special wards Eye, ENT etc.	1:1 (24 hrs.)	1 each shift
Operation Theatre	3 for 24 hrs. per table	1 each shift 1 Departmental sister/ ANS for 4-5 Operation Theatre
Casualty & Emergency Unit	2-3 Staff Nurse depending on the No. of beds	1 each shift 1 Depttl. Sister/ANS for emergency casualty etc.

**Out patient Department-base on Actual observation.**

- a) Minor Operation Theatre 1 Staff Nurse for every 13 Patients
- b) Injection Room 1 Staff Nurse for every 86 patients
- c) Surgical 1 Staff Nurse for every 120 patients
- d) Medical 1 Staff Nurse for every 140 patients
- e) Gynae. 1 Staff Nurse for every 35 patients
- f) Children (Paediatric) 1 Staff Nurse for every 85 patients
- g) Orthopaedic 1 Staff Nurse for every 120 patients
- h) Dental 1 Staff Nurse for every 120 patients
- i) ENT 1 Staff Nurse for every 120 patients
- j) Eye 1 Staff Nurse for every 86 patients
- k) Skin 1 Staff Nurse for every 100 patients

Similarly other out patient Department need to be staffed based on actual observation.

**JUSTIFICATIONS:**

1. Needs may vary from hospital to hospital depending on the size of hospital and service rendered more staff than anticipated will be required. – Deleted

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

2. Special attention is needed for supervision of patient care on the evening and night shift. 30 % leave reserve is suggested because nurses get 2 off, 30 Earned Leave and 12Casual leave/24 days off in a year. Also it has been observed that on any working day 25% of the staff on casual leave etc.

A nurse works for 240 days in a year whereas hospital require nursing services for 365 days, for 24 hours, which means to depth work for 1/3 nurse is required that is why 30% leave reserve is needed. – Deleted

**\* As per the terms of Notification published on 22.01.2018 in the Gazette of India.**

3. Dieticians: In order to prescribe diet on the scientific lines for different types of patients the services of qualified dietician are essential in all the teaching hospital.
4. Pharmacists: As required for Hospital.
5. Class III and IV personnel-as required for hospital.

### SCHEDULE III

#### EQUIPMENT ( for various departments in the College and Hospitals).

**Note:** These recommendations are minimum requirements and will serve as a guide to the institutions with regard to the equipment required. They are not meant to be an exhaustive list and the staff of the various departments will use their initiative and experience for equipping the departments.

#### A. NON CLINICAL DEPARTMENTS

##### 1. DEPARTMENT OF ANATOMY

- (a) **Furniture and Fixtures:** Office tables small and big, office chairs, museum almirahs, study tables, staff room and library almirah, store almirahs, store racks, lockers with coat hangers and drawers as required. Laboratory benches with cup-boards and rack for reagent bottles and laboratory glasswares as required, water and gas and electric points operation tables etc., as necessary.

NAME OF THE ARTICLE	QUANTITY REQUIRED FOR 150 (admissions)
Table with marble for stainless steel tops 6' 1" x 2' x 3'	20
Tables with marble top or stainless steel, Half standard size.	5
Drill machine	3
Hand saw	4
Band saw for sectioning body and limbs	1
Stools, preferably metal	90
Brain knife	5
Mortuary cooler with arrangement to keep at least 8 bodies or suitable alternative arrangement.	1/2
Storage tank to hold 10 cadavers, made of concrete with copper lid.	1
Plastic tanks for storing soft and dissected parts.	10
Trolley Table (Steel, Light).	3
Projectors including overhead projectors	2 + 2
X-ray Viewing lobby.	4
Charts, Diagrams, Models, Slides etc.	As required
Dissecting instruments	As required
Meat cutting machine for thin body sections (trans and vertical) for gross anatomy sectional study	1

**NAME OF THE ARTICLE****QUANTITY REQUIRED FOR  
150 (admissions)****(b) APPARATUS AND INSTRUMENTS FOR HISTOLOGY**

Microscopes, Monocular	90
Dissection microscope	5
Microtomes, rotary	2
Microtomes, Sledge, large cutting	1
Cabinet for slides (1000)	6
Incubators	1
Paraffin embedding bath	1
Hot plates for flattening sections	2
Hot air cover fro drying slides (45 <sup>0</sup> C)	1
Balance Analytical capacity 200 grms. and Sensitivity 1/10 mg.	1
Balance Earanger capacity 6 kilos Sensitivity, 1/5 gram	2
Refrigerators	2
Distilled water still menesty type capacity gallon per hour	2
Diamond pencils	4
7 colour marking pencils	2
 <u>Anatomy Museum</u>	
Skeletons articulated	7
ones (Dis-articulated) sets	30
Specimen jars	As required
Racks steel	As required
Embalming machines for cadavers	2
Computer for keeping student records, marks, stores etc,	

**2. DEPARTMENT OF PHYSIOLOGY**

Office table, small and big, office chairs, museum almirahs, study table, staff room and library almirahs, stock almirahs, store room racks, laboratory benches with cupboards and racks for reagent set up for experimental physiology including Sherrington Starling Kymograph (Presferably electrically driven) Myograph stand, inductorium, simple key short circulating key, pohl's commutator, vibrating interrupter, Muscle through, Muscle liver, Muscle grip of femur clamp, Hook and weight set, heart liver, frog board for dissection, enamel tray for above, frog board cork-lined with boss-head-36 sets + 6 spares.

Low voltage units, for tapping 2 and 4 volts for stimulation, at each seat-as required.

Note:

1. Time makers can also be made available at each seat alongwith the low voltage unit.
2. Electronic stimulators, students type can be used instead of low voltage units Nife cells. This will also dispense with the need for induction coil interrupter, Transistor ones are preferred.

NAME OF THE ARTICLE	QUANTITY REQUIRED FOR 150 (admissions)
Electric time makers, 100/sec.	10
Tuning fork, time marker, 100/sec.	10
Electrodes, X-blocks, burette clamps, enamel bowls brass uprights, with coarse and fine adjustments basin, spirit lamps, cooper wire (double cotton covered) Kymograph paper etc.	As required
 (b) MAMMALIAN EXPERIMENTS	
Large extension kymographs-Brodie- Starling complete with respiration pump, motor time marker manometer etc.	As required
Operation table	1
Volume recorders	8
Dale's bath for internal organ	30
Isolated Organs. Bath for students complete with liver etc.	40
Animal Weighing Machine, for small and big animals (for each)	1
Mary's Tambour	40
Venus and arterial canula (different sizes) (each)	40
Smoking outfit, with fume cupboard	1
Varnishing outfit, for long and short papers	1
Anaesthesia boxes.	5
Surgical instruments for operative procedures, syringes, pulleys, etc.	As required
 (c) HUMAN AND OTHER EXPERIMENTS:	
Microscopes, Oil immersion	50+8
Demonstrations eye piece	4
Double Demonstration eye piece	4
Stage incubator	1
Wastergen's Pipettes for E.S.R. on Stand (with space pipettes)	40
Perimeter Priestly Smith S/LP.984 B & T	10
Haemoglobinometer, Sahil or hellige ( with spaces)	40
Haemocytometers	40
Sphygmomanometer	15
Stethoscopes	20
Stethoscopes, Demonstration with Multiple ear pieces	4
Polygraphs	4
Venus Pressure apparatus	2
Spirometer, Ordinary	10
Gas analysis apparatus, Haldane's students type	1
Van Slyko's apparatus manometric	2

Gas analyzer – automatic for CO <sup>2</sup> , O <sup>2</sup> , N <sup>2</sup>	1
Douglas bag, complete	6
Basal metabolism apparatus	1
Erogograph Mosse's	10
Clinical thermometer	30
Compass	10
Thermanaesthesiometer	5
Algometer	5
Apparatus for passive movement	5
Knee hammer	15
Stethograph	15
Bicycle ergometer	6
Olfactometer	1
Ophthalmoscope	2
Schematic eye	4
Phakoscope	2
Perimeters, with charts	5
Colour perception lantern Edridge Green	1
Maddox rod	1
Newtons colour wheel	1
Tuning forks to test hearing 32-10,000 cps (sets)	4
Dynamometer	2
Otorhinolaryngoscope	5
Steriliser Electric	2
Instrument trolley	1
Stop watches	10

(d) GENERAL

Physiograph, 3 channels, complete with accessories	2
Physiograph, single channel, with accessories	8
Centrifuge, high speed with technometer etc.	1
Calorimeter, photo-electric	1
pH meter, electric	1
Refrigerator, 9-10c ft.	1
Oxygen Cylinder with trolley	6
Co cylinder with trolley	2
Electronic stimulator	1
Water distillation still, with spare heating elements	1
All glass distillation apparatus double stage	1
Voltage stabilizer	3
Stepdown transformers	1
Thermometers, balances, microslides and glassware	As required

**3. DEPARTMENT OF BIOCHEMISTRY**

Fume cupboards	2
Boiling Water baths, with lids having 8-12 Holes	6
Autoclave electric	2

Balance open pan	6
Balance semi micro	2
Balance micro	1
Vortex mixers	2
Urinometers	50
Constant temperature water bath	4
Ryles tube	4
Incubator electric with thermostat	4
Hot air oven	4
Magnetic stirrer	2
Pump vacuum	2
Calorimeters	6
Refrigerators	4
Flame Photometer	2
Thermometers 0-250 <sup>0</sup> C	4
Thermometers 0-110 <sup>0</sup> C	4
Cork borer set	1
Stop watch	4
Spirit lamp	50
Chromatographic chamber	2
Water distillation plant (metallic)	3
All glass distillation apparatus	3
Desiccators large size	6
Desiccators small size	6
Centrifuge clinical for 12 tubes	6
PH meters	3
Homogeniser	3
Microscopes	6
Ultra Violet (U.V.) lamp	1
Tools for small workshop for glass blowing and mending	1 set
Bottle dispensers	15
Samplers (autopipettes) different volume range	15
Electrophoresis apparatus with power supply for Paper PAGE AGAROSE	6
Spectrophotometer	1
Binocular research microscopes	2
Glass ware as required by standard lab. Like pipettes, beakers and conical flasks, etc.	As required.

#### **4. DEPARTMENT OF PATHOLOGY**

##### General

Office table small and big, office chairs; museum almirahs; study table, staff room, and library almirahs, stock almirahs, store room racks, lockers with coat hangers and drawers as required. Laboratory benches with cupboards and rack for reagent bottles, water, gas and electric points, operation tables etc. as necessary.



**(b) Morbid Histology and Morbid Anatomy Sections**

Weighing machine for cadavers	1
Rotary Microtomes	2
Freezing Microtome with a stand for carbondioxide cylinder	1
Hot plates	2
Hot air (50 degree Celsus) for special staining	2
@ Paraffin embedding bath (Ordinary)	2
@ Electric vacuum embedding baths @ if Histo Kinetite is not available.	2
Autoclave electric	2
Distilled water still	1
Water bath 57 degree Celsius	1
Rectangular water bath	1
Centrifuge machine electric Rotofix	1
Colorimeter Photoelectric Klett.	1
Cabinet for 1000 slides	As required
Band saw	1
Autopsy tables	2
Automatic tissue processor, Histokinmettee or similar, complete.	1
Staining racks for staining in bulk	15
Troughs for staining in bulk	18
Coplin jars	24
Water bath electric (Tissue Flootation	2
Balance, Chemical with weights	2
Balance, chemical with weights	
Microscopes, Monocular, with double nose piece, High power objective	
2 eye-pieces, mechanical stage and condensor	90
Oil immersion lens for above	90
Polarising attachments for microscopes	1
Micrometers, ocular	1
Demonstration eye pieces	6
Magnifying lens	6
Blood pressure instrument	2
Micrometer stage	2
Hot plat electric	2
Laboratory Counter nine keys clay Adams	8
Laboratory stirrer	1
Automatic timer	2
Balance for weighing organs	1
Saws, wire for cutting bones	1
Slide boxes for 100 slides for students	200
Drill for boring glass	2
Blow piece with bellows for bending glass	2
Microphotographic apparatus	1
X-ray viewing box	2
Double Demonstration Eye piece	4

Microprojection apparatus	2
Sternal puncture needle Adulet size	2
Sternal puncture needle child size	2
Liver Biopsy needle	2
Box weight analytical	2
Stop watch reading at 1/5 second.	6
Ultraviolet lamp.	1
pH Meter electric.	1
Microscope, Binocular, research.	1
Paper Electrophoresis apparatus vertical	1
Paper electrophoresis apparatus, horizontal	1
Water still electric	1
2 x 2 slide Projector.	3
Overhead projector	1
Museum jars.	As required
Drawing instruments and colours for photo artist	1 set
Surgical instruments.	1 set
Dark room lamp, developing troughs	1 set
Chemicals etc. for photo artist	
Glassware, stains, chemicals reagents etc. for Histological work.	As required

#### Clinical Laboratory:

Microscope high power with oil immersion lens moveable stage and condensor for the routine microscope work.	15
Bottles Sp. Gravity 25 cc	2
Micro burretes 5 cc	2
PH meter, with ultra micro blood PH electrodes and Electrical	
Contrifuge One higher power contrifuge for serological works, one for haematological work and one other	3
Incubator	1
Haemacytometers with red and white pipettes	90
Haemoglobinometers, Sahili'type	90
Sedimentation apparatus-one wester green and one wintrobole	2 sets
Syringes disposable one set from 10 cc to 2cc	30 of each
Staining jars for slides.	12
Urinometers	9
Albuminometers, esbachs & Aufrech's type	2
Urine Glasset (Conical)	12
Water baths with lids and holes thereon for holding test tubes etc.	3
Centrifuge tubes graduated	36
Crusible with china ltd.	2
Crusible Gooch with adapter	2

Graduated cylinders for various capacities ranging from 100 cc to 1000 cc.	6 of each.
Pipettes of various sizes, graduated sets	As required
Reagent bottles.	As required
Dropping bottles 4 ounce	As required
Reagents	As required
Balances-(1) Sensitive balance	2
(2) Chemical balance with weight boxes	2

## 5. DEPARTMENT OF MICROBIOLOGY

Incubators, electrical (large) 37 degree Celsius	5
Autoclave	3
Hot air steriliser	3
Arnolds steriliser	3
Serum inspissators	2
Balance, Chemical	2
Lovibond comparators	1
Flasks flat bottom 50 cc.	10
Microscope oil-immersion moveable stage Abbe, condenser etc.	80
Microscope, dark ground work with arc lamp arrangement etc.	1
Refrigerators	3
Micrometer eye pieces	2
Micrometer stage	2
Centrifuge, electrical high power	3
Refrigerated centrifuge	1
Distilled water plant	2
Distilled water plant all glass	1
Oil immersion lens for students microscope.	80
Dropping bottles for stains (Plastic)	750
Staining troughs	100
Anaerobic apparatus	4
Electrophoresis complete set	1
B.O.D. incubator	2
Laminar flow table	1
Ultra Violet (U.V.) Lamps	1
Venereal Diseases Research Laboratory (V.D.R.L.) shaker	2
Computer unit	1
Overhead Projector	1
Water bath (Serological ) 37 degree Celsius	1
Water bath (Serological ) 56 degree Celsius	1
Deep freeze (-20 degree Celsius)	1
Elisa Reader, dispenser and washer	1
Binocular microscope	3

## **Culture facilities**

Thermometers (Assorted)	12
Glassware, such as pipettes burettes, beakers, conical flasks, petri dishes of different sizes, reagent bottles etc.	As required
Material for preparation of media	
Stains	As required
PH Determination apparatus	2
Reagent bottles with stopper 2000 cc	12
1000 cc	48
500 cc	24
250 cc	24
100 cc	60
50 cc	60
Test tubers hard glass 150 mm x 18 mm	12 Gross
100 mm x 12 mm	25 Gross
75 mm x 12 mm	25 Gross

## **6. DEPARTMENT OF PHARMACOLOGY**

Office tables small and big, office chairs, museum almirahs, study tables, staff room and library almirahs, stock almirahs, store room rack, lockers with coat hanger and drawers as required laboratory benches with coat hanger and drawers as required. Laboratory benches with cupboards and with racks for reagent bottles, water, gas and electric points, operation tables, as necessary.

### **EXPERIMENTAL PHARMACOLOGY**

Starling's long extension kymographs with time markers.	3
The ideal Respiration Pump (500 cc. CAP.)	3
Brodi's operation tables	3
Incubators	2
Refrigerators	2
Assembly perfusion apparatus for mammalian heart	4
Standard power tables	3
Assembly for mammalian classes	4
Automatic electric recording drums	4
Mechanical Stromhur	2
Gadum's out-flow recorder	2
Centrifuge.	2
Colorimeters	3
Canulas (different types)	48
Cautery machine, electric Blendsone	1
Varnishing Tray with foot lever	2
Four Unit isolated organ bath palmer F.67	1
Analgesiometer	1
Smoking Burners Palmer A-291 and A-265	1

Tracheal Canula Metal Palmer E.76	4
Condons Drop Recorder – Palmer B-75	1
Prof.Inchleys Drop Recorder-Palmer B.78	1
Animal weighing:	
a) Machine for small animals like rats and guinea pig	3
b) Machine for big animals like dogs	3
Dissection instruments and injection syringes (The experimental physiology laboratory can be used if available for the students)	As required
* Kymograph (students) Electric independent unit	150
* Electric Motor ¼ with split pulleys	2
* Shafting steel rod ¾” diameter and 18” long	8
* Standard Shafting and fittings	40
* Pulleys	30
Muffs coupling for joining 2 pieces of the above mentioned shafting steel rods	12
* <i>Not required in case of independent units.</i>	
X-blocks	As required
Hook grip rods	As required
Plain stand	150
Apparatus for isolated rabbit intestine etc.	150
Jacquets graphic chronometer	3
Frog Boards Palmer c. 120	150
Jackson’s Enterograph	3
Hair Aesthesiometer-Palmer W.290	3
Long Extension for paper palmer A-130	2
Animal Balance Tripple Beam	2
Manometers mercury Palmer C-200	6
Metronome Palmer B-5	2
Oncometer Kidney	2
Oncometer Heart	2
Copper Trays (10”x8”x1”)	150
Thermometer (upto 110 degree Celsius)	150
Distillation apparatus	6
Microscopes ordinary	4
Working tables with racks each table 36’ long	9
Chemical Balance-ordinary Apothecary’s	2
Chemical Balance-Sensitive	2
Dissection instrument	As required
Plethysmograph assorted	4
Pneumograph Palmer E	1
Piston Recorder Palmer C.51	1
Tambours mareys Palmer C.5 & C.11	4
Tetanus Set Palmer H2O	1
Stop Watches Jacquets	12
Oxygen Cylinders with Trolleys 20 cu.ft	6
Carbon-di-oxide cylinder	2

Operating lamps-Phillips	4
Animal trolley with 12 cages	4
<b>Miscellaneous:</b>	
Electrodes, Ordinary and non polarisable, insulated wires, time markers, electric signals, Mercury manometer, perfusion apparatus, myograph lever, small pulley's upright stands and chemicals etc.	As required

(c) Pharmacy Laboratory:

Dispensing Balance with metric system weights	50
Pill Tiles	50
Suppository moulds	50
Procelain dishes	15
Crucibles with tongs	15
Pestle and Mortar	50
Iron Spatula	50
Measure glass all sizes	50
Water bath, metal	15

Miscellaneous:

Chemicals, drugs, glass rods, funnels and filter	As required
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**(d) SPECIAL CHEMICALS AND PHARMACOLOGICAL EQUIPMENT**

Stimulator Electronic Arthus Thomas	1
Balance Semi micro Analytical Pan Mottler	1
Electrocardiograph	1
Spectrophotometer Model Du-Backman (UV Visible range)	1
Skin and Rectal Thermometer Barun	1
Antihistamine Chamber with manometer	1
Flame photometer	1
Stop clock	18
Water bath 4 hole electrically heated	12
Bell jars Assorted	4
Petri dishes assorted	36
Museum drugs specimen jars	30
All glass distillation apparatus cap.2 litres	2
Centrifuge Electric international R.P.M. 3000	4
Microscope students type with mechanical stage and oil immersion	4
Microscope lamps	4
Magnetic stirrer B.T.L.	1
Autoclave electric	1
Waring Blender M.S.E.	1

Hot air oven size 14"x14"x14"	1
Incubator Electric Size 14"x14"x14"	1
Vacuum & Pressure Pump Cenco	2
Instruments Sterilliser Electric size 12" x 8"x6"	
B.P. Apparatus	12
Distilled water still Manesty Electrical Cap.	
2 gallon per hour	2
Stethoscope	12
Multimeter	1
Temperature controlled water bath 37 °C	1
Razor Hone	2
Electric Hot Plate	2
Deionizer-two of capacity 20 litres per hour and 6 litres per hour (mixed bed type) connected in series	
Physiographs with Transducers and other relevant accessories (may substitute kymographs)	60
Vortex mixer	2
Actophotometer	1
Rotarod Assembly	1
Electro-Convulsimeter	1
Cook's Pole Climbing Apparatus	1
Metabolic Cages (Diuretic Study)	3-4
Digital pH meter	1
Tablet Disintegration Machine Glass tubing (length of 6 ft.)	1
Glass tubing (length of 6 ft.)	As required.
Glass rods-assorted sizes of 6 ft.	150
Glass mortar & pestles capacity of 500 and 200 cc } Cork borer set of 12	36 Each 1 set
Holder for platinum wireloop	160
Lancet spring (disposable)	160
Lamp for microscope	As required
Magnifying glass with metal handle	80
Metal mincing machine	1
Postmortem instruments sets complete	2 sets
Suction pumps	1
Filtering apparatus sietz filter and Millipore filter	1 each
Dessicators	2
Vacuum Dessicators	1
Apron plastic for postmortem	2
Apron rubber for postmortem	2
* Lyophilizer	1
*Thermal Cyclor	1
*U.V. Transilluminator with photography	1
* Colony counter	1
* Cold room + 4 degree Celsius	1
* BACTEC system	1

* Phase contrast Microscope	1
*Vortex mixer	1
* Electronic Balance	1
* Microfuge	1
* Ultra centrifuge	1
* Flourescent Microscope	1
* Desirable additional equipment in the department of Microbiology.	

## 7. DEPARTMENT OF FORENSIC MEDICINE

Weighing machine, dial type human	2
Equipment for reporting height	2
Balance chemical	1
Balance, single pair for weighing foetus	1
Weighing machine for Weighing dead bodies	
Weighing machine for organs	2
Folding metal scale to measure upto 7 ft.	1
Steel tape roll	2
Warnier calipers	1
Autopsy table	2
Styker autopsy saw, with accessories	3
Hacksaw	4
Dissection sets, consisting of cartilage knife bone cutting forceps scissors, straight and curved	
Enterotome Scaples, knives with spare blades, probe	
metal scale graduated in cms. Etc.	4
Rib. Shears, right and left	4
Viscerotome with attachment for illumination (Battery operated)	1
SLR camera with accessories	1
Microscope student type	30
Microscope Binocular, research	4
Stopwatch	2
X'ray view box one in four	5
View Box Two in one	4
B.P. Apparatus	5
Anthropometric set	1
Automatic tissue processing machine	1
Microtome with knife	1
Hot plates	1
L.Modes	16
Leather Strops	2
Parafin Bath Embedding	1
Slide Warming Table	1
Stone Carbarandon	2
Water bath (Tissue Flowing)	1
Distilation plant	1
Brain knife	8
Black Holder	50
Digital Spectrometer	1



Digital PH meter	1
Electric Auto slide projector	1
Glass cutting Pencil	1
Hand Set heat Sealer	1
Spectroscope Lens with adjustable slit	2
Refrigerator	1
Cold Storage for keeping dead bodies	As required
Deep freezer for keeping tissues	As required
Video Camera, Television and Video Cassette Recorder	1 each
Instrument Cabinet, instrument, trolley, filing cabinet with folders, filing cabinets for almirahs etc.	As required

## 8. DEPARTMENT OF COMMUNITY MEDICINE

Comparator, Nessler	1
Barometer, Fotin	1
Extraction Apoparatus, fat, complete	1
Filter, Pasteur chamberland, complete set	1
Filter, berke fed	1
Hydrometres, Spirit	3
Hydrometres, milk	3
Hydrometers, wet and dry BULB	1
Incubator, electric	1
Museum jars	As required
Models, charts, diagrams etc.	As required
Balance Analytical 200 gm	3
Balance for weighing food stuff Capacity 2 Kg.	1
Centrifuge clinical	1
Weighing machine adult	4
Salters Baby weighing machine	4
Harpenders Callipers (for skinfold thickness)	2
Height measuring stand	1
Aqua guard	1
Refrigerator 9 cu.ft.	1
Ice Lined Refrigerator (I.L.R.)	1
Dissecting microscope	40
Microscope oil immersion	3
T.F., V.C.R.	1 each
Still for distilled water	1
Autoclave	1
Sterilizers, electric	2
Computer	1
Over Head Projector	2

The Rural and health centers for training of undergraduate students shall be suitably equipped alongwith adequate transport.

## B. CLINICAL DEPARTMENTS

The list of equipment for clinical departments both indoor and outdoor, may be prepared by the Heads of departments, who would keep in view the needs for:-

- (1) Special examination with diagnostic aids and investigations such as laboratory, X-ray, etc.
- (2) Routine treatment, medical and surgical etc.
- (3) Special therapy such as physical, occupational, dietetic etc.

The following equipments for various clinical departments are however the minimum required.

### 9. DEPARTMENT OF MEDICINE

B.P. Apparatus	40
Ophthalmoscope	10
Lumbar puncture needles (disposable)	As required
Haemocytometer	5
Light Microscope	3
Haemoglobinometer	5
Centrifuge Machine	3
Urinometer	3
Plural biopsy needs (disposable)	As required
Liver biopsy needs (disposable)	As required
Kidney Biopsy needs (disposable)	As required
X-ray viewing box	25
Overhead projector	2
Slide Projector	2
Upper GI endoscope	3
Colonoscope	3
Sigmoidoscope	3
Proctoscope	10
Facilities for doing tests for malabsorption	As required
Ultra sound machine	1
Fiberoptic bronchoscope	2
Spirometer	2
Bed side Cardiac monitors	16
Central Cardiac monitor Console	1
Defibrillator	16
Non-invasive B.P.Apparatus	16
Pulse oxymeter	16
Equipment for ardiac pacing	1
Ambu bag	16
Laryngoscope	16
ECG Machine	16
Echocardiography machine	2
Tread Mill test machine	1
Haemodialysis machine	5

Peritoneal dialysis catheters	As required
Arterial blood gas analyzer	2
Na/K analyzer	2
Equipment for measuring diffusion capacity	1
Microprocessor based spectrometer	2
Gamma cameras	1
Glucometer	10
Radiotope scan laboratory	1
Electro Encephalogram (EEG) machine	1
EMC and nerve conduction velocity machine	1
Fine needle aspiration needle	As required
Aspiration needle	As required
Torches	40
Patient examination table	35
Rubber Hammer	35
Reagents for doing Gram's and Ziehl Neilson staining	As required
Computer ( one for each medical unit)	6
Radiopagers	40
Endotracheal tubes	As required
Emergency lights	10

## 10. DEPARTMENT OF PAEDIATRICS

### (A) Resuscitation equipments:

Ambu bag	
-infant	4
-children	4
Face mask	4
Nasal prongs	As required
Nasal catheters	As required
Endotracheal tubes	As required
Suction apparatus	1
Suction catheters	As required
Laryngoscope	
- Infant	1
- Children	1

### (B) Oxygen Delivery System-

Oxygen Cylinder	1
Oxygen regulator	1
Oxygen Humidifiers	1
Oxygen headbox (of each size)	1
Nebulisers	8

### (C) Drug Deliver Equipment/ Catheter/tube-

Intra-venous (I.V.) Drip set	As required
Measured volume	4
Blood transfusion set	4
Intra-venous (I.V.) Canula (Butterfly type)	As required
Intracath	8

Umbilical vein	8
Catheter	
Feeding tubes	As required
Three way and four way valve	4
Malecot's catheter	8
Cut open canula	As required

(D) Measurement Equipments

Weighing machine	
- Infant	1
-Child	1
- Neonates	1
Infantometer	1
Measuring tape	As required
Shakir's tape	As required

(E) Work lab and investigations

Student Microscope	2
Nuclear Chamber	4
Hemoglobinometer	4
Test tube	As required
Spirit lamp	4
Stains for – Leishman's staining	As required
- AFB staining	-do-
-Grams staining	-do-
Dextrostix	As required
Multisix	-do-
Uristix	-do-
Micro Erythrocyte Sedimentation Rate (ESR) tubes	As required
Filter paper	As required
Bone marrow needle	4
Lumber Puncture (L.P.) Needles	4
Pleural aspiration needle	4
Vim-Silveram	4
Biopsy needle	
Mengneiz Needle	4
True cut Renal	4
Biopsy needle	
X-ray view box	1

F) Miscellaneous

Radiant Warmer	1
Infant incubator	1
Phototherapy unit	1
Ophthalmoscope	1
Thermometer-Oral	As required
-Rectal	As required

## 11. DEPARTMENT OF TUBERCULOSIS AND CHEST DISEASES

Peak flow meters	3
Nebulizers	6
Intercostals Drainage Facility	4
Pleural Biopsy Needles	2
Pulse Oximeter	2/1
Fiberoptic Bronchoscope	2/1
Rigid Bronchoscope	1
Pulmonary function Test machine with facility for spirometry, lung volume and diffusion capacity	1
Arterial Blood Gas machine	1

## 12. DEPARTMENT OF DERMATOLOGY-VENERELOGY AND LEPROSY

Facilities for examining smears for bacteria, fungi, mycobacteria and acantholytic cells

(a) light microscope with facility for dark ground illumination microscopy

(b) Gram's stain

(c) Zeihl-Neelsen's stain

(d) Giemsa stain

Facilities for electrosurgery and chemosurgery

(a) Electro-cautery machine

(b) Trichloroacetic acid

## 13. DEPARTMENT OF PSYCHIATRY

Electro Convulsive Therapy (E.C.T.) machine preferably with ECG monitoring	3
E.E.G. monitoring	1
EEG machine	1
Lithium analyzer	1
Biofeed-back instruments (sets)	1
Thin layer chromatography (for drug dependence treatment)	1
Alcohol breath analyzer	1
Psychological Tests equipment	
a) Project tests	4
b) Intelligence Tests	4
c) Personality Tests	4
d) Neuro psychological tests	4

## 14. DEPARTMENT OF SURGERY

### (i) O.P.D

Blood Pressure Apparatus, Stethoscope, diagnostic kit, weighing machine, skinfold caliper, eight scale.	8
X-ray viewing box 4 in 1	8
Proctoscope & Gabriel Syringe	8
Sigmoidoscope (Rigid)	2

Flexible Endoscope, Upper GI, Colonscope (one set in Main O.T.)	2
Diagnostic Crystoscope	1
Ultrasound	1
Uroflowmetry	1

**(ii) MINOR O.T.**

Operation Theatre Table	2
Operation Theatre Ceiling light	2
Pedestal lights	4
Electro-surgical unit	1
Suction	4
Pulse oximeter (one for Endoscopy Room)	4
Anaesthesia Equipment	1 set
Resuscitation kit	1
Assorted surgical instrument for minor operation sets	12
Autoclave	1

**WARDS**

B.P. Apparatus, Stethoscope, diagnostic kit (4 sets in each ward)	16 sets
Weighing machine, height scale, skinfold Caliper (2 each in each ward)	8
Proctoscope (2 in each ward)	8
Monitors for pulse rate, Heart Rate, E.C.G., Invasive and non-invasive pressure (2 in each ward)	8
Incubators/Transport incubators	4
Neonatal Bassinet	4
Ultrasound	1
Arterial blood analyzer	1
Oesophageal/Gastric pH & pressure recorder	1

**(iii) OPERATION THEATRE**

Operating tables	8
Operating Ceiling light	8
Paedestal side light (for emergency use)	4
Electrosurgical Unit	10
General Sets (8 for each Operation Theatre)	64
Burr hole set	2
Vascular set (1 in each O.T.)`	8
Anaesthesia Equipment as per requirement of Anaesthesia department Diagnostic and operative	
Laparoscope	2
Crystoscope and Resectoscope	2
Bronchoscope	1
Flexible G.I. Endoscope	1
Laser (May be shared with other departments)	1
C-arm image intensifier	1

Operating microscope-binocular with Video monitor	1
Operative ultrasound	1
Stapling device Assorted	2 sets
Endo-stapler	1 set
Closed Circuit T.V.	2

(iv) MISCELLANEOUS

Photocopier	1
Computer with laser Printer	1
Electronic Typewriters	2
Slide-Projector	4
Overhead projector	8
Video Cassett Recorder/video Cassette Player	2

**15. DEPARTMENT OF PAEDIATRIC SURGERY**

Resuscitation equipment	
-Ambubags	6
-ET Tubes (all sizes 2.5-8)	10 sets
-Guedell's airway (all sizes)	8 sets
	6
-Laryngoscope	6
Suction Catheters (sets) assorted sizes	30
Suction machines	6
Oxygen cylinders Oxygen	12
B.P.Apparatus	12
Slow suction machine	4
Nebulizer	4
Heater	4
I.C.U. equipment incubator sets	4
Operation Theatre equipment	2
Cystoscope-Paediatrics	2
Rigid Bronchoscope (sets)	2
Oesophageal dilators (sets)	2
Paediatrics Sigmoidoscope	2

**16. DEPARTMENT OF ORTHOPAEDICS**

Basic instrumentation set for fracture.	8 sets
Small Fragment and large fragment	4
External Fixator	8
C-Arm (Image Intensifier)	2
Portable X-ray Machine	1
Arthroscope	1
Slide Projector	2
Over-head projector	2
Movie Camera for demonstration of live operations	1
Plaster room equipment (sets) with plastic table.	2
Physiotherapy and occupational Therapy equipment sets	1
Operation room equipment (sets)	2

## 17. DEPARTMENT OF OPHTHALMOLOGY

### (i) O.P.D.

Snellen Chart/Snellen drum with or without remote control	6
Trial set with trial frame both for adult and children	6
Bjerrum Screen	2
Perimeter	2
Colour vision chart	3
Near vision chart with different language	6
3 Cell torch	12
Ophthalmoscope and Retinoscope	6

### Common equipments in the OPD

Slit lamp	3
Applanation tonometer	2
Keratometer	2
Indirect Ophthalmoscope	2
Synoptophore	2
Maddox Rod	2
Maddox Wing	2
Diplopia goggles	1
Gonioscope	2
Placido disc	2
Prism Bar	2
Schoutz tonometer	4

### (ii) MAJOR OPERATION THEATRE

Operating microscope with TV Unit with camera	2
Crye Unit	2
Cataract set	7
Glaucoma set	3
DCTR set	3
Entropian set	3
Enucleation set	3
Evisceration set	3
Squint set	3

### (iii) GENERAL OPHTHALMIC EQUIPMENTS

Operation Theatre Table	2
Operation Theatre Light	2

(iv) Minor Operation Theatre: Minor O.T. should have the equipment for the removal of the foreign body, sutures, and chalazion or styte.

### (v) Ward

Slit lamp	1
*snellen chart/snellen drum with or without remote control	1
Trial set with trial frame both for adult and children	1



Bjerrum screen	1
Perimeter	1
Colour vision chart	1
Near vision chart with different language	6
3 Cell torch	6
Ophthalmoscope and Retinoscope	2

## 18. DEPARTMENT OF ENT

### (i) OPD (per doctor)

Nasal Speculum	4
Tongue depressor	4
Laryngeal mirrors	4
Nasopharyngeal mirrors	4
Aural speculum	4
Ear Suction	2
Nasal Suction	2
Suction apparatus	1
Siegles speculum	1
Tuning fork (512 Hz)	1
Otoscope	2
Bayonet forces	1
Bulls lamp	1
Head lamp	1
ENT examination chair	2
Jobson Horne probe	1
Sterilizer	1
BP apparatus	1
Stethoscope	1

### (ii) MAJOR Operation Theatre.

(a) Tonsillectomy and adenoidectomy set Biopod	1
Boyle-Davis mouth gag	1
Tonsil holding forceps	1
Tonsil dissector and pillar retractor	1
Tonsil snare	1
Burkit artery forceps	1
Negus artery forceps	1
Tonsil scissors	1
Adenotome	1
Adenoid curette	1
Yankauer oropharyngeal suction tip	1
(b) Set for nasal bone fracture Asch forceps	1
Walsham forceps	1
(c) Septoplasty set	
Bayonet forceps	1
Killians nasal speculum	1

Freer elevator	1
Ballenger's swivel knife	1
Takahashi forceps	1
Fish tail gouge and mallet	1
(d) Caldwell luc set	
Nasal gouge	1
Mallet	1
Ribbon Retractor	2
Cheek Retractor	2
(e) Antrostomy set	
Antral	1
Retrograde gouge	1
Antral rasp	1
(f) *FESS set	
*Rigid nasal endoscope	1
*Light source	1
*Sickle knife	1
*Retrograde punch	1
*Blakesley forceps – straight	1
- upturn	1
* Optional for MBBS.	
g) Direct laryngoscopy set	
Anterior commissure	1
Laryngoscope`	1
Negus laryngoscope	1
Lighting system for laryngoscopes	1
Biopsy forceps	1
Foreign body removal forceps	1
Laryngeal suction	1
(h) *Microlaryngoscopy set	
*Kleinsasser's laryngoscope	1
*Fiberoptic lighting system	1
*Suspension system for Laryngoscope	1
*Microlaryngeal cup forceps	1
* Microlaryngeal Scissors	1
i) *Tympanoplasty set	
*Aural speculum	4
*Drum curette	2
*Drum elevator	1
*Microsuction	2
*Graft knife	1
*Graft press	1
(j) *Mastoidectomy set	

* Mallet	1
*Gouge	4
*Endaural retractor/post aural retractor	2
*Electric drill (motor, handpiece and burrs)	1
*Mastoid seeker	1
*Aditus seeker	1
* Malleus head nipper	1
(k) *Stapedctomy set	
*Pick-straight	1
Angled	1
*Perforator	1
*Measuring rod	1
*Prosthesis crimper	1
(l) *Oesophagoscopy set	
Oesophagoscopes	3
Lighting	1
Biopsy forceps	1
Foreign body removal forceps	1
Suction	1
Oesophageal dilators	1 set
(m) * Bronchoscopy set	
*Bronchoscopes	3
*Lighting system	1
* Biopsy forceps	1
* Foreign body removal forceps	1
*Suction	1
* Optional for MBBS	
(n) Tracheostomy set	
Needle holder	1
Bard Parker knife handle	1
Ribbon right angled retractors	2
Curved arteries	4
Straight arteries	1
Cricoid hook	1
Tracheal dilator	1
(iii) MINOR Operation Theatre	
(a) Antral wash set	
Trocar	2
Canula	2
Higginsons syringe	2
(b) Direct laryngoscope set	
Laryngoscope – Anterior	1
Commissure	
Negus	1

Lighting system	1
Biopsy forceps	1
Foreign body removal forceps	1
Sterilizer	As required
Aural Syringe	As required
Tracheostomy set	As required
Intubation set	As required
Cricothyrotomy set	As required
Quinsy forceps	As required
Aural Snare	As required
Aural cup forceps	As required

(iv) \*WARDS

* Semi intensive care unit (4 beds)	As required
* Central suction	As required
* Oxygen	As required
* Humidifier	As required
* Optional for MBBS	As required

(v) MISCELLANEOUS EQUIPMENTS

Operating microscope for major Operation Theatre	1
For minor Operation Theatre	1
Puretone audiometer	As required
Impedance audiometer	As required

SPECIAL EQUIPMENT

(a)* Temporal bone lab Microscope	
(b) * Drill	1
Mastoid set	1
*Optional for MBBS	

(vi) ANY OTHER ADDITIONAL EQUIPMENT WHICH ARE DESIRABLE

Flexible nasopharyngolaryngoscope	1
Electronystagmograph	1
Brainstem evoked response audiometer	1
Goggles, plastic apron, gloves for examination of patients with biohazard (HIV and Au positive)	1 set

**19. DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY**

(i) General

Speculums and retractors	75
EA + ECC sets	30
PCT forceps	15
Ayers spatula	45
Cytology bottle	45
Microscope	3
MR Syringes	15
Colposcope	3

Cryo/electro cautery apparatus	3
Simple fetal Doppler	3
NST machine	6
Stitch removal sets	15
Dressing sets	15
Ultrasound machine	3
Proctoscope	9
Weighing machine	3
Height scale	3
View box	3
(Blood Pressure apparatus, measuring tapes, gloves, syringes, needles, torch)	
Resuscitation tray	2
(Laryngoscope, ET tube, ambu bag, suction catheter, essential drugs).	
Suction machine	2
Hysterosalpingogram Canula	15

(ii) MAIN Operation Theatre

Abdominal Hysterectomy set	9
(Alters, scissors, Scalpel, Allis's Kelly's clamp, badcock forceps, thumb forceps, Harington & Richardson retractors.)	
Vaginal Hysterectomy set	9
(Scalpel, scissors, metal catheter, Sim's, Speculum volsellum, Kelly's clamps, right angle retractor, arteries, Allis, uterine sound, bladder sound).	
Tuboplasty set	6
Myomectomy instruments	
(Myoma screw, Boney's clamp)	3
Diagnostic laparoscopy set	6
Operating laparoscopy set	6
Hysteroscopy set	3
Electronic Carbondioxide insufflator/ Insufflator basic unit	6
Resctoscope	3
Hyseromat	3
Operatin microscope/Loupe	2
Electrocautery	3

iii) SPECIAL EQUIPMENT

Contact microhystroscope	2
Co2 & Nd Yag laser	1

(iv) LABOUR ROOM

Delivery sets	30
B.P. Apparatus	9
Weighing machine	2
Fetal Doppler	3

Cardiotocogram machine	5
Portable ultrasound	2
High suction machine	3
Resuscitation tray	3
v)SPECIAL EQUIPMENT	
Oxytocin infusion pumps	9
Multichannel monitors	6
Intrauterine Pressure monitoring system	6
*Fetal scalp electrodes Facilities for fetal scalp pH	4
(vi)TEACHING SET	
Doll and Dummy	3
Female Pelvis	3
Gross specimens	
X-ray/US films	3
View box	
VCR	2
Overhead Projector	1
Slide Projector	2
Set of instruments/forceps etc.	
(vii) <u>Miscellaneous.</u>	
Camera with 200 m lens Endocamera/Television, TTL flash light, Carbondioxide Monitor, Calculator Channelizer, *Disposables, to be issued on monthly basis.	
(viii)MINOR Operation Theatre.	
Cervical biopsy set	10
MTP set	15
D&C set	15
Hydrotubation set	6
IUCD insertion/removal set	20
High suction machine	4
Resuscitation tray	1
E.B. set	10
(O.T. lights, OT tables)	
xi)MATERNITY O.T.	
Set for LSCS	12
D&C set	15
MTP set	15
High suction machine	4
Cervical exploration set	6
Uterine packing forceps	6
Abdominal hysterectomy set	3
Diagnostic laparoscopy set	4
Laprocator for tubal ligation	6
Postputum ligation	6

Outlet forceps	9
Low mid cavity forceps/kjielland forceps	6
Vacuum Extractor and suction machine	6
Resuscitation tray	3
Decapitation hook	3
Cranioclast with cephalotribe	3
Oldham Perforator	2
Infusion Pump	6
EB set	6
Operation Theatre table, Operation Theatre lights, Central Oxygen and suction	

(x) SPECIAL EQUIPMENT:

Multichannel monitor with ECG, BP, HR, Pulse oxymetry for high risk pregnant patients (eclampsia, heart diseases etc.)	3
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(xi) WARDS

Blood Pressure Apparatus	10
Weighing machine	1
Height scale	1
Speculum and retractors	100
Glucometer	2
Microscope	2
Suture removal sets	15
Dressing sets	20
Ultrasound	2
Cutdown sets	3
Blood gas analyzer	1
CTG machine	2
Suction machine	4
Resuscitation tray	4
View box	3

(xii) SPECIAL EQUIPMENT

Ultrasound machine with Doppler/Vaginal probe/ facilities for Interventional procedure	2
Multichannel Monitor	2
Fetal Monitor for Antepartum Surveillance	3
Computer for data entry	1
(Gloves, Syringes, needles, torch, measuring tape etc.)	

(xiii) Laboratory equipment for following investigations:

H-gram	
Urine examination	
Semen analyses	
Renal Function Test (RFT), Liver Function Test (LFT), including Serum Blutamase Test (SBT),	
Electrolytes, Blood sugar	
Culture facilities	

24 hr. urine alb. Creatinine  
 VDRL, TORCH  
 HIV  
 Serum, BHCG, estriol, MSAFP  
 Semen wash  
 FSH, LH PROCLACTIN, T3, T4,  
 TSH, Testosterone, DHEAS  
 Chlamydia and other reproductive tract infection testing.

GENETIC LAB.-Cytology, Chromosome study, PCR for various  
 Abnormalities. Facilities for biochemical tests  
 And enzyme studies for prenatal diagnosis.  
 Blood gas analyzer  
 Thalassemia study.  
 ABO and Rh typing.  
 PCR for tuberculosis.  
 Viral markers for Hepatitic studies.  
 Coagulation profile, fibrinogen degradation products,  
 Blood bank facilities.  
 Cryopreservation.  
 Assisted reproductive techniques.

## 20. DEPARTMENT OF ANAESTHESIOLOGY

### OPD-Anaesthesia Clinic

Blood Pressure Instrument (Non-invasive)	1
Weighing machine	1
Height scale	1
Ward (Recovery)	
Resuscitation equipments (CPR)	
a) Adult Dummy	1
b) Paediatric dummy	1
c) Artificial breathing	
Bag with face Masks.	1
d) Defibrillator	1
Suction machine	
-Electrical	5
-Manual	5
Oxygen therapy unit	8
Pulse oximeter	2
E.C.G. Monitor	2
E.T.Co2 Monitor	1
Simple anaesthesia machine with resuscitation equipments and accessories	1
Mechanical Ventilator	2

## 21. DEPARTMENT OF RADIO-DIAGNOSIS

Conventional X-ray Unit for routine X-ray and IVV.	4
Mobile X-ray units-	



a) 30 MA	3
b) 60 MA	3
Fluoroscopic unit	2
Both conventional and image intensifying unit for gastro-enterology & gynae work etc.	2
Ultrasonography equipment	2+1 additional Unit independently for Obstetrics and Gynaecology.
CT	1
Mammography (preferably) MRI (preferably)	

## OPTIONAL DEPARTMENTS

### 22. DEPARTMENT OF RADIO-THERAPY

Examination Table	4
ENT examination set up	2
Gynae./pelvic examination tables	2
Treatment planning and mould room including	
i) Computerised treatment planning system	2
ii) Simulator	1
iii) Immobilization cast making system	2
<b>Brachytherapy setup</b>	
i) Manual afterloading intercavitary system (sets)	2
ii) Manual afterloading Interstitial/surface mould system (sets)	1
<b>Teletherapy set-up</b>	
Isocentrically mounted	2
Rotational telecobalt Unit minimum 80 cm SSD	
<b>Radiation Protection and Dosimetry set-up</b>	
i) Secondary standard dosimeter with ionization chamber	2
ii) Survey meter	2
iii) Area/Zone monitors (by BARC)	4
As per the number of staff members in the department	
<b>Radiotherapy department</b>	
i) Dual Photon energy linear accelerator with electrons and multileaf collimeter	1
ii) Remote controlled intracavitary system.	1
iii) Remote controlled interstitial system	1
iv) CT-Sim 3D treatment Planning system	1
v) Isodose plotte (Automatic)	1
vi) Customised shielding Block making system	1
vii) Customised compensator making system	1
viii) Computerised Dosimetry system	1

- ix) Thermoluminescent dosimetry system 1
- x) Intra operative Radiotherapy and stereotactic radiotherapy set up along with linear accelerator (multi leaf) 1

N.B. Normally one teletherapy unit should be provided for every 1000 new cancer cases. All radiation therapy equipments (tele/Brachy) should be BARC type approved with BARC Sanctioned layout/installation plan.

### **23. DEPARTMENT OF PHYSICAL MEDICINE AND REHABILITATION**

1. Rehabilitation Diagnosis and treatment equipments including exercise set-ups.
2. Remedial and recreational set up.
3. Electrotherapy equipments.
4. Prosthetic-Orthotic Workshop equipments.

### **C. OTHER DEPARTMENTS**

#### **1) MEDICAL EDUCATION UNIT**

Overhead Projectors	2
Slide Projector	2
Computer with printer:	1
Electronic Typewriter:	1
Video Camera:	1
Video Cassette Recorder:	1
Television	1
Blackboard`	2
Zerox Copier	1
Books and Journals	As required

#### **(2) DEPARTMENT OF AUDIO VISUAL AIDS**

##### **ARTIST SECTION**

Drawing Board size 42"x27"	1
Drawing Board size 22" x 30"	1
Instrument Box steadler	1
Plastic Transparent Set square 10"	1 pair
Plastic Scale transparent 18:	1
Parallel ruler 18"	1
Proportional Compass.	1
Bowpen "Stanley" one for fine and one for thick line.	2
"T" scale 24" wooden	1
"T" scale 48" wooden	1
Frenat curves Plastic 1 set of 12	1 set
Protractor Plastic Semiround 6" dia.	1
Kent paper size 22"x30"	12
Scolor drawing paper 22"x30"	12
Drawing paper Norway 72 lbs.	12
Water colour tubes "Winsor and Newton"	24

Postercolours in different shades.	13
Reeves Indian Black ink.	12
Water colour box “peliken” Sable Hari brushes 16	1
Series No. 00 to 6 and 10	8
Speed ball nibs style A.B.C. &D.	1 set
Crequil Nibs	12
Drawing Nibs 303 and 304	12
Clip holders.	6
Computer facilities	As required

### (3) MODELLING SECTIONS AND PHOTOGRAPHY

Modeling Instrument box.	1
Saw for wood work.	1
Ben saw iron.	1
Jamboor	1
Plier	1
Plier Goldsmith.	1
Scissors ordinary	1
Scissors Goldsmith	1
Hammer	1
Mortar Iron.	1
Buck et Iron.	1
Chisel.	1
Tagari Iron	1
E.I. Bowls.	4
Drill machine	1
Modelling clay	As required
Chalk clay.	As required
Multani clay.	As required
Yellow clay.	As required
Soft stone powder.	As required
Plaster of paris	As required
Old raddy	As required
Gum.	As required
Stand paper	As required
Plasticine.	As required
Wires G.I. copper and wire netting.	As required
Synthetic Enamel colours 1/16 gallon	As required
Oil colour brushes.	As required
Soap and coconut oil	As required
Epidiascope B & L or alatis.	4
Radiant Screen size. 72” x 72”	2
16 mm. Film projector bell and Howell	1
Camera Rollieflex automatic.	1
Camera 35 mm. Contax 4/D with copying attachment.	1
Microscopic attachment of Contax.	1
Micro Projectr Zeiss or B&L.	1
Enlarger Omega D 2.	1
Dark room and developing equipment	1 set

35 mm. Slide projector  
Viewlex. 2

#### 4) WORKSHOP AND ELECTRIC SECTION

Lathe machine 6" center height 10" automatic gear change box (heavy duty with gapped.	1
Lathe machine small 3" center height 8" automatic gear change box. German make.	1
Milling machine type with dividing head attachment	1
Stand Drill Machine electric	1
Shaping machine Bench model	1
Spraying painting composer max. pressure 140 lbs. & continuous pressure must be 30 lbs. Complete with spray gun and pressure rubber tube	1
Electric welding machine max. amperage 200 amp. with accessories electrode, holder, shade and earthing slip and extension wire.	1
Aceytlene welding with oxpacelylene bottle and complete set of torch	1
AVO's multimeter English make	1
Electric Soldering Henleys 250 watts, 60 watts, with two nose-one fine and one abroad	
Electric blower	1
Frequency generator	1
Ampere meter	1
Battery charger	1
Electroplating unit outfit	1
Carpenters section instrument and appliances including electric saw and sander	1 set
Glass blowing appliances	1

Note:-

1. All kinds of endoscopes shall be fiberoptic preferably with a videoscope.
2. For effective teaching and training facilities close circuit TVs (CCTVs) shall be provided in the departments of Microbiology, Pathology, and Surgery and other allied specialities including Gynaecology.
3. In order to make teaching hospital more effective, it is necessary that a periodical upgrading of the instruments in various departments and sections should be undertaken for which required financial support shall be rendered.

*The above Schedule III – “EQUIPMENT (for various departments in the College and Hospitals).” for all the departments shall be substituted in terms of Gazette Notification dated 28.08.2017 as under: -*

### SCHEDULE III

#### EQUIPMENT (Lists for various Departments in the College and Hospitals).

Note: These recommendations are minimum requirements and will serve as a guide to the institutions with regard to the equipment required. They are not meant to be an exhaustive list and the staff of the various departments will use their initiative and experience for equipping the departments.

#### **A. NON CLINICAL DEPARTMENTS**

##### **1. ANATOMY (New List)**

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

26	Incubators	1
27	Paraffin embedding bath	1
28	Hot plates for flattening sections	1
29	Hot air oven for drying slides (45 °C)	1
30	Refrigerators (Minimum 165 litres)	2
31	Marking pencils	As required
(C)	<b>Museum</b>	
32	Articulated Skeleton set	7
33	Bones (Dis-articulated) sets	30
34	Specimen Wet	150
35	Steel racks	As required
36	Laptop	1
37	Desktop Computer, with Printer	3
38	Photocopier and Scanner	1

## 2. PHYSIOLOGY (New List)

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

28	Wintrobe's pipette for ESR and PCV with stand	30
29	Perimeter Pristely Smith S/LP.984 B & T	15
30	Hemoglobin-meter Sahli's or Hellige (with spaces)	60
31	Hemocytometer	60
32	Sphygmomanometer (digital) (Mercury based instruments to be replaced with suitable alternatives)	60
33	Stethoscopes	60
34	Stethoscopes, demonstration with multiple ear pieces	4
35	Polygraphs	1
36	Venous pressure apparatus	2
37	Spirometer, ordinary	20
38	Gas analysis apparatus, Halden's student type	1
39	Van Slyke's apparatus manometric	1
40	Gas analyser automatic for CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub>	1
41	Douglas bag, complete	2
42	Basal metabolism apparatus	1
43	Mosso's Ergograph	10
44	Clinical thermometer (Mercury based instruments to be replaced with suitable alternative)	60
45	Compass aesthesiometer	20
46	Thermo-aesthesiometer	20
47	Algometer	20
48	Apparatus for passive movement	1
49	Knee hammer	40
50	Stethograph	20
51	Bicycle Ergometer	1
52	Olfactometer	1
53	Ophthalmoscope	1
54	Schematic eye	2
55	Phakoscope	1
56	Perimeter with charts (Lister's)	5
57	Color perception lantern Edridge green	2
58	Maddox rod	1
59	Newtons color wheel	1
60	Tuning fork to test hearing 32-10000 cps(sets-100, 256, 512 hz)	20
61	Dynamometer	2
62	Otorhinolaryngoscope	1
63	Sterilizer electrical	1
64	Instrument trolley	1
65	Stop watch	20
66	Multi channel Physiograph, 3 channels, complete with accessories	3
67	Student physiograph, (single channel) with accessories	8
68	Centrifuge, high speed with technometer	1
69	Colorimeter, photoelectric	1
70	pH meter electric	1
71	Refrigerator	1

72	Oxygen cylinder with trolley	1
73	CO2 cylinder with trolley	1
74	Electronic stimulator	1
75	Water distillation steel with spare heating elements	1
76	All glass distillation apparatus double stage	1
77	Voltage stabilizer	1
78	Thermometers, balances, microslides and glassware	As required
79	Digital Physiograph	2
80	Models and Charts	25 each
81	ECG Machine	3
82	Laptop	1
83	Desktop Computer, with Printer	3
84	Photocopier and Scanner	1
85	Multimedia Projector with screen	2
	<b>Note:</b> The animal experiments included in the curriculum should be demonstrated through CAL, charts/photographs/models and videos.	

### 3. **BIOCHEMISTRY (New List)**

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



24	Fume cupboard	1
25	Digital Analytical Balance	1
26	Balance Micro	1
27	Spectrophotometer	1
28	ELISA (Demonstration)	1
29	Laptop	1
30	Desktop Computer, with Printer	2
31	Photocopier and Scanner	1
32	Multimedia Projector with screen	2

#### 4. **PATHOLOGY (New List)**

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

24	Stand alone cold plate	1
25	Troughs for staining	As required
26	Coplin jars	As required
27	Water bath (Tissue Flootation)	As required
28	Single Pan Digital Balance, Chemical	2
29	Balance, chemical with weights	2
	<b>Microscopes</b>	
30	<b>For Students</b> – LED Binocular with Scanner, 10X, 40X, & Oil immersion lenses and inbuilt Battery backup power source	60
31	<b>For Diagnostic &amp; Research Work</b> - Trinocular head Microscope with Bright field, Dark field, Fluorescent & Polarizing Facility, high end Apochromatic lenses with Camera with HDMI Multi output camera Minimum 5MP with Projector & Ultra HD TV > 52 inches & Screen including Software Capable of Brightfield& Immunofluorescence Photography with connectivity to projector & LED TV (At least 55 inches Ultra HD)	1
32	<b>For every Professor, Associate &amp; Assistant Professor</b> : Binocular Microscopes with High end Semiapochromatic Optics of international standard.	As required
33	<b>For every Tutor</b> – Binocular Microscope with suitable high end lenses.	As required
34	<b>Penta Head Microscope with High end Optics</b> with HDMI Multi output Photographic camera (> 5 MP) including Software	1
35	Deca Head Microscope with High end Optics with HDMI Multi output Photographic camera (> 5 MP) including Software	1
36	<b>Grossing Station</b> - Stainless steel, with Control panel, air filtration system, Track mounted adjustable computer arm with articulation, LED lights that are color and intensity, Dedicated USB ports for camera control and data transfer adjustable, Integrated pathology camera system, Instrument Set (High quality) Height Adjustable Stainless Steel Chairs With Split AC of appropriate capacity.	1
37	Fully Automated Immuno-histo-chemistry Setup with Continuous supply of Important Antibodies, Lymphoma Panel etc.	1
38	Automatic High Speed Slide Scanner for converting Slides in Digital Format with software and Database Management with backup for Data Storage	1
(C)	<b>Hematology Lab:</b>	
39	Five part Fully Automated Cell Counter	1
40	Three Part Fully Automated Cell Counter	1
41	Coagulometer (Fully automated)	1
42	Magnifying lens	3
43	Blood pressure instrument	5
44	Laboratory Counter	As required
45	Laboratory stirrer	As required
46	Automatic timer	5
47	Balance for weighing organs	1
48	Saws, wire for cutting bones	As required
49	Slide boxes for 100 slides for students	200
50	Drill for boring glass	As required
51	X-ray viewing box (LED)	2
52	Sternal puncture needle adult size	As required
53	Sternal puncture needle child size	As required
54	Liver Biopsy needle	As required
55	Stop watch reading at 1/5 second.	5

56	pH Meter electric	5
57	Electrophoresis Set Up	1
58	LED Wireless Projector	3
59	Museum jars.	As required
60	Surgical instruments.	5 Sets
61	Glassware, stains, chemicals reagents etc. for histological work.	As required
(D)	<b>Clinical Laboratory:</b>	
62	Five Part Hematology Analyzer	1
63	Three Part Hematology Analyzer	2
64	Automatic Urine Analyzer	2
65	Binocular Microscopes with high end optics including 100X & LED Fluorescence for each Faculty/ resident working in lab plus 2 microscopes for technicians.	As Mentioned
66	Sp. Gravity Measure	2
67	PH meter	2
68	Incubator	2
69	Haemocytometers with red and white pipettes	90
70	Syringes disposable	As required
71	Staining jars for slides.	As required
72	Automatic Hematology Slide Stainers.	As required
73	Urinometers(Mercury based instruments to be replaced with other alternatives)	As required
74	Centrifuge tubes graduated.	As required
75	Graduated cylinders for various capacities ranging from 100 cc to1000 cc.	As required
76	Pipettes of various sizes with disposal tips.	As required
77	Reagent bottles	As required
78	Dropping bottles	As required
79	Reagents	As required
80	Balances –Digital Single Pan Sensitive Chemical balance	As required
(E)	<b>Specimens:</b>	
81	Mounted Specimens	300
82	Wet Specimens	150
	<b>Note:</b> Equipment must be of International specification & standards, regular calibration, running of international standard controls, comprehensive maintenance are mandatory. Department must have High Speed Internet Facility > 2 MB/S. Adequate Desktop, Laptops, Printers, Scanners, Portable Hard Disks, DVD Writer etc. for office and for the Faculty & Residents.	

### 5. MICROBIOLOGY ( New List)

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>General</b>	
1	Anaerobic apparatus	2
2	Autoclave	3
3	Balance Electronic Digital	2
4	Biosafety Cabinet Type - 2A	3
5	BOD Incubator	1
6	Centrifuge	4

7	CO2 Incubator/Candle Jar	2
8	Computer Unit	3
9	Deep Freeze -20° C & Deep Freezer	1 each
10	Distilled water Plant	1
11	Elisa Reader	2
12	Elisa Washer	2
13	Hot Air Oven	2
14	Incubator	3
15	Lab Refrigerator (minimum 400 litres)	4
16	Laminar flow	1
17	Micrometer eye pieces	2
18	Micrometer stage	2
19	Microscope Binocular (Students)	90
20	Microscope Binocular	Every Faculty
21	Microscope with universal condenser containing oil immersion, Bright field, Phase Contrast & Dark ground	1
22	Multimedia Projector	2
23	pH determination apparatus	2
24	Serum inspissators	1
25	VDRL shaker	2
26	Vortex Mixer	2
27	Water bath with variable temperature	2
28	Oil-immersion lens for student microscope	50
29	Automated Blood Culture System	1
30	Colony Counter	1
<b>(B)</b>	<b>Consumables for Culture and Serological Diagnosis</b>	
31	Antibiotic Discs for Antibiotic susceptibility testing	As required
32	Antibiotic zone scale	As required
33	Antisera-Salmonella	As required
34	Antisera-Shigelladysenteriae	As required
35	Antisera-Shigella flexneri	As required
36	Antisera-Shigella sonnei	As required
37	Antisera-Vibrio cholerae	As required
38	ATCC strain - Enterococcus faecalis 29213	As required
39	ATCC strain - E.coli 25922	As required
40	ATCC strain - E.coli 35218	As required
41	ATCC strain - Pseudomonas aeruginosa 27853	As required
42	ATCC strain - Staphylococcus aureus 25923	As required
43	ATCC strain - Staphylococcus aureus 29213	As required
44	Bottles for blood culture	As required
45	Micropipettes – Multi channel & Single channel	As required
46	Materials for preparation of various Culture Media	As required
47	Materials required for various Microbiological Stains	As required
48	Digital Thermometers of different temperatures	As required

49	Various Kits for Serological diagnostics	As required
50	Laptop	1
51	Desktop Computer, with Printer	2
52	Photocopier and Scanner	1
	<b>Note:</b> All equipment must be calibrated and maintained	

## **6. PHARMACOLOGY (New List)**

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

## **7. FORENSIC MEDICINE ( New List)**

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>Teaching</b>	
1	Multimedia Projector , CPU & Projection Screen	2
2	Television, DVD Player	1

3	Digital SLR Camera With Accessories	1
4	Microscope Student Type	20
5	X-Ray View Box Two In One	6
6	Stop Watch	4
7	Anthropometric Set including	2
	A) Folding Metal Rod Upto 7 Ft	
	B) Osteometric Board	
	C) Craniometer	
	D) Mandibulometer	
	E) Goniometer	
	F) Vernier Calipers	
	G) Equipment for Reporting Height	
	H) Weighing Machine Dial Type Human	
8	Digital pH Meter	1
9	Digital Spectrophotometer	1
10	Chemical Balance	1
11	Distillation Plant	1
12	Refrigerator	2
13	Centrifuge	1
14	Slide Warming Table	2
15	Hot Plate	2
16	Glass Cutting Pencil	2
17	Spectroscopic Lens With Adjustable Slit	2
18	Dissection Set Complete	2
19	Digital BP Instrument	2
20	Stethoscope	2
21	Charts and Models	30 each
<b>(B)</b>	<b>Research</b>	
22	Binocular Research Type With Attachment For Camera	1
23	Deep Freezer For Keeping Tissue	1
24	Automatic Tissue Processing Machine	1
	<b>Following can be shared with Central Research Lab:</b>	
25	Microtome With Knife	1
26	Paraffin Bath Embedding	1
27	Water Bath For Tissue Flootation	1
28	L Modes	1
29	Block Holder	1
30	Abrasive Powder	1
31	Thin Layer Chromatograph	1
32	Gas Chromatograph	1
33	Ultra Violet Spectroscope	1
34	Infra Red Spectroscope	1
35	Mass Spectrometer	1
<b>(C)</b>	<b>Medico legal work</b>	

36	Cold Storage For Dead Bodies	8
37	Weighing Machine For Dead Bodies	1
38	Autopsy Tables	4
39	Stryker Type Autopsy Saw With Accessories	4
40	Weighing Machine For Organs	3
41	Weighing Machine For Fetus	2
42	Dissection Set Complete	4
43	Brain Knife	6
44	Hack Saw	3
45	Rib Shear Left & Right	2 Each
46	Measuring Tape( Steel Tape Roll)	4
47	Magnifying Lens	4
48	X- Ray View Box (4 In 1)	3
49	Tooth Extractor Left & Right	2
50	Hand Set Heat Sealer	1
51	Instrument Trolley	As required (3 minimum)
52	Stretchers for shifting dead bodies	As required (Minimum 3)
53	Rectal Thermometer	4
54	Portable X-ray Machine (can be shared with Radiology Department)	1
	<b>Additional Equipment For Medico Legal Work For Each 500 Medico legal Post Mortems Beyond 500 Post Mortems Annually</b>	
55	Cold Storage For Dead Bodies	2
56	Autopsy Tables	2
57	Stryker Type Autopsy Saw With Accessories	1
58	Weighing Machine For Organs	1
59	Weighing Machine For Fetus	1
60	Dissection Set Complete	1
61	Brain Knife	2
62	Hack Saw	2
63	Rib Shear Left & Right	1 Each
64	Measuring Tape( Steel Roll)	2
65	Magnifying Lens	2
66	X- Ray View Box	1
<b>(D)</b>	<b>Consumable for medico legal work</b>	
68	Disposable Cap-Mask-Gown, Gloves Etc.	As required
69	Cotton Rolls, Suture Materials Etc.	As required
70	Formalin, Rectified Spirit,Lugol's Iodine	As required
71	Swabs, Preservative Bulbs etc.	As required
72	Viscera Bottles etc.	As required
73	Syringe (5, 10, 50 ml)	As required
74	Preservative Salts	As required
75	Packing and Sealing materials	As required
<b>(E)</b>	<b>For Sexual Assault Examination [*]</b>	

76	Victim examination table (Gynecological Examination table with leg stirrups)	1
77	Screen	As required
78	OT light Shadowless adjustable	1
79	Hymenoscope	2
80	Colposcope	2
81	Sims Speculum	4
82	Cusco's Speculum	2
83	Sponge holding forceps	4
84	Toothed forceps	4
85	Ovum forceps	2
86	Proctoscope	4
87	Torch	1
	<b>[*] Mandatory for the colleges where sexual assault examination done in FMT Department but not applicable to colleges where sexual assault examination is not done in FMT</b>	
88	Desktop Computer	3
89	Laptop	1
90	Printer with Scanner	2 each
91	Photocopier machine	1

#### **8. COMMUNITY MEDICINE (New List)**

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



22	T.V. and DVD player	4 each(2 at college and 2 at Centres)
23	Autoclave (Can be shared with Pathology/Microbiology department)	1
24	Computer with printer, scanner and photocopier and Internet facility	5
25	Vehicles for transport of students/interns/faculty/ paramedical staff to the RHTC and UHTC	2 Buses (32 capacity) and one SUV
26	Multimedia Projector with Screen	2
27	Public Address system (2 portable for field based activities and one each for RHTC & UHTC)	4 Sets
28	Chloroscope	10
29	Horrock's Apparatus	3
30	MUAC tapes	10
31	Haemoglobinometer	5
32	BP Apparatus (Digital)	10
33	Stethoscope	10
34	Kata Thermometer	3
35	Globe Thermometer	3
36	Anemometer	4
37	Sound level meter	4
38	Soil testing kit	1
39	Water sampling bottle from any depth	1
40	Needle Shredder	3
41	Vaccine carrier	5
42	Craft water testing kit	1
43	Protective devices for occupational safety	3 sets
44	Ear muffs	As required
45	Ear plugs	As required
46	Safety helmet	As required
47	Goggles	As required
48	Safety boots	As required
49	Swine flu kit	As required
50	Gloves	As required
51	Triple layer surgical mask	As required
52	High efficiency mask	As required
53	Long sleeved cuffed gown	As required
54	Protective eye wear	As required
55	Cap	As required
56	Disposable delivery kit	As required
57	Treatment kits as per national health programs	3 each
58	Iodine testing kit	10
59	Glucometer	10
60	Slide set for entomology	5
61	Mosquito catching kit	4
62	Clinical Thermometer	10

63	Sling psychrometer	3
64	Solar radiation thermometer	3
65	Treatment kits as per National Health Programs	4 each
66	Iodine testing kit	10
67	Glucometer	10
68	Slide set for entomology	5
69	First Aid Kit	1
70	Spirometer	3
71	Audiometry	1
72	Otoscope	1
73	Ophthalmoscope	1
74	Laptop	1
75	Portable X-ray (Maybe shared with other departments)	1
76	ECG(Maybe shared with other departments)	1

## **B. CLINICAL DEPARTMENTS**

### **9. MEDICINE (New List)**

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

27	Hemodialysis machine	4
28	Peritoneal dialysis catheters	As required
29	Arterial blood gas analyzer	1
30	Glucometer	14
31	EMG and nerve conduction velocity machine	1
32	Fine needle aspiration needle	As required
33	Aspiration needle	As required
34	Endotracheal tubes	As required
35	Invasive Mechanical Ventilator	8
36	Non Invasive mechanical ventilator (Maybe shared with TB and CD)	5
37	Nebulizer	14
38	Portable Suction Machine	2 with each ward, 1for MICU, 1 for ICCU, 1 for casualty ward, 1 for OPD
39	Infusion pumps	1 with each bed of MICU and ICCU plus 4 / unit
40	Weighing scale	2/unit + 2 in OPD
41	<i>Multimedia Projector with Screen</i>	2
42	Patient Examination table	6
43	Rubber Hammer	12
44	Computer	1/unit 1/MICU, 1/ICCU, 1/OPD
45	Torch	16
46	Emergency Lights	6
47	Upper GI endoscope (Optional)	3
48	Sigmoidoscope (optional)	3
49	Colonoscope (optional)	3
*50	*Haemocytometer	5
*51	*Light Microscope	3
*52	*Haemoglobinometer	5
*53	*Urinometer	3
	* Required where ward side laboratories are available	

### 10. PAEDIATRICS (New List)

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>Resuscitation equipment:</b>	
1	Ambu bag and Face mask - Neonate & infant	6
2	Ambu bag & Face mask – Children	4
3	Nasal prongs	As required
4	Nasal catheters	As required
5	Endotracheal tubes	As required
6	Suction apparatus	6
7	Suction catheters	As required
8	Laryngoscope - Infant	4

9	Laryngoscope - Children	4
<b>(B)</b>	<b>Oxygen Delivery System-</b>	
10	Oxygen Cylinder	6
11	Oxygen regulator	6
12	Oxygen Humidifiers	6
13	Oxygen head-box (of each size)	As required
14	Nebulizers	6
<b>(C)</b>	<b>Drug Delivery Equipment/ Catheter/tube-</b>	
15	Blood Transfusion Set	As required
16	Intra-venous (I.V.) Drip set	As required
17	Measure volume Set	As required
18	Intra-venous (I.V.) Cannula (Butterfly type)	As required
19	Intracath (different sizes)	As required
20	Umbilical vein Catheter	As required
21	Infant Feeding tubes	As required
22	Three way and four way valve	As required
<b>(D)</b>	<b>Measurement Equipment</b>	
	<b>Digital Weighing machine</b>	
23	- Infant	2
24	- Child	2
25	- Neonates	2
26	Infantometer	3
27	Stadiometer	4
28	Measuring tape	As required
29	Shakir's tape	As required
30	Digital Thermometer-Oral *(Mercury based instruments to be replaced with other alternatives)	As required
31	BP measuring Instrument with various cuff sizes - Digital (Only Non mercury alternatives to be used)	6
<b>(E)</b>	<b>Work Lab and Investigations:</b>	
32	Bone marrow needle	4
33	Lumbar Puncture (L.P.) Needles	4
34	Pleural aspiration needle	4
35	Vim-Silverman liver biopsy needle	4
36	True Cut Renal biopsy needle	4
37	X-ray view box	8
<b>(F)</b>	<b>Miscellaneous</b>	
38	Glucometer	3
39	Pulse Oximeter	6
40	CPAP machine*	3
41	Mechanical Ventilator (neonatal and child)	2+2
42	Radiant Warmer	8
43	Phototherapy unit	6

44	Ophthalmoscope	3
45	Pleural Fluid Collection Bag	As required
46	Urine Collection Bag	As required
47	LED phototherapy unit	3
48	Multimedia Projector with Screen	1
49	Laptop	1
	Note: CPAP machine, Mechanical Ventilator, Radiant Warmer, Phototherapy unit, Pulse oximeters, Multipara monitors, are required in proportion to Neonatal and Pediatric ICU bed capacity. Phototherapy unit should preferably be double surface. NICU should preferably have Transcutaneous Bilirubinometer.	
	Oxygen supply should be from central pipeline through manifold gas supply system, liquid oxygen supply, suction should be through wall mount supply system. Essential equipment should be according to age of the children i.e. neonate/infant/toddler/children.	

### **11. TUBERCULOSIS & CHEST DISEASES (New List)**

S.No.	NAME OF THE ITEMS	No. Required
1	Peak flow meters	6
2	Nebulizers	8
3	Intercostal Drainage Facility	6
4	Pleural Biopsy Needles	4
5	Pulse Oximeter	8
6	Fiber optic Bronchoscope	2
7	Rigid Bronchoscope	1
8	Pulmonary function Test machine with facility for spirometry, lung volume and diffusion capacity	1
9	BP Instrument (Mercury based instruments to be replaced with suitable alternatives)	8
10	Weighing Scale	2
11	Non Invasive Mechanical Ventilator	8
12	Height Scale	2
13	Multimedia Projector with Screen	1

### **12. DERMATOLOGY, VENEROLOGY & LEPROSY (New List)**

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

### **13. PSYCHIATRY (New List)**

S.No.	NAME OF THE ITEMS	No. Required
(A)	General	

1	Electro Convulsive Therapy (E.C.T.) machine preferably with ECG & EEG monitoring	1
2	EEG Machine (may be shared with medicine department)	1
3	ECT machine without monitor	2
4	EEG machine (may be shared with medicine/neurology department)	1
5	Lithium analyzer (may be shared with clinical pathology department)	1
6	Bio feed-back instruments (sets)	1
7	Thin layer chromatography (for drug dependence treatment) (may be shared with other departments or in Central Research lab)	1
8	Alcohol breath analyzer	1
<b>(B)</b>	<b>Psychological Tests equipment</b>	
9	a) Projective tests	3
10	b) Intelligence Tests	3
11	c) Personality Tests	3
12	d) Neuro psychological tests	3
13	Multi media Projector with Screen	1
	<b>Note:</b> ECT treatment room to be equipped with the basic anesthesia machine with ventilating circuit, monitors, ECG/ETCO <sub>2</sub> and paO <sub>2</sub> , noninvasive BP monitoring equipment for resuscitation, intubation, ventilation and suction.	

#### **14. SURGERY (New List)**

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

21	Operation Theatre Ceiling light	9
22	Pedestal lights	9
23	Electro-surgical cautery unit	15
24	Suction machine	9
25	Pulse oximeter	9
26	Anesthesia Equipment(as per requirement of Dept)	9 sets
27	General Sets including open Urological surgery (4 for each Operation Theatre)	36
28	Pediatric surgical instrument set	2
29	Burr hole set with electric craniotome	2
30	Vascular set	2
31	Diagnostic and Operative laparoscope including one High Definition with all accessories and hand instruments.	2
32	Cystoscope&Resectoscope	1
33	Flexible Video Colonoscope	1
34	Flexible Video Side viewing Gastroduodenoscope for ERCP	1
35	Flexible Video End viewing Oesophago-Gastroduodenoscope	1
36	Flexible Video Sigmoidoscope	1
37	Flexible Video Bronchoscope	1
38	C-arm image intensifier	1
39	Operative ultrasound	1
40	Harmonic Scalpel	2
41	Assorted Open & Laparoscopic Stapling devices	2 sets
42	Multimedia Projector with Screen	2
	<b>Note:</b> All the surgical wards should have wall mounted suction lines along with piped wall mounted central O <sub>2</sub> lines on all beds. They should have resuscitation equipment like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps , LMA / PLMA of all sizes, Electrical suction apparatus, AED -1.	

### **15. ORTHOPAEDICS (New List)**

S.No.	NAME OF THE ITEMS	No. Required
1	General instrumentation set for fracture reduction	8 sets
2	Set for Hip Replacement	1
3	Set for knee replacement	1
4	Interlock nailing sets	1 each
5	Specific fixation sets (Proximal Humerus, Distal humerus, Intertrochanter, proximal and distal tibia, pelvic fixation, pedicle screw, lateral mass screw and ACDF for cervical spine)	1
6	Small Fragment and large fragment	4
7	External Fixator	8
8	Fracture reduction OT tables	1
9	Simple OT tables	2
10	Cautery machines	1
11	Pneumatic drill and reamer	1
12	Electrical drill and reamer set	1
13	Laminar airflow system in OT (for OT - where joint replacement surgeries are carried out)	As mentioned
14	C-Arm (Image Intensifier)	1

15	Portable X-ray Machine	1
16	Arthroscope	1
17	Multimedia Projector	1
18	Plaster room equipment (sets) with plastic table.	2
19	Physiotherapy and occupational Therapy equipment sets	As required
20	Movie Camera for demonstration of live operations	1
	<b>Note:</b> All the orthopaedic wards should have wall mounted suction lines along with piped wall mounted central O <sub>2</sub> lines on all beds. They should have resuscitation equipment like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps , LMA / PLMA of all sizes, Electrical suction apparatus, AED -1.	
	<b>The OPD should have –</b>	
21	Plaster tables	2
22	Electric plaster cutter	4
23	Reflex hammer	10
24	Measure tape	20
25	Goniometer	10

### **16. OPHTHALMOLOGY ( New List)**

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



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

### **17. OTORHINOLARYNGOLOGY (New List)**

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>OPD</b>	
1	Sterilizer	1
2	Cidex instrument sterilization tray	2
3	Digital /Electronic BP Apparatus	1
4	Stethoscope	2
	<b>X-ray view box in all OPD rooms 5 sets each consisting of :</b>	
5	Thudicum/St.Clair Thomson Nasal Speculum different sizes	4
6	Lac's Tongue depressor different sizes	4
7	Laryngeal mirrors different sizes	4
8	Nasopharyngeal mirrors different sizes	4
9	Aural speculum different sizes	4
10	Ear Suction different sizes	2

11	Nasal Suction different sizes	2
12	Suction apparatus	1
13	Siegel's speculum	1
14	Tuning fork (512 Hz)	1
15	Tuning fork (256 Hz)	1
16	Tuning fork (1024 Hz)	1
17	Otoscope with halogen bulb, rechargeable battery and Siegle attachment	1
18	Bayonet forceps	2
19	Bulls lamp	1
20	Head Mirror	1
21	Head Light With LED/Halogen lamp	1
22	Jobson Horne probe	2
23	Instrument tray	1
24	Kidney tray	2
25	The OPDs should have Otoendoscope, Nasalendoscope, Laryngeal telescope with camera, monitor and light source for teaching purposes (1 Unit of the above may be placed either in Minor OT or Endoscopy room or in the OPD in the Consultant Chamber)	As mentioned
26	Optional- One treatment unit may be placed in the Consultant Chamber in the OPD which will facilitate and replace the instruments required in that room for examination purposes and help in teaching clinical skills.	As mentioned
<b>(B)</b>	<b>Ward</b>	
27	Four sets consisting of the instruments required in the OPD should be kept in the ward for teaching purposes and for examination time.	As mentioned
28	One mobile spotlight, One Tracheostomy set should be placed in the ward.	As mentioned
29	The ward side room/emergency treatment room should have a mobile spotlight.	As mentioned
<b>(C)</b>	<b>Major Operation Theatre.</b>	
	The OTs should be equipped with the requisite equipment for anaesthesia, cautery machines, suction machines and general operative sets.	
	<b>(a) Tonsillectomy and adenoidectomy set - 2 sets, each consisting of</b>	
30	Biopod	1
31	Boyle-Davis mouth gag with difference size blades	1
32	Tonsil holding forceps	1
33	Tonsil dissector and pillar retractor	1
34	Waugh's tenaculum forceps: plain and tooth	2
35	Tonsil snare	1
36	Burkit artery forceps	1
37	Wilson's double curved artery forceps	1
38	Negus artery forceps	1
39	Tonsil scissors	1
40	Adenotome	1 (optional)
41	Adenoid curette with and without cage	2
42	Yankaueroropharyngeal suction (disposable)	1
	<b>(b) Set for nasal bone fracture</b>	
43	Asch forceps	1
44	Walsham forceps	1
45	St.Vlair Thompson Nasal Speculum	1

46	Killian Long bladed Nasal speculum	1
	<b>(c) Septoplasty set</b>	
47	Nasal dressing forceps	1
48	Knife handle	1
49	Killian's nasal speculum	1
50	Freer elevator	1
51	Howarth elevator	1
52	Cottle elevator	1
53	Sickle knife	1
54	Ballenger's swivel knife	1 (optional)
55	Luc tissue cutting forceps	1
56	Takahashi forceps	1
57	Fish tail (bayonet shape) gouge	2
58	Nasal mallet	1
	<b>(d) FESS set</b>	
59	Rigid nasal endoscope 0 degree, 4 mm and 2.7 mm size	1 each
60	Rigid nasal endoscope 30 degree, 4 mm and 2.7 mm size	1 each
61	Light source and light cable	1
62	Endoscopic Camera with suitable display with recording & archiving facility. (with High Definition Camera)	1
63	Sickle knife	1
64	Retrograde punch	1
65	Blakesley forceps – straight 1 and upturn	1
66	Nasal suction cannula different sizes	4
67	Double curved suction cannula different sizes	4
68	Sinus probe and curette	1
69	Lacrimal probes for endoscopic DCR (optional)	1
70	General Fess Instruments	1
	<b>(e) Direct laryngoscopy set</b>	
71	Anterior commissure laryngoscope for adult and pediatric sizes	2
72	Laryngoscope for adult and pediatric sizes	2
73	Negus laryngoscope	2 (optional)
74	Light source	1
75	Light cable	1
76	Biopsy forceps	2
77	Foreign body removal forceps	2
78	Laryngeal suction	2
	<b>(g) Microlaryngoscopy set</b>	
79	Kleinsasser's laryngoscope	2
80	Fibreoptic lighting system	2
81	Suspension system for Laryngoscope	2
82	Microlaryngeal cup forceps	2
83	Microlaryngeal Scissors	2
	<b>(h) Tympanoplasty set</b>	
84	Graft knife	1

85	Graft scissors	1
86	Graft press	1
87	Aural speculum	4
88	Rosen first incision knife	1
89	Curette	2
90	Drum elevator	1
91	Blunt elevator	1
92	Sickle knife	1
93	Ball probe	1
94	Micro suction Cannula with thumb adaptor	4
95	Ear granulation forceps straight, up turn and side turn	3
96	Graft forceps	1
	<b>(i) Mastoidectomy set</b>	
97	Mallet	2 (optional)
98	Gouge (different sizes)	4 (optional)
99	Knife handle	1
100	Mosquito artery forceps	4
101	Cat's paw retractor	2
102	Endaural retractor/post aural retractor for right and left ear	2
103	Electric drill (motor, hand piece and burrs)	2 sets
104	Mastoid seeker	2
105	Aditus seeker	2
106	Malleus head nipper	2
107	Suction cannula with adapter for thumb control	4
108	Ear granulation forceps straight, up turn and side turn	3
	<b>(j) Stapedectomy set</b>	
109	Pick-straight	2
110	70 Angled	2
111	Perforator	2
112	Measuring rod	2
113	Prosthesis crimper	2
	<b>(k) Oesophagoscopy set</b>	
114	Oesophagoscopes sizes for different age group	3
115	Light source and cable	1
116	Biopsy forceps	3
117	Foreign body removal forceps	3
118	Suction cannula	3
119	Oesophageal dilators	1 set
	<b>(l) Bronchoscopy set</b>	
120	Bronchoscopes different sizes for different age groups	3
121	Light source and cable	1
122	Biopsy forceps	3
123	Foreign body removal forceps	3
124	Peanut forceps	3

125	Suction cannula	3
	<b>(m) Tracheostomy set</b>	
126	Needle holder	1
127	Bard Parker knife handle	1
128	Ribbon right angled retractors	2
129	Curved arteries	4
130	Straight arteries	1
131	Cricoid hook	1
132	Tracheal dilator	1
	<b>(n) Excision Biopsy Set</b>	
133	Doyen mouth gag	1
134	Jenin's mouth gag	1
135	Knife handle	2
136	Adson's tissue holding forceps toothed	2
137	Adson's tissue holding forceps plain	2
138	Mayo scissors different sizes	3
139	Mosquito curved artery forceps	6
140	Curved artery forceps	6
141	Ellis tissue forceps	4
142	Babcock tissue forceps	2
143	Cat's paw retractors	2
144	Right angle retractors	2
145	Skin hook single	2
146	Skin hooks double	2
147	Needle holder different sizes	3
148	Thread cutting scissors	1
	<b>Minor Operation Theatre</b>	
	<b>(a) Direct laryngoscope set</b>	
149	Laryngoscope – Anterior Commissure	1
150	Negus	1
151	Lighting system	1
152	Biopsy forceps	1
153	Foreign body removal forceps	1
	<b>(b) Micro ear examination set</b>	2
154	Aural speculum	4
155	Suction cannula	4
156	Aural cup forceps	2
	<b>(c) Nasal packing set</b>	2
157	St Clair Thompson nasal speculum different sizes	4
158	Nasal packing forceps	1
159	Nasal suction cannula	4
	<b>(d) Nasal endoscopy trolley with 0 degree &amp; 30 degree 4mm endoscope with light source, cable , monitor &amp; camera</b>	1
	<b>(e) Others</b>	

160	Higginson syringe	2
161	Sterilizer	As required
162	Aural Syringe	As required
163	Tracheostomy set	As required
164	Intubation set	As required
165	Bowls, kidney treys, towel clips, sponge holding forceps and Cheatle forceps	As required
(E)	<b>Miscellaneous Equipment</b>	
166	Operating microscope for major Operation Theatre ( with camera attachment & monitor for teaching and recording )	1
167	Electrocautery Unit	1
168	Spot Mobile Light	1
169	Basic OT table	1
170	Operating microscope for minor Operation Theatre	1
171	Puretone audiometer	As required
172	Brainstem evoked response audiometer with ASSR	As required
173	OAE Impedance audiometer (With sound treated air-conditioned room for audiometry)	As required
174	Multimedia Projector with Screen	1
	<b>Teaching models/simulators as a part of the college CAL lab to teach clinical skills and procedure to the students must be available</b>	
(F)	<b>Additional Equipment</b>	
175	Flexible nasopharyngolaryngoscope	1
176	Electronystagmograph(Optional)	1
177	Brainstem evoked response audiometer	1
178	Goggles, plastic apron, gloves for examination of patients with biohazard (HIV & AU +ve)	As required

### **18. OBSTETRICS & GYNAECOLOGY (New List)**

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>General</b>	
1	Speculums and retractors	100
2	EA + ECC sets	12
3	Cytology bottle	10
4	Microscope	2
5	MR Syringes	7
6	Colposcope	1
7	Cryo/electro cautery apparatus	1
8	Simple fetal Doppler	2
9	NST machine	2
10	Stitch removal sets	7
11	Dressing sets	7
12	Ultrasound machine	1
13	Weighing machine	3
14	Height scale	2
15	View box	1

16	Digital/ Electronic Blood Pressure apparatus, measuring tapes, gloves, syringes, needles, torch	6
17	Resuscitation tray (Laryngoscope, ET tube, Ambu bag, suction catheter)	2
18	Suction machine	2
19	Hysterosalpingogram Cannula	3
20	PCT forceps	5
21	Ayer's spatula	40
<b>(B)</b>	<b>Main Operation Theatre</b>	
22	Abdominal Hysterectomy set (Artery forceps, scissors, scalpel, Allis's Kelly's clamp, Babcock forceps, thumb forceps, Harrington & Richardson retractors.)	4
23	Vaginal Hysterectomy set	3
24	Scalpel, scissors, metal catheter, Sim's, Speculum volsellum, Kelly's clamps, right angle retractor, arteries, Allis, uterine sound, bladder sound.	3
25	Tuboplasty set	1
26	Myomectomy instruments (Myoma screw, Boney's clamp)	1
27	Diagnostic laparoscopy set	1
28	Operating laparoscopy set including one with HD with all accessories & hand instruments.	1
29	Laparocator for tubal ligation	1
30	Operative Hysteroscopy set	1
31	Electronic Carbondioxideinsuffator/ Insuffator basic unit	2
32	Resectoscope	1
33	Hysteromat	1
34	Operative microscope	1
35	Electrocautery	3
<b>(C)</b>	<b>Labour Room</b>	
36	Delivery sets	20
37	Digital/ Electronic B.P. Apparatus	4
38	Weighing machine	1
39	Fetal Doppler	1
40	Cardiotocogram machine	2
41	Portable ultrasound	1
42	High suction machine	2
43	Resuscitation tray	2
<b>(D)</b>	<b>Special Equipment</b>	
44	Oxytocin infusion pumps	2
45	Multichannel monitors	4
<b>(E)</b>	<b>Teaching Set</b>	
46	Doll and Dummy	1
47	Female Pelvis	1
48	Gross specimens	10
49	X-ray/US films	5
50	View box	1
51	Multimedia Projector with Screen	1
52	Set of instruments for teaching purpose	1

<b>(F)</b>	<b>Minor Operation Theatre</b>	
53	Cervical biopsy set	2
54	MTP set	3
55	D&C set	3
56	IUCD insertion/removal set	5
57	High suction machine	2
58	Resuscitation tray	1
59	E.B. set	3
60	Operation Theatre table, Operation Theatre lights, Central O2 and suction	As required
<b>(G)</b>	<b>Maternity Operation Theatre</b>	
61	Set for LSCS	12
62	D&C set	3
63	MTP set	3
64	High suction machine	2
65	Cervical exploration set	2
66	Uterine packing forceps	3
67	Abdominal hysterectomy set	1
68	Diagnostic laparoscopy set	1
69	Postpartum ligation	2
70	Outlet forceps	1
71	Low mid cavity forceps/Keilland forceps	1
72	Vacuum Extractor and suction machine	1
73	Resuscitation tray	1
74	Infusion Pump	1
75	EB set	2
76	Laparocator for tubal ligation	1
77	Operation Theatre table, Operation Theatre lights, Central O2 and suction	As required
<b>(H)</b>	<b>Wards</b>	
78	Blood Pressure Apparatus (Digital/Electronic)	4
79	Weighing machine	1
80	Height scale	1
81	Speculum and retractors	30
82	Glucometer	1
83	Microscope	1
84	Suture removal sets	8
85	Dressing sets	5
86	Ultrasound	1
87	Cutdown sets	1
88	CTG machine	1
89	Suction machine	2
90	Resuscitation tray	2
91	X ray View box	1
92	Central O2 and suction	As required
<b>(I)</b>	<b>Special Equipment</b>	



93	Ultrasound machine with Doppler/Vaginal probe/facilities for Interventional procedure	1
94	Oxytocin infusion pumps	2
95	Multichannel Monitor with ECG, BP, HR, Pulse oximeter for high risk pregnant patients (eclampsia, heart diseases etc.)	3
96	Fetal Monitor for Antepartum Surveillance	3
97	Multimedia Projector with Screen	2

### **19. ANAESTHESIOLOGY (New List)**

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

28	Provision for resuscitation equipment and CPR Algorithms	1
29	Airway crash cart	1
30	ABG machine (Optional)	1
31	Side lab for emergency investigations (Optional)	1
32	TOF monitor (PNS) (Optional)	1
(D)	<b>Pain Clinic</b>	
33	Radio frequency ablation machine	2
34	Fluoroscopy machine (e-ARM)(may be shared with other department)	2
35	Ultrasound machine	1
36	Patients controlled analgesia system (portable)	1
37	Styleted Epidural catheter	10
38	Rac's catheters	As required
39	Intrathecal infusion pumps	As required
40	Pain assessment chart	4
41	OT Table fluoroscopy compatible	2
42	Nerve locator	1
43	Computer	2
44	Anodyne Machine (Optional) (For diabetic foot care)	2
45	Transcutaneous Electric Nerve Stimulating Machine (optional)	1
46	Anesthetic machine with resuscitation equipment	2
47	Crash cart	2
48	Monitors for vital signs (NIBP, P.R, ECG, SPO2, Temperature, R.R)	2
49	Nerve stimulator	2
50	18 G epidural needle	4
51	Multimedia Projector with screen	1

## **20. RADIO-DIAGNOSIS (New List)**

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>General</b>	
1	Conventional X-ray Unit for routine X ray 300 mA, 500mA, 800mA (with IITV) - 1 each	2+2+1 Total - 5
2	CR system	2
3.	DR System	-
(B)	<b>Mobile X-ray units</b>	
3	a) 60 mA	3
4	b) 100mA	3
5	Ultrasonography equipment and color Doppler (Additional unit independently for OBGY).	3+1
6	CT (16 slice).	1
7	Mammography (Preferably).	1
8	MRI (Preferably).	1
9	Multimedia Projector with Screen	1
	<b>Note:</b> The department should have resuscitation equipment like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps , LMA / PLMA of all sizes, Electrical suction apparatus	

## 21. CENTRAL CASUALTY DEPT. (New List)

S.No.	NAME OF THE ITEMS	No. Required
	There shall be a Central Casualty department wherein consultancy services shall be provided by the faculty of relevant Departments. And relevant investigation facilities to be run in liaison with central laboratory.	
1	Casualty resuscitation room should have central piped Oxygen supply & suction on every bed.	As required
2	Ventilators, Multipara monitors, ECG machines, Nebulizers.	3 each
3	Fully equipped disaster trolleys (emergency trolleys).	3
4	Emergency X-ray (Fixed 300/500mA & Mobile 100mA )	1 each
5	Sonography machine/s in the casualty	1
6	Plaster room	1
	<b>Operation theatre shall be provided. These shall be equipped for emergency operative treatment and include the following:</b>	
7	Operation Theatre Table	1
8	Operation Theatre Ceiling light	1
9	Pedestal lights	2
10	Electro-surgical cautery unit	2
11	Suction	2
12	Pulse oximeter	2
13	Anesthesia Equipment	1 set
14	Resuscitation kit	1
15	Assorted surgical instrument sets	5
16	Autoclave	1
17	OT should have resuscitation equipment like Anesthesia machine and accessories like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps ,Mechanical ventilator Separate or with anesthesia machine, LMA / PLMA of all sizes, Electrical suction apparatus	
	<b>Required equipment on Each Emergency Trolley</b>	
<b>(A)</b>	<b>Airway:</b>	
18	Pocket mask with oxygen port	As required
19	Digital Blood Pressure apparatus	As required
20	Ambu bag and tubing (ideally, the resuscitation bag should be single use – if not, it should be equipped with a suitable filter)	As required
21	Clear face masks, sizes 3, 4 and 5	As required
22	Oropharyngeal airways, sizes 2, 3 and 4	As required
23	Nasopharyngeal airways, sizes 6 and 7	As required
24	Portable suction equipment	As required
25	Yankauer suckers	As required
26	Tracheal suction catheters, sizes 12 and 14	As required
27	Laryngeal mask airways (sizes 4 and 5), or ProSeal LMAs (sizes 4 and 5)	As required
28	Magill forceps	As required
29	Tracheal tubes – oral, cuffed, sizes 6, 7 and 8	As required

30	Gum elastic bougie or equivalent device	As required
31	Lubricating jelly	As required
32	Laryngoscope handles (x 2) and blades (standard and long blades)	As required
33	Spare batteries for laryngoscope and spare bulbs (if applicable)	As required
34	Fixation for tracheal tube (such as ribbon gauze or tape)	As required
35	Scissors	As required
36	Selection of syringes	As required
37	Oxygen mask with reservoir (non-rebreathing) bag	As required
38	Oxygen cylinders	As required
39	Oxygen cylinder key.	As required
<b>(B)</b>	<b>Circulation:</b>	As required
40	Defibrillator	As required
41	ECG electrodes	As required
42	Defibrillation gel pads or self-adhesive defibrillator pads (preferred)	As required
43	Selection of intravenous cannulae	As required
44	Selection of syringes and needles	As required
45	Cannula fixing dressings and tapes	As required
46	Seldinger central venous catheter kit	As required
47	Intravenous volumetric infusion sets	As required
48	0.9% sodium chloride - 1000 mL x 2	As required
49	Arterial blood gas syringes	As required
50	Tourniquet.	As required
<b>(C)</b>	<b>Drugs:</b>	As required
51	Immediately available pre-filled syringes:	As required
52	Adrenaline (epinephrine) 1 mg (1:10,000) x 4	As required
53	Atropine 3 mg x 1.	As required
54	Hydrocortisone 100mg x 1	As required
<b>(D)</b>	<b>Other readily available drugs: Intravenous medications:</b>	As required
55	Adenosine 6 mg x 10	As required
56	Adrenaline 1 mg (1:10 000) x 4	As required
57	Adrenaline 1 mg (1:1 000) x 2	As required
58	Amiodarone 300 mg x 1	As required
59	Calcium chloride 10 mL of 100mg per mL x 1	As required
60	Chlorphenamine 10 mg x 2	As required
61	Furosemide 50 mg x 2	As required
62	Glucose 10% 500 mL x 1	As required
63	Lidocaine 100 mg x 1	As required
64	Magnesium sulphate 50% solution 2 g (4 mL) x 1	As required
65	Midazolam 10 mg x 1	As required
66	Normal saline 10 ml ampoules	As required
67	Potassium chloride for injection	As required
68	Sodium bicarbonate 8.4% - 50 mL x 1.	As required

69	Other life saving drugs as required.	As required
(E)	<b>Additional items:</b> Gloves, goggles and aprons, sharps container, clinical waste bags, large scissors, alcohol wipes, blood sample specimen bottles.	As required

### **C. OTHER DEPARTMENTS**

#### **22. MEDICAL EDUCATION UNIT (New List)**

S.No.	NAME OF THE ITEM	No. Required
1	Multimedia Projector	1
2	Projection Screen	1
3	Computer with printer and scanner	2
4	Video Camera	1
5	Television	1
6	Blackboard	2
7	Photocopier	1
8	Flip Charts with accessories	2
9	Soft Board	2
10	White Board with accessories	2
11	Laptop	1
12	Dedicated Internet facility	
13	Public Address system with wireless collar and hand microphones	1
14	Cupboards and display cabinets for books	As required
15	Books and Journals	As required

#### **23. DEPARTMENT OF AUDIOVISUAL AIDS**

S.No.	NAME OF THE ITEMS	No. Required
(A)	<b>ARTIST SECTION</b>	
1	Drawing Board (Big)	1
2	Drawing Board(Small)	1
3	Drawing instrument Box	1 set
4	Plastic Transparent Set square 10"	1 pair
5	Plastic Scale transparent 18'	1
6	Parallel ruler 18"	1
7	Proportional Compass.	1
8	Bowpen one for fine and one for thick line.	2
9	"T" scale 24" wooden	1
10	"T" scale 48" wooden	1
11	Frenet curves Plastic 1 set of 12	1 set
12	Protractor Plastic Semiround 6" dia.	1
13	Drawing paper various sizes	24
14	Drawing paper	12
15	Water colour tubes	1 set
16	Poster colours in different shades.	1 set
17	Reeves Indian Black ink.	12
18	Sable hair brushes	1set

19	Calligraphy and lettering nibs	1 set
20	Clip holders.	6
21	Computer, printer, photocopier and scanner	1
<b>(B)</b>	<b>MODELLING SECTIONS AND PHOTOGRAPHY</b>	
22	Modeling Instrument box.	1
23	Saw for wood work.	1
24	Bandsaw	1
25	Plier	1
26	Plier Goldsmith.	1
27	Scissors ordinary	1
28	Scissors Goldsmith	1
29	Hammer	1
30	Mortar Iron.	1
31	Bucket Iron.	1
32	Chisel.	1
33	Drilling machine	1
34	Modelling clay	As required
35	Clay of different types	As required
36	Drawing Board with Stand	1
37	Soft stone powder.	As required
38	Plaster of Paris	As required
39	Gum.	As required
40	Sand paper	As required
41	Plasticine	As required
42	Wires G.I. copper and wire netting.	As required
43	Synthetic Enamel colours	As required
44	Oil colour brushes.	As required
45	Projection Screen	1
46	Digital SLR Camera (Latest Model )	1
47	Video Camera (Latest Model )	1
48	Microprojector Dark room & developing equipment	1 set
	<b>NOTE:</b>	
1	All Mercury containing instruments should be replaced by digital or other suitable alternatives.	
2	In order to make teaching hospital more effective, it is necessary that a periodic maintenance and upgrading of the instruments in various departments is carried out.	
3	Endoscopes shall be fibre-optic preferably with a videoscope.	
4	Close circuit TVs (CCTVs) , videoconferencing, Internet and other facilities for live audiovisual demonstration of procedures shall be provided in the institution for effective teaching and training facilities	
5	All Clinical departments must be provided with one flat high definition TV monitor, DVD Player, one laptop, desktop computer with printer (one per Unit) and one Desktop computer with printer, scanner and photocopier for department office. Requirements of computers and printers and scanners for pre and Paraclinical departments have been mentioned in respective columns.	
6	Number of Operation Theatre(OT) are according to the number of admissions. All OT in the hospital should have wall/dongle mounted suction lines along with piped	

	wall/dongle mounted central gas (O2, NO2) lines.	
7	All Operation theatres in the hospital should have resuscitation equipment like Anesthesia machine and accessories like laryngoscope, all - size endotracheal tubes, nasal and oral airways, Magill's forceps , Mechanical ventilator, Separate or with anesthesia machine, LMA / PLMA of all sizes and Electrical suction apparatus.	

## APPENDIX-I

### BUILT UP AREA REQUIREMENTS (50 ADMISSIONS)

ITEM DETAILS	NO.	AREA (Sq. M.) Each	Total (Sq. m.)	Remarks
(1)	(2)	(3)	(4)	(5)
<b>Administrative Block</b>				
Principal/Dean's Office		36	36	
Staff Room		54	54	
College Council Room		80	80	
Officer Superintendent's Room		10	10	
Office		150	150	
Record Room		100	100	
Common Room – Boys		150	150	
Girls		150	150	
Cafeteria		300	300	
Central Library		2400	2400	
Lecture Theatres	4	495	1980	180 Seating Capacity
	1	600	660	350 Seating Capacity
Auditorium	1	1200	1200	500-700-750-1000
Common Laboratories	6	245	1470	
	2	110	150	
Central Research Laboratory	1	100	100	
<b>Department Total</b>			<b>9060</b>	
<b>DEPARTMENTS</b>				
<b>Anatomy</b>				
Demonstration Room	2	60	120	Accommodate at least 75-100 Students
Dissection Hall	1	325	325	Accommodate at least 150 Students
Museum		200	200	Accommodate 35 students to study in the museum
<b>Accommodation for Staff</b>				
Professor & Head	1	18	18	

Asso. Prof./Reader	2	15	30	
Asst. Prof./Lecturer	3	20	60	
Tutor/Demonstrators	4	15	60	
Department Office/Clerical Room	1	12	12	
Non-teaching staff room	1	12	12	
<b>Department Total</b>			<b>837</b>	
<b>Physiology including Bio-physics</b>				
Demonstration Room	2	60	120	Accommodate at least 75-100 Students
<b>Accommodation for Staff</b>				
Professor & Head	1	18	18	
Asso. Prof./Reader	2	15	30	
Asst. Prof./Lecturer	3	20	60	
Tutor/Demonstrators	4	15	60	
Department Office/Clerical Room	1	12	12	
Non-teaching staff room	1	12	12	
<b>Department Total</b>			<b>312</b>	
<b>Biochemistry</b>				
Demonstration Room	1	60	120	Accommodate at least 75-100 Students
<b>Accommodation for Staff</b>				
Professor & Head	1	18	18	
Asso. Prof./Reader	1	15	15	
Asst. Prof./Lecturer	2	12	24	
Tutor/Demonstrators	4	15	60	
Department Office/Clerical Room	1	12	12	
Non-teaching staff room	1	12	12	
<b>Department Total</b>			<b>261</b>	
<b>Pathology</b>				
Demonstration Room	2	60	120	Accommodate at least 75-100 Students
Museum	1	60	90	
<b>Accommodation for Staff</b>				
Professor & Head	1	18	18	
Asso. Prof./Reader	3	15	45	
Asst. Prof./Lecturer	4	12	48	
Tutor/Demonstrators	6	15	90	
Department Office/Clerical Room	1	12	12	
Non-teaching staff room	1	12	12	
<b>Department Total</b>			<b>435</b>	



<b>Blood Bank (includes)</b>		<b>100</b>	<b>100</b>	
(a) Registration & Medical Examination Room				
(b) Blood Collection Room				
(c) Room for Laboratory for Blood Group Serology				
(d) Room for Lab. For Transmissible diseases like Hepatitis, Syphilis, Malaria, HIV antibodies, etc.				
(e) Sterilisation and Washing Room				
(f) Refreshment Room				
(g) Store and Records Rooms				
<b>Microbiology</b>				
Service Laboratory	7	25	175	Each for Bacteriology, Serology, Virology, Parasitology, Mycology, Tuberculosis and Immunology
Museum	1	80	80	
<b>Accommodation for Staff</b>				
Professor & Head	1	18	18	
Asso. Prof./Reader	2	15	30	
Asst. Prof./Lecturer	2	12	24	
Tutor/Demonstrators	4	15	60	
Department Office/Clerical Room	1	12	12	
Non-teaching staff room	1	12	12	
<b>Department Total</b>			<b>411</b>	
<b>Pharmacology</b>				
Demonstration Room	2	60	120	Accommodate at least 25-30 Students
Museum		125	125	
<b>Accommodation for Staff</b>				
Professor & Head	1	18	18	
Asso. Prof./Reader	2	15	30	
Asst. Prof./Lecturer	2	12	24	
Tutor/Demonstrators	3	15	45	
Department Office/Clerical Room	1	12	12	
Non-teaching staff room	1	12	12	
<b>Department Total</b>			<b>386</b>	
<b>Forensic Med. Including Toxicology</b>				
Demonstration Room	2	60	120	Accommodate at least 75-100 Students.
Autopsy Block		400	400	
Museum		175	175	
<b>Accommodation for Staff</b>				

Professor & Head	1	18	18	
Asso. Prof./Reader	1	15	15	
Asst. Prof./Lecturer	2	12	24	
Tutor/Demonstrators	3	15	45	
Department Office/Clerical Room	1	12	12	
Non-teaching staff room	1	12	12	
<b>Department Total</b>			<b>821</b>	
<b>Community Medicine</b>				
Museum		150	150	
Primary Health Centre/Rural Health Training Centre				
Urban Health Training Centre				
<b>Accommodation for Staff</b>				
Professor & Head	1	18	18	
Asso. Prof./Reader	2	15	30	
Asst. Prof./Lecturer	3	15	45	
Statistician-cum-Lecturer	1	12	12	
Epidemiologist-cum-Lecturer	1	12	12	
Tutor/Demonstrators	4	15	60	
Department Office/Clerical Room	1	12	12	
Non-teaching staff room	1	15	15	
<b>Department Total</b>			<b>354</b>	
<b>COLLEGE TOTAL</b>			<b>12977</b>	
<b>Teaching Hospital</b>				
Dean's Room		36	36	
Medical Superintendent's Room		36	36	
Hospital offices for the supportive staff		150	150	
Waiting space for visitors		450	450	
Enquiry office		50	50	
Reception		400	400	
Store Rooms		600	600	
Central Medical Record Section		250	250	
Linen Rooms		500	500	
Hospital & Staff Committee Room		80	80	
Central Lecture Theatre of Gallery Type	1	495	495	Seating capacity of 200 persons
Central Registration and Statistics Department		200	200	
Central Laboratories		150	150	
Central Casualty Department (Incl. Minor O.T.)		150	150	

Central Hospital Pharmacy	100	100
Central Kitchen	200	200
Incinerating Plant	40	40
<b>Common Facilities</b>		<b>3887</b>

**Clinical Departments in the Hospital (No. of Beds required for 150 admission annual is 750):-**

	<b>Beds/Units</b>		
General Medicine	180/6		
Paediatrics	90/3		
TB & Respiratory Diseases	30/1		
DVL	15/1		
Psychiatry	15/1		
General Surgery	180/6		
Orthopaedics	90/3		
Ophthalmology	30/1		
ENT	30/1		
Obstetrics	50		
Gynaecology	32		
Postpartum	8	90/3	
			7 Sq. M. per bed (1.5 m. distance b/w 2 beds; Bed width 1m')

<b>Department Total</b>	<b>750</b>	<b>5250</b>	<b>5250</b>
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**Clinical Departments - Indoor**

Accommodation for Nurses Duty Room	20	20
Laboratory for routine examinations	15	15
Examination and treatment room	15	15
Ward pantry	15	15
Store room for linen and other equipments	15	15
Residents Doctors & Students duty room	20	20
Office for Heads of each department & Heads of Units	20	20
Room for Other Unit Staff	20	20
Clinical Demonstration Rooms (at least one for each department)	20	20

<b>Total for 25 Wards/12 Departments</b>		<b>4000</b>
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**Operation Theatre Unit**

Waiting room for patients	15	15
Preparation room	15	15
Operation Theatre	75	75
Post-operative recovery room	30	30

Soiled Linen room		15	15
Instrument Room		15	15
Sterilisation Room		15	15
Nurses Room		20	20
Surgeon's and Anaesthetist's Room	2	20	40
Assistant's Room		20	20
Observation Gallery for students		60	60
Store rooms		15	15
Washing room		10	10
Dressing up room		10	10
Central Sterilisation Unit		10	10
Laundry		10	10
<b>Total for 11 O.T.s</b>	<b>11</b>		<b>4125</b>
<b>Labour Room</b>			
Waiting room for patients		15	15
Preparation room		15	15
Labour Room		100	100
Post Partum Recovery Room		75	75
Soiled Linen room		15	15
Instrument Room		15	15
Sterilisation Room		15	15
Nurses Room		20	20
Surgeon's and Anaesthetist's Room		20	20
Assistant's Room		20	20
Observation Gallery for students		30	30
Store rooms		15	15
Washing room		10	10
Dressing up room		10	10
Eclampsia Room		75	75
Laundry		10	10
<b>Total for Labour Room</b>			<b>460</b>
<b>Radio-Diagnosis</b>			
Room for 300mA, 500mA, 800mA			
IITV System, Fluroscopy System		36	36
Ultrasound room		15	15
Room for 60mA Mobile X-Ray System		15	15
Accommodation for CT Scan System		80	80
Store Room		15	15
Museum		25	25

Waiting Room	40	40
<b>Department Total</b>		<b>226</b>
<b>Anaesthesiology</b>		
Accommodation for the Anaesthesia Department in Operation Theatres		
Office for HOD & Heads of Units	20	20
Accommodation for other unit staff	20	20
Clinical Demonstration Rooms	20	20
Department Total		<b>60</b>
<b>Optional Departments</b>		
<b>Radiotherapy</b>		
Teletherapy Unit	100	100
Intracavitary Treatment room	50	50
Endocavitary surface mould therapy room	50	50
Planning Room	50	50
Room for metalling treatment	50	50
Record Room	100	100
Medical Physics Lab.	50	50
Out patient waiting room	200	200
Indoor beds	200	200
Day care ward for short chemotherapy/radiotherapy	70	70
<b>Department Total</b>		<b>920</b>
<b>Physical Medicine &amp; rehabilitation</b>	1500	1500
<b>Clinical Departments - Outdoor</b>	<b>7500</b>	<b>7500</b>
Waiting/reception space rooms for patients and attendants		
Enquiry and record room		
Examination rooms and case demonstration rooms for each		
4		For each department
Dispensary		
Dressing room in surgery & its specialities		
Refraction rooms, dark rooms, dressing rooms in Ophthalmic Deptt.		
Plaster rom, plaster cutting room etc., in Orthopaedics Deptt.		
Sound proof audiometry room, ENG Lab., speech therapy rooms in ENT Deptt.		
Child welfare, immunization room etc. in paediatrics Deptt.		
Antenatal, family welfare, sterility cancer detection clinics in OBG Deptt.		

Dental Section		
<b>OPD TOTAL</b>		<b>7500</b>
<b>HOSPITAL TOTAL</b>		<b>26428</b>
<b>Residential Quarters/Hostels</b>		
Qtrs. @20% teaching (20% of 146=30)	200	6000
Qtrs. @ 20% Non teaching (20% of 200 = 40)	100	4000
Nurses @ 20% (20% of 330 = 66)	100	6600
Residents @ 100 % = 115	20	2300
Interns @ 100 %	1500	1500
Hostels for 563 students (i.e. @ 75% of 750)	10	6000
<b>TOTAL RESIDENTAIL COMPLEX TOTAL</b>		<b>26400</b>
<b>TOTAL</b>		<b>65805</b>
<b>ADD 15 %</b>		<b>9871</b>
<b>GRAND TOTAL</b>		<b>75676</b>