



भारत का राजपत्र The Gazette of India

सी.जी.-डी.एल.-अ.-17082023-248154
CG-DL-E-17082023-248154

असाधारण
EXTRAORDINARY

भाग III—खण्ड 4
PART III—Section 4

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 578]
No. 578]

नई दिल्ली, बुधवार, अगस्त 16, 2023/श्रावण 25, 1945
NEW DELHI, WEDNESDAY, AUGUST 16, 2023/SHRAVANA 25, 1945

राष्ट्रीय आयुर्विज्ञान आयोग
(स्नातक चिकित्सा शिक्षा बोर्ड)
अधिसूचना

नई दिल्ली, 16 अगस्त, 2023

सं. यू. 11022/3/2023-यूजीएमईबी.—राष्ट्रीय आयुर्विज्ञान आयोग अधिनियम, 2019 (2019 का अधिनियम 30) की धारा 26, 28 और 29 के साथ पठित धारा 24 की उपधारा(ए), (डी) और (ई) के माध्यम से प्रदत्त शक्तियों का प्रयोग करते हुए, "स्नातक चिकित्सा शिक्षा बोर्ड नए चिकित्सा संस्थानों की स्थापना, नए चिकित्सा पाठ्यक्रमों की शुरुआत, मौजूदा पाठ्यक्रमों के लिए सीटों की वृद्धि और मूल्यांकन और रेटिंग विनियम, 2023 संक्षेप में (यूजी-एमएसआर 2023)" के नियम 10 के तहत और स्नातक चिकित्सा शिक्षा विनियम 2023 के नियम 19 के तहत निम्नलिखित दिशा-निर्देश जारी करता है।

- इन दिशा-निर्देशों को - "नए चिकित्सा संस्थानों की स्थापना के तहत दिशानिर्देश, नए चिकित्सा पाठ्यक्रमों की शुरुआत, मौजूदा पाठ्यक्रमों के लिए सीटों की वृद्धि और मूल्यांकन और रेटिंग विनियमन 2023" कहा जा सकता है।
- ये दिशा-निर्देश आधिकारिक राजपत्र में उनके प्रकाशन की तिथि से लागू होंगे।

अध्याय-1

उद्देश्य:

इन विनियमों का उद्देश्य हर साल एमबीबीएस छात्रों के प्रवेश के लिए अनुमोदित मेडिकल कॉलेज और मेडिकल संस्थान के लिए कॉलेज और उसके संबंधित शिक्षण अस्पतालों में आवास, कॉलेज के विभागों और अस्पतालों में कर्मचारियों

कौशल लैव**(i) निम्नलिखित के लिए ट्रेनर सिमुलेटर/मॉडल/पुतले :**

- प्राथमिक उपचार, पट्टी बाँधना, कमठी बाँधना
- बेसिक लाइफ सपोर्ट (बीएलएस), सीपीआर (कार्डियो पल्मोनरी रिससिटेशन) पुतला
- विभिन्न प्रकार के इंजेक्शन - सबक्यूटेनियस, इंट्रा-मस्क्युलर, इंट्रा-वेनस
- मूत्र कैथेटर अंतर्वेशन
- त्वचा एवं पट्टी की सिलाई
- स्तन परीक्षण मॉडल/पुतला
- आईयूसीडी (अंतर गर्भाशय गर्भनिरोधक उपकरण) प्रशिक्षण मॉडल सहित स्त्री रोग संबंधी जांच मॉडल/पुतला
- प्रसूति जांच, संचालन और योनि प्रसव प्रबंधन सहित प्रसूति के पुतले
- नवजात एवं बाल चिकित्सा पुनर्जीवन के पुतले
- संपूर्ण शरीर के पुतले
- ट्रॉमा का पुतला

(ii) प्रत्येक मॉडल (निम्न या उच्च निष्ठा) में उद्देश्यों, विधियों और मूल्यांकन सहित प्रशिक्षण के लिए एक मॉड्यूल होना चाहिए। मॉड्यूल में हाइब्रिड मॉडल भी हो सकते हैं जहां वास्तविक रोगियों या मानकीकृत / नकली रोगियों / कंप्यूटर सिमुलेशन का उपयोग किया जा सकता है।

(iii) पर्याप्त कंप्यूटर के साथ कंप्यूटर सहायता प्राप्त शिक्षा के लिए भी जगह होगी।

डा. अरूणा वी. वणीकर, अध्यक्ष

[विज्ञापन III/4/असा./360/2023-24]

नोट I : ये दिशानिर्देश अंग्रेजी और हिंदी दोनों भाषाओं में प्रकाशित किया जा रहा है, इन दिशानिर्देशों की व्याख्या के बारे में किसी भी संदेह के मामले में अंग्रेजी संस्करण मान्य होगा।

नोट II : इन दिशानिर्देशों से संबंधित अनुबन्ध आयोग के वेबसाइट पर उपलब्ध होगा।

**NATIONAL MEDICAL COMMISSION
(UNDERGRADUATE MEDICAL EDUCATION BOARD)**

NOTIFICATION

New Delhi, the 16th August, 2023

No. U. 11022/3/2023-UGMEB.—In exercise of the powers conferred vide sub-section (a), (d) and (e) of Section 24 read with Sections 26, 28 and 29 of the National Medical Commission Act, 2019 (Act 30 of 2019), the Under Graduate Medical Education Board hereby issues the following detailed "Guidelines under Regulation 10 of the Establishment of New Medical Institutions, Starting of New Medical Courses, Increase of Seats for Existing Courses & Assessment and Rating Regulations, 2023 in short (UG-MSR 2023)" and Regulation 19 of the Graduate Medical Education Regulations 2023.

1. (i) These Guidelines may be called the — "Guidelines for Under Graduate Courses under Establishment of New Medical Institutions, Starting of New Medical Courses, Increase of Seats for Existing Courses & Assessment and Rating Regulations, 2023".

(ii) These Guidelines shall come into force from the date of their publication in the Official Gazette.

CHAPTER-I

Objectives :

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

These regulations shall be applicable for Medical Colleges being established from the academic session 2024-25 onwards. Applications for establishing new undergraduate medical education colleges shall be allowed only for 50/100/150 seats.

- Only such colleges meeting these requirements shall be eligible for continuing their admission of permitted/recognised number of MBBS students from the academic year 2024-2025.
- Colleges seeking increased number of seats cannot exceed a total of 150 MBBS students from the year 2024-25:
- Colleges seeking increase in seats for admission, shall have admitted batch fulfilling all the criteria for number of seats admitted for the preceding academic year and also shall be fulfilling all the requirements for increase in seat capacity;
- Any additional permitted seat quota for admissions shall be within the number of seats granted for admission to that college;
- With the exception that colleges who have applied for academic year 2023-24 for increased seats but failed to get the same, can ask for the same number (totaling 200 or 250) that was in their previous application for one time in the year 2024-25 only.
- After A.Y. 2023-24, Letter of permission (LOP) for starting of new medical colleges shall be issued only for annual intake capacity of 50/100/150 seats;

Provided that medical college shall follow the ratio of 100 MBBS seats for 10 lakh population in that state/

U.T.

Departments: Every medical college/ institution approved for under graduate admissions annually shall have the following departments, namely;

- i. Anatomy
- ii. Physiology
- iii. Biochemistry
- iv. Pathology
- v. Microbiology
- vi. Pharmacology
- vii. Forensic Medicine And Toxicology
- viii. Community Medicine
- ix. General Medicine
- x. Pediatrics
- xi. Psychiatry
- xii. Dermatology
- xiii. General Surgery
- xiv. Orthopaedics
- xv. Radio-Diagnosis
- xvi. Oto-Rhinolaryngology
- xvii. Ophthalmology
- xviii. Obstetrics & Gynaecology
- xix. Anesthesiology
- xx. Dentistry
- xxi. Integrative Medical Research

SCHEDULE -I

ACCOMMODATION IN THE MEDICAL COLLEGE AND ITS ASSOCIATED TEACHING HOSPITALS

A-COLLEGE

A. 1. GENERAL

1.1 Campus

Every hospital seeking permission to start medical college after the publication of this amended regulation

shall comprise of the Medical College, the attached Teaching hospital/(s), and the hostels for the students and interns, with or without the residential area for faculty and other staff of college /hospital. The medical college, hostels for students/interns and the teaching hospital/institution shall be either in a unitary campus or maximum of two campuses.

Each unitary campus shall have adequate constructed area on the land, as per the prevalent building norms, belonging to the college management or if on lease, at least for a period of 30 years on lease. If there are 2 plots/ campuses, then college shall be in single plot. The distance between the plots of college and hospital shall have a travel time of maximum of 30 minutes.

The hospital shall have at least two hundred and twenty (220) beds.

The medical college shall provide adequate built-up space to accommodate various teaching areas (both in the college and the teaching hospital), Library, administrative areas, rooms for teaching and non-teaching staff, student amenities, etc. as specified in various sections of this schedule.

The buildings of the medical college and hospital shall conform to the prevailing building codes and local building byelaws/ norms. The hospitals should have fire-safety measures, including patient evacuation plans as per local byelaws and regulations. They must also comply with the requirements for providing access and facilities to those who are disabled. The buildings of the college and hospital shall meet the requirements for the numbers of students to be admitted as prescribed.

1.2 Administrative Area

There should be adequate accommodation for the Principal/Dean, College Council, Academic and examination sections, Accounts, and other administrative offices (as per the need), the medical education unit and the server room for the computer network.

1.3 College Council

Every Medical College / 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 four 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 regular interdepartmental meetings like grand rounds, statistical meetings, and clinic-pathological meetings including periodical review of research in the institution.

1.4. Central Library

1. There shall be a central library (preferably air-conditioned) with good lighting and adequate space for stocking the books and journals. There shall be provision for:

- (a) Rooms for the Librarian and other staff.
- (b) Reading rooms with adequate seating for twice the number of annual intake of UG students distributed over 2 areas.
- (c) Reading room for faculty.
- (d) Room for stocking old books, journals, etc.
- (e) A computer room with computer nodes with internet facilities for at least 10% of the annual intake of students.

2. Books: There shall be at least thirty (30) books per annual intake of students comprising all subjects with at least two (2) copies of each of the textbooks for every 50 students, for the various subjects in MBBS curriculum.

3. Journals: The minimum number of journals for various annual intake of MBBS students shall be at least one (1) percent of the minimum books prescribed. The journals shall be either in print or electronic form, provided that there shall be at least one (1) print journal of each major specialty departments for MBBS training – Anatomy, Physiology, Biochemistry, Pathology, Pharmacology, Microbiology, Forensic Medicine & Toxicology, Community Medicine, Medicine, Pediatrics, Dermatology, Psychiatry, Surgery, Orthopedics, Otorhinolaryngology, Ophthalmology, Obstetrics & Gynecology, Anesthesia, Radio-diagnosis and Dentistry.

Provided that only journals that are indexed in the following databases i.e. Pubmed Central (PMC), Medline, Science Citation index (SCI), Science Citation Index Expanded (SCIE), Embase, SCOPUS and INDMED/ MedInd will be considered. There shall be evidence for a full annual subscription for all these journals. For every 50 students, there shall be minimum 15 journals and 1500 books. A total of up to 60% of books can be made available as hard copies and the remaining 40% be available in electronic format. Variety of journals shall be the same irrespective of annual student intake.

1.5. Lecture theatres

1. There shall be minimum of four lecture theatres preferably air conditioned, of gallery type in the Institution, each of them with seating capacity for 20% more than the annual student intake (shall provide at least 1.40 sq.m. /student).

2. In case the hospital is not in the same unitary campus there shall be one additional lecture theatre in the teaching hospital with a similar seating capacity as prescribed for the medical college.
3. The Lecture theatres shall have provision for audio-visual and internet facilities and shall be enabled for e-learning with adequate band width. The lecture theatres shall be linked digitally to all teaching areas designated for small group teaching.
4. The lecture theatres shall be shared by all the departments in a programmed manner.

1.6 Small Group Teaching Facilities

The size of each batch for small group teaching shall be about 15 students. The common resource pool of teaching rooms, student practical laboratories, museums and lecture theatres and any other available area that can be utilized for teaching purposes as prescribed in these regulations shall all be utilized for small group teaching and shared by the teaching departments. All the above-mentioned teaching areas shall have audio-visual and internet facilities and be linked digitally to one another.

- a. **Teaching Rooms:** The minimum number of teaching rooms in the medical college for various intake of MBBS students annually to be shared by all the departments (each teaching room shall provide at least 1.2 sq.m/student). To provide adequate small group teaching, appropriate area in each of the teaching specialties and locations shall be made available. Each of such area shall also have a facility to connect to larger lecture halls and internet facilities.
- b. **Student Practical Laboratories.** There shall be practical laboratories, one each for Histology, Clinical Physiology, Biochemistry, Histopathology & cytopathology, Clinical Pathology & Hematology, Microbiology, Clinical Pharmacology, and Computer Assisted Learning (CAL) in Pharmacology. For optimal utilization of the space, labs may be shared by the departments with mutual consent. Adequate work stations shall be provided to ensure the training of students (either for the entire batch or in parts thereof). All the above-mentioned laboratories shall have audio-visual and internet facilities and be linked digitally to all other teaching areas and museums. Facilities for technical staff shall be ensured.

Laboratories may be designed and provided with required facilities appropriately for each department.

The service laboratories for the hospital in the departments of Pathology including Hematology, Biochemistry, and Microbiology can be co-located in the medical college with appropriate additional spacing.

Computer Assisted Learning (CAL) lab in Pharmacology shall have computers with broadband internet and AV aids for computer assisted teaching-learning and assessment activities.

c. **Museum:** There shall be museum/s in the college for teaching Anatomy, Pathology, Forensic Medicine, Pharmacology, Microbiology, and Community Medicine. The specimens/ charts/ skeleton, etc in the museum shall be adequate to train each of the above subjects. In addition to the display area, the museum shall also have sufficient space to seat at least 50 students (at least 1.2 sq. m. per student) and shall have audio-visual and internet facilities and be linked digitally to the Lecture theatres, teaching rooms and practical laboratories. The museum shall have adequate racks and shelves for storing and proper display of wet and dry specimens (where applicable) and models. There shall also be adequate facilities for displaying and viewing radiological and digitalized images. Sharing of the teaching time in museum shall be programmed by the college authorities optimally.

1.7 Skills Laboratory

Every medical institution shall have a Skills Laboratory where students can practice and improve skills pre-specified in the curriculum. The purpose of the skills laboratory is to provide a safe and non-threatening environment for students to learn, practice and be observed performing skills in a simulated environment thus mitigating the risks involved in direct patient exposure without adequate preparation and supervision. The skills laboratory attempts to recreate the clinical environment and tasks which future health care workers have to perform with various levels of complexity and fidelity. *Skills lab is only to prepare the student for clinical exposure. It shall not replace or be used for compensating any hands-on clinical training or conducting examination.* Six (6) weeks of skills lab training including evaluation before the students are posted to the wards for clinical training shall be mandatory.

The skills laboratory shall have a total area of at least 600 Sq.m for intake upto 150 MBBS students annually and 800 Sq.m for intakes of 200 and 250 MBBS students annually, and shall have-

- (a) a minimum of 04 rooms for examination of patients or standardized/ simulated patients,
- (b) a room for demonstration of skills to small groups,
- (c) area for review or debriefing area,

- (d) rooms for faculty coordinator and support staff,
- (e) adequate space for storage of mannequins and/or other equipment,
- (f) facility for video recording and review of the interaction for teaching communication skills,
- (g) stations for practicing skills individually or in groups,
- (h) trainers or mannequins required to achieve skills outlined in the Competency Based Medical Education curriculum for Undergraduates,
- (i) a dedicated technical officer and adequate support staff,
- (j) the teaching areas of the skills lab shall have provision for audio-visual and internet facilities and shall be enabled for e-learning.

1.8. Department Offices, Rooms For Staff And Other Requirements

Every Teaching Department shall have:

- (k) room for Head of Department with Space for Department Office, for office staff and storage of records
- (l) rooms with adequate space for teaching faculty, and Tutors/Demonstrators/ Residents (both Junior & Senior)
- (m) rooms for faculty, provided with communication, computer and internet facilities.
- (n) rooms for non-teaching staff.

1.9. Medical Education Unit

There shall be a Medical Education Unit for faculty development and providing teaching or learning resource material. The Unit shall have provision for audio-visual and internet facilities. The requirements of this unit shall be as prescribed by the Undergraduate Medical Education Board of National Medical Commission from time to time (it shall have an area of at least 150-160 sq.m).

2. Research Facility

A well- equipped research facility shall be available to be used by all departments. The details are covered under Annexure 1.

2.1. Communication Facilities

Adequate communication network (land line or hardware network or wi fi) between various sections of the college and hospitals shall be provided for better services, coordination and patient care.

2.2. Student Amenities

Student amenities including facilities for common rooms for boys and girls (separate), cafeteria, cultural activities, Yoga training, gymnasium, outdoor and indoor games, shall be provided.

2.3 Child Care Centre

A Child Care Centre shall be established in the medical college with adequate facilities for taking care of the infants and the children of staff of the medical college and/or teaching hospital.

3. Aadhar Enabled Biometric Attendance System (AEBAS) & Close Circuit TV Monitoring of Medical Colleges / Institutions And Hospitals:

The medical college/ institution shall be responsible for the installation and maintenance of AEBAS, close circuit camera and HMIS and other Information Technology as prescribed from time to time.

3.1 AEBAS:

- i) All Medical Colleges/Institutions shall install AEBAS to be linked to Command-and-Control center of NMC.
- ii) *The daily AEBAS of the required staff (faculty, residents and supporting staff), preferably along with face linked recognition, shall be made available to NMC as well as on the Medical College Website in the form of daily attendance dashboard.*

3.2 Minimum requirement of attendance:

It shall be mandatory to have at least 75% attendance of the total working days (excluding vacations) for all faculty and resident doctors. During vacation period, other than sick leave or leaves availed due to emergency situations, the faculty on duty shall not be availing any leave. Emergency leaves shall be certified by Head of the

department or Head of the institution.

AEBAS, preferably with face recognition of all students attending every lecture/ teaching class/ seminar shall be recorded and linked to NMC.

3.3 Close Circuit Camera:

Every medical college shall have prescribed number and location of cameras with Close-Circuit Television (CCTV) system in the medical college and shall provide live streaming of classroom teaching, patient care in the teaching hospital and any other area as specified from time to time (*Annexure II*), to enable the Commission to maintain a constant vigil on the standard of medical education/ training being imparted.

The live streaming of both classroom teaching and hospital, shall be integrated with the appropriate virtual monitoring/ teaching system of the National Medical Commission.

3.3 (a): College Website:

- 1) Every college /institute shall have its own website which shall contain the details mentioned in (*Annexure III*) to be updated in the first week of every month or earlier if any changes are made.
- 2) There shall be a separate dynamic dashboard for the hospital including details of clinical material in the hospital (OPD and IPD) (*Annexure III*).
- 3) Adequate Qualified Information Technology (IT) manpower, preferably two (02) persons with minimum BE/ B. Tech qualification to maintain these data shall be employed by the college.

4. Biomedical Waste Management

The Medical Institution must ensure compliance with the Bio-medical Waste (Management & Handling) Rules, 2019 and as notified from time to time. They shall have a robust institutional policy on biomedical waste management of human origin, with a well-defined arrangement for segregation and discarding of biomedical waste. Facilities for biomedical waste management shall be commensurate with the Central/State legislations.

Registration at state level shall be made with registration certificate & receipt of fee paid should be available. Provision for Fire-safety & PWD-friendly arrangements must be established. Power management with evidence of use of amount must be available as and when required for assessment of facilities. This shall be under the direct supervision of Superintendent/ Head of the Institute in close coordination with Department of Microbiology.

5. Hostels For Students, Interns And Resident Doctors.

The College/Institution shall provide furnished accommodation for atleast 75% students, interns, and Resident Doctors. It is desirable that hostel rooms are double accommodation facilities. Adequate recreational, dining and 24x7 security facilities shall be provided at the hostels. However, those who do not wish to avail of the hostel facilities shall be allowed to choose their own residential facilities without the college collecting 'hostel fees'.

6. Department Specific Requirements

The equipment for each department may be as per existing norms to train students adequately.

Other facilities for training:

6.1. Department of Anatomy

Dissection Hall – There shall be a dissection hall to accommodate 50% of annual student intake (area of at least 4.20 Sq.m/student shall be provided which shall be sufficient for ante-room for students with lockers, wash basins, embalming room, space for storage tanks and cold storage room or cooling cabinets with sufficient space. Every academic year, at least one cadaver shall be provided for every 10 students. Dissection hall shall be well lit, well-ventilated with exhaust fans. There shall be adequate teaching aids in the hall. Annual declaration about the details of every cadaver shall be provided by the college.

6.2 Department of Forensic Medicine and Toxicology:

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 10-15 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 by the departments of Pathology and Forensic Medicine. Every college shall obtain appropriate permission from the state/ UT government for the conduct of autopsy/ post mortem or an appropriate MOU to facilitate the training of undergraduate students.

6.3. Microbiology department shall have separate service laboratory each for (a) Bacteriology including anaerobic bacteria; (b) Serology; (c) Virology; (d) Parasitology; (e) Mycology; (f) Tuberculosis; and (g) Immunology.

The Virology Service Laboratory shall be a BSL-2 level laboratory (as per e-gazette No. MCI -34(41)/2020-Med./103234 notified on 3.6.2020)

6.4. Department of Pharmacology

Animal holding area. For teaching Pharmacology in undergraduate curriculum, the required knowledge and skills should be imparted by using computer assisted module. However, if research and postgraduate training is envisaged, only an animal hold area, as per CPCSEA Guidelines is required.

6.5. Department Of Community Medicine: Staff requirements for RHTC & UHTC keeping in mind NHM population (RHTC – 30000 population & UHTC 50000 population). Medical Officer with MD qualification i.e. Assistant Professor may be made able to provide more quality education to UG CBME, CRMI and PGs in addition to quality care for the rural and urban populations. If a trained PHN is not available, trained staff nurse with community field experience for UHTC and RHTC shall be made available.

(a) Rural/ Urban Health Training Centre:

For every hospital seeking permission to start medical college, the medical college shall have Rural Health Training Centers/Community Health Centers/Urban Health Centers affiliated to it; as per the geographical location of the college, which shall be used for internship training. The number of these centers adopted by the college should fulfil the need of posting 15 interns per center as required in CRMI regulations 2021.

These centers shall be owned by the college or it should be affiliated to Government owned Health Center. If it is the latter, the academic control shall be with the Dean/Principal of the college for training of 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 X category (Tier-1) cities as amended where it shall be within 50 kms. Separate residential arrangements for boys and girls 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.

Manpower	RHTC for population of 30,000 and UHTC for population of 50,000				
	50	100	150	200	250
Students					
Assistant Professor in-charge (in rotation) & MO (one male, one female) (at least one must be a Lady Medical Officer)	2	2	2	2	2
PHN/trained staff nurse with community field experience	1	2	2	2	2
ANM	2	2	4	5	5
Medical social worker	1	2	3	4	5
Technician/ Technical Assistant	1	1	1	1	1
Pharmacist	1	1	1	1	1
Sanitary inspector/Health inspector	1	1	2	2	2
Health educator	1	1	1	1	1
Store keeper/ record clerk	1	1	1	1	1

- There should be complete computerization of RHTC and UHTC patient record system.
- The distance of RHTC from medical college may need to have some flexibility in case of megacity or Metro cities where immediate rural field practice area may not be feasible.
- In case of megacity or Metro cities, there is need to have flexibility of adoption of families in various areas including urban slums.
- In case of megacity or Metro cities, there is need to have flexibility of distribution of interns in various OPDs of the teaching hospital like TB clinic, immunization clinic, anti-rabies clinic, which are also important learning outcomes for interns in addition to current CRMI postings.
- Since all infrastructural requirements can be easily fulfilled at the start of the college and one time,

there is need for a separate museum for Community Medicine. In addition, it will also bring ownership of the dept to develop in own museum and may not be possible in shared museum.

- Every medical college shall have one Rural Health Training Center and Urban Health Training Centre running as like teaching hospital before the first inspection/assessment or first LOP.

B. Teaching Hospital

B.1. General remarks

1. The hospital building shall conform to the existing national building norms and various local statutory regulations for hospitals taking into consideration the requirements of the hospital as a service provider including administration, registration, records storage, out-patient and inpatient areas, operating theaters, CSSD, ICUs, Radiology and laboratory services, emergency areas, etc. The teaching hospital shall provide for the minimum requirements as prescribed in these regulations.

2. Space for Clinical Teaching Departments, Teaching faculty and Residents.

- (iv) When the teaching hospital and medical college are in a unitary campus, rooms for the clinical departments and its teaching faculty can be provided either in the medical college or in the teaching hospital.
- (v) When the teaching hospital and medical college are on separate plots, besides the statutory requirements for the hospital, the teaching hospital shall also have adequate space for the offices of the clinical departments and rooms for the teaching faculty.
- (vi) Teaching rooms. The teaching hospital shall have atleast 1 (one) teaching area for each of the department to accommodate atleast 30 students for clinical cases discussions/ demonstrations. Each such room shall have audio-visual facilities. Small group teaching in clinical departments essentially entails out-patient clinic and bed side teaching. However, additional teaching rooms shall be provided as required for any of the Clinical teaching departments. Internet facilities and connectivity to all teaching areas of the hospital shall be desirable.

B.1.1. B.1.1 Outpatient Area

1. There shall be a minimum daily OPD attendance of 8 patients (old & new) per student intake annually in the specialties/subjects of undergraduate curriculum.
2. The Out-patient areas should have adequate reception and patient waiting halls, consultation rooms, examination rooms and other ancillary facilities commensurate with the clinical specialty department.

B.1.2. Indoor beds occupancy : Average occupancy of indoor beds shall be a minimum of 80 % per annum. Bed strength shall be as under:

BEDS FOR MBBS SEAT CAPACITY	50	100	150	200	250
GENERAL MEDICINE	50	100	150	220	225
PEDIATRICS	25	50	75	100	125
DERMATOLOGY	5	10	10	10	10
PSYCHIATRY	5	10	15	20	25
GENERAL SURGERY *	50	100	150	150	200
ORTHOPEDICS	20	40	60	80	100
OTORHINOLARYNGOLOGY(ENT)	10	20	20	30	30
OPHTHALMOLOGY	10	20	20	30	30
OBSTETRICS & GYNAECOLOGY	25	50	75	100	125
ICUs	20	20	30	30	30
TOTAL	220	420	605	770	900
OPD/DAY	400	800	1200	1600	2000
Major OT	4	7	9	10	11
Minor OT- well equipped (with Anaesthesia facility)	1 for each surgical specialty				

* For hospitals with 100 or more beds dedicated for Gen. Surgery, at least 10% shall be dedicated to Pediatric

Surgery.

1. The bed strength of the teaching hospitals shall be as mentioned in the table above. Supporting staff shall be in adequate number as required.
2. There shall be well equipped and updated intensive Care Unit (ICU), Intensive Coronary Care Unit (ICCU), Intensive Respiratory Care unit, Paediatric intensive care (PICU) and Neonatal Intensive care unit (NICU), Critical care Burns unit, Post-op surgical critical care unit, Obstetric HDU/ICU.
3. All beds which are available for teaching and training of undergraduate medical students shall be counted towards teaching beds as indicated above.
4. Wherever possible, the facilities available in other hospital services may be utilized for training in these specialties.

B. 2. Hospital Infection Control Committee (HICC): There shall be a HICC as per the national recommendations for health care facilities with Head of the institute / Medical Superintendent as the Chairperson and senior Microbiologist (Associate Professor/ Professor) as member- Secretary of the committee. Appropriate number of infection control nurses and senior technicians of the lab shall be appointed in this committee as per the bed strength of the hospital. This committee shall address and periodically review Infection control, anti-microbial resistance and antibiotic policy.

B. 3. Indoor Department Requirements:

The following shall be available with each ward, namely:

1. In a General ward, distance between the two beds shall not be less than 1.5 m with all facilities.
2. 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.
3. Examination and Treatment room.
4. Pantry.
5. Store room for linen and other equipment.
6. Resident Doctors and students Duty Room.
7. Clinical Demonstration area.
8. High Dependency Unit (HDU)

B. 4. The Operation Theatres shall confirm to existing norms. The minimum number of major and minor operating theaters for varying annual intake shall be as indicated in the table mentioning Bed strength for each department.

B. 5. Casualty services/ Emergency medicine department shall be managed by relevant Departments 24 x 7 by rotation. Every hospital shall have their own triaging policy. Accommodation for Resuscitation Services including Oxygen supply, ventilators, defibrillator and fully equipped disaster trolleys (emergency trolleys), Emergency X-ray, investigative facilities shall be provided.

Students shall be made aware about these services during their clinical postings.

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.

The shifting of patients from casualty/ emergency medicine department to ICU / Surgery should be such that minimum time is lost in patient shifting.

B. 6. Central Sterilisation Services, laundry: shall confirm to existing norms.

B. 7. Department Of Radio-Diagnosis:

Requirements shall be as per existing norms. The staff of Radio-Diagnosis department shall be covered by Personal Monitoring System of BARC.

There shall be facilities for conventional, static and portable X-rays, fluoroscopy, contrast studies, ultrasonography and computerized tomography. It shall be having at least two X-ray machines of 500 mA capacity or higher with computerized/ digitized radiography, two USG machines with at least one of them having colour Doppler to support cardiovascular studies and linear probe.

There shall be digital record room for all the investigations done in the department. All the machines shall be duly certified by appropriate authority.

The room sizes for various Diagnostic Imaging Systems shall be as per the provision of the Atomic Energy Regulatory Board Safety Code.

B. 8. Department Of Anaesthesiology : In addition to routine requirements to be planned by the department, there shall be facilities;

To provide emergency services, minimum of 2 Emergency OTs working 24 X 7 for emergency including Trauma patients and one separate OT available 24 X 7 should be there for Obstetric emergencies. Facility for Labour analgesia should also be available.

(a) Pre-Anesthesia Check-up (PAC) Room.

Adequate room as per OPD Norms, Can be in main OPD complex or near OT complex. With facility for Patient examination tables, Height & Weighing machine, BP apparatus, SpO₂, adequate staff for management.

(b) Pain Clinic: It shall be desirable to have a pain clinic under department of Anesthesiology. It shall have adequate room as per OPD Norms, can be in main OPD complex or near OT complex. It shall have facilities including patient examination tables, BP apparatus, SpO₂ along with adequate staff for management. If any patient requires admission for pain management, the parent unit shall provide the privileged bed in concerned unit. The requirements for Pain Clinic/ OT like RF ablation, Fluoroscopy, USG in pain clinic, Syringe pumps, Catheters, OT tables may be made available as per clinical load and functioning of Pain services with shared facilities with other departments like Orthopedics, Neurosurgery, Oncology etc. The department shall have a good documentation policy.

B. 9. Central Laboratory:

There shall be well-equipped and updated central laboratory preferably along with common collection area for all routine investigations in haematology, clinical pathology, microbiology- serological tests based on ELISA, Chemiluminescence, rapid tests, Clinical biochemistry- Photometric tests, Chemiluminescence based tests, electrolytes, ABG etc. Separate lab may be set up in the departments for any other specialized work. As far as possible, there shall be a facility in the central lab for collection of all samples and dispatch of reports. Respective sections of central laboratory shall be managed by respective teaching departments of the medical college and overall coordination may be managed by one of the HODs of the related teaching departments of the medical college, which may be arranged in rotation for every 1 or 2 years.

The number of samples in Histopathology lab shall be at least 20% of total major surgeries, number of samples in cytopathology lab shall be at least 1% of the total hospital OPD. The number of samples in Hematology lab, Clinical Pathology, and Clinical Biochemistry shall be at least 15% of OPD and 30% of indoor beds, and in Microbiology, these shall be at least 30% of indoor beds and 50 % of total surgery cases.

B. 10. Blood Bank

There shall be a well-equipped air-conditioned Blood Bank capable of providing component therapy. The Blood bank and Blood transfusion services should conform to the guidelines of the National AIDS Control Organization and as prescribed in Schedule-F Part XII-B to the Drugs and Cosmetics Rules, 1945 amended time to time.

The Blood Transfusion services should be under the administrative control of the teaching Department of Pathology of the medical college when there is no separate Department of Transfusion Medicine.

B.11. Department of Yoga (Recommended)

Every college may start a Yoga department with a minimum of one male and one female Yoga instructor/trainer to train the students and faculty in Yoga. The trainers shall be employed or engaged by the college. Consultation with AYUSH ministry or its guidelines as prescribed from time to time, or local AYUSH centers could be utilised.

B.12. Department of Radiation-Oncology is recommended with at least one qualified Radiation Oncologist.

The department of radiation-oncology shall be planned in accordance with the regulatory requirements and approval of AERB. It would be desirable to start an OPD to begin with, in view of the rising incidence of malignancies in the country. This department may 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. Prior BARC approval of the radiation therapy rooms/plan along with complete layout of the entire department is mandatory.

B. 13. Anti-Retroviral Therapy (ART) Centre

Every Teaching Hospital should have Anti-Retroviral Therapy (ART) Centre and facility for management of Multi-Drug Resistant (MDR)-TB.

B. 14. Pharmacy services. There shall be 24-hr pharmacy services to cater to the out-patient, emergency and other patients attending the teaching hospital. It shall have qualified Pharmacist in-charge and other staff certified by statutory authorities to dispense the drugs.

B. 15. Electricity, Water, Sanitation

There shall be continuous electricity, water supply. Appropriate UPS/ Generator shall be available. Trained staff to support uninterrupted electricity and water, 24 x 7 shall be available. Adequate sanitary facilities for patients and staff shall be made available.

SCHEDULE II- STAFF REQUIREMENTS**A. General Remarks:**

1. Emphasis in medical education being on practical instruction and demonstration in small groups and encourage students for self-directed learning, the number of teachers must be as mentioned in requirement here so as to enable instructions to be imparted effectively.
2. The teaching staff of all departments of medical college, shall be full-time; faculty shall not indulge in private practice during college functioning hours.
3. These regulations cover the minimum requirements of under graduate medical education as per the annual MBBS student intake and the minimum patient load indicated in these regulations. However, the medical colleges/institutions and teaching hospital(s) need to make provision for additional staff as indicated below.
 - a) Additional staff shall be provided proportionate to the workload.
 - b) Non-teaching staff shall also be required in OPD, Indoors, Operation theatres and Intensive Care areas, emergency care area, labour room, clinical laboratories, or for outreach work where work load is heavy or is of a specialized nature.
 - c) Additional teaching staff shall be required when starting postgraduate courses in accordance with "Postgraduate Medical Education Regulations" as prescribed from time to time.
4. In department of Anatomy, Physiology, Biochemistry, non-medical teachers may be appointed to the extent of 15% of the total number of posts in the department subject to non-availability of medical teachers. The above mentioned non-medical teachers and the Statistician in the department of Community Medicine should possess qualification in that particular subject from a recognised University as per requirements in Teacher Eligibility Qualification Regulations.
5. Post of junior cadre faculties up to Assistant Professors can be filled by senior cadre faculties; for example Assistant Professor, by Associate Professor or Professor. Similarly Associate Professor by Professor. Tutors/Demonstrators and S.Rs. together shall meet the total number of required persons.
6. Faculty position shall conform to "Minimum Qualifications for Teachers in Medical Institutions" regulations.
7. Senior Resident Doctors (SRs) shall be postgraduate candidates of the corresponding specialty or department. Tutors shall be MBBS candidates. Demonstrators shall be postgraduates with PhD in the subject to be appointed, and not having qualifications of MBBS.
8. Teachers appointed as faculty in super-specialty departments shall not be counted against the complement of teachers required for under graduate medical education in broad specialty departments. However, teachers appointed in a broad specialty department who may also have super-specialty qualifications shall be counted against the complement of teachers required for under graduate medical education in the concerned broad specialty department.
9. Visiting faculty. With a view to enhance the comprehensiveness and quality of teaching of undergraduate students, "Visiting Faculty" may be appointed as prescribed in "Minimum Qualifications for Teachers in Medical Institutions" regulations over and above the minimum faculty prescribed herewith. The Visiting Faculty, however, shall not be considered as faculty as per minimum requirements prescribed herewith.

Each department of the medical college shall have a Head of the Department of the rank of Professor who shall have overall control of the Department. As an exception, the departments of Dermatology, Psychiatry, and Dentistry where Associate Professor or an Assistant Professor with more than 5 years of teaching experience may be the Head

of the Department who shall have overall control of the Department till full-time Professor is appointed or the concerned faculty is promoted to the post of Professor. Such exemption shall be available for a maximum period of five (5) years.

In addition to the staff indicated, additional Senior Residents and Junior Residents or Medical Officers shall be provided according to the clinical load in various areas of the hospital such as wards, Labour room, intensive care areas, emergency wards, and clinical laboratories and investigative departments of the hospital, for providing services round the clock. Also, unit of the teaching departments should have at least 02 (two) Junior Residents or postgraduates / M.O.s for patient care.

Ancillary staff including Social workers, Clinical Psychologists, Audiometry technicians, Speech Therapists, Optometrists, Physicists, Technicians, Attendants, Library staff, and others shall be employed as per the requirements.

FACULTY REQUIREMENT FOR MBBS ADMISSIONS

S. No.	Department	Designation	50 seats	100 seats	150 seats	200 seats	250 seats
1	ANATOMY	Professor	1	1	1	1	1
		Associate Prof.	1	1	2	2	3
		Asst. Prof.	2	2	3	4	5
		Tutor/ Demonstrator	3	4	5	6	8
		Senior Resident	1	2	3	4	4
2	PHYSIOLOGY	Professor	1	1	1	1	1
		Associate Prof.	1	1	2	2	3
		Asst. Prof.	1	2	2	4	5
		Tutor/ Demonstrator	2	3	4	5	5
		Senior Resident	1	2	3	4	4
3	BIOCHEMISTRY	Professor	1	1	1	1	1
		Associate Prof.	1	1	2	2	3
		Asst. Prof.	1	2	2	3	4
		Tutor/ Demonstrator	2	3	4	4	4
		Senior Resident	1	2	3	4	4
4	PHARMACOLOGY	Professor	1	1	1	1	1
		Associate Prof.	1	1	2	2	3
		Asst. Prof.	1	2	3	4	4
		Tutor/ Demonstrator	2	3	4	6	6
		Senior Resident	1	2	3	4	4
5	PATHOLOGY	Professor	1	1	1	1	1
		Associate Prof.	1	2	3	3	4
		Asst. Prof.	1	3	3	4	5
		Tutor/ Demonstrator	2	4	5	6	6
		Senior Resident	1	2	3	4	4
6	MICROBIOLOGY	Professor	1	1	1	1	1
		Associate Prof.	1	1	2	2	3
		Asst. Prof.	1	2	3	3	4
		Tutor/ Demonstrator	2	4	4	5	5
		Senior Resident	1	2	3	4	4

7	FORENSIC MED. TOXICO	Professor	1	1	1	1	1
		Associate Prof.	1	1	1	1	2
		Asst. Prof.	1	1	1	2	4
		Tutor/ Demonstrator	1	2	3	4	4
		Senior Resident	1	2	3	4	4
8	COMMUNITY MEDICINE	Professor	1	1	1	1	1
		Associate Prof.	1	2	2	3	3
		Asst. Prof.	2	3	4	5	6
		Statistician (Minimum A.P. level)	1	1	1	1	1
		Tutor/Demonstrator	1	2	3	4	5
		Senior Resident	1	2	3	4	4
9	GENERAL MEDICINE	Professor	1	1	1	1	1
		Associate Prof.	1	3	4	6	7
		Asst. Prof.	2	4	5	7	8
		Senior Resident	2	4	5	7	8
10	PEDIATRICS	Professor	1	1	1	1	1
		Associate Prof.	1	1	2	3	3
		Asst. Prof.	1	2	3	4	5
		Senior Resident	1	2	3	4	4
11	DERMATOLOGY	Professor	0	0	1	1	1
	Prof/ Assoc. Prof. upto 100 seats	Associate Prof.	1	1	1	1	1
		Asst. Prof.	1	1	1	1	1
		Senior Resident	1	1	1	1	2
12	PSYCHIATRY	Professor	0	0	1	1	1
	Prof/ Assoc. Prof. Upto 100 Seats	Associate Prof.	1	1	1	1	1
		Asst. Prof.	1	1	1	1	1
		Senior Resident	1	1	1	1	2
		Clin. Psychologist	1	1	1	1	1
13	GENERAL SURGERY	Professor	1	1	1	1	1
		Associate Prof.	1	3	4	6	7
		Asst. Prof.	2	4	5	7	8
		Senior Resident	2	4	5	7	8
14	ORTHOPEDECS	Professor	1	1	1	1	1
		Associate Prof.	1	1	2	3	3
		Asst. Prof.	1	2	3	4	5
		Senior Resident	1	2	3	4	4
15	OTORHINOLARYNGIOLOG Y (ENT)	Professor	0	1	1	1	1
	Prof/ Assoc. Prof. Up to 50 Seats	Associate Prof.	1	1	1	2	2

		Asst. Prof.	1	1	2	2	3
		Senior Resident	1	1	2	2	3
16	OPHTHALMOLOGY	Professor	0	1	1	1	1
	Prof/ Assoc. Prof. Up to 50 Seats	Associate Prof.	1	1	1	2	2
		Asst. Prof.	1	1	2	2	3
		Senior Resident	1	1	2	2	3
17	OBSTETRICS & GYNECOLOGY	Professor	1	1	1	1	1
		Associate Prof.	1	1	3	4	4
		Asst. Prof.	1	2	4	4	5
		Senior Resident	1	2	4	4	5
18	ANESTHESIOLOGY	Professor	1	1	1	1	1
		Associate Prof.	1	2	3	4	5
		Asst. Prof.	2	4	5	5	6
		Senior Resident	2	3	4	5	5
19	RADIODIAGNOSIS	Professor	0	1	1	1	1
	Prof/ Assoc. Prof. Up to 50 Seats	Associate Prof.	1	1	1	1	2
		Asst. Prof.	1	1	2	3	3
		Senior Resident	1	2	3	3	3
20	DENTISTRY	Professor	0	0	0	1	1
	Prof/ Assoc. Prof. Up to 100 Seats	Associate Prof.	1	1	1	1	1
	Not required if Dental coll Present in campus/ city/ town	Asst. Prof.	1	1	1	1	1
		Senior Resident	1	1	1	1	1

TOTAL STRENGTH

	PROF	ASSOC. PROF	ASST. PROF	TOTAL	TUT/DEMO	SR
50 SEATS	14	20	25	59	15	23
100 SEATS	17	27	41	85	25	40
150 SEATS	19	40	55	114	32	58
200 SEATS	20	51	70	142	40	73
250 SEATS	20	62	86	168	43	80

SCHEDULE III**LIST OF EQUIPMENTS** (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 for teaching of MBBS students. For providing service to the attached hospital, the requirements would have to be provided accordingly. They are not meant to be an exhaustive list and the staff of the various departments will use their experience for equipping the departments.

Department of Anatomy:

A)	Name of items (Quantity may be procured at the discretion of the department as per requirement)
1.	Table with marble or stainless-steel top with a minimum size of 6' x 2' x3'
2.	Tables with marble or stainless-steel tops - half standard size
3.	Drill machine
4.	Hand saw, preferably metal
5.	Band saw for sectioning body and limbs
6.	Stools, preferably metal
7.	Brain knife
8.	Mortuary cooler with arrangement to keep at least 8 bodies or suitable alternative arrangement
9.	Storage tank to hold 10 cadavers, static/movable, durable tank with input and output facility with lid
10.	Plastic tanks for storing soft and dissected parts
11.	Trolley Table (Steel)
12.	Multimedia Projector with screen
13.	Movie camera with projection screen
14.	Computer with internet connection, & video CD library
15.	X-ray View box
16.	X-Ray plates/MRI/CT scan/USG
17.	Charts, Diagrams, Models, Slides etc.
18.	Dissecting instruments
19.	Meat cutting machine for thin body sections (trans and vertical) for gross anatomy sectional study
20.	Steel trays (big & small)
21.	Cadavers
22.	Embalming machine
(B) HISTOLOGY	
23.	Microscopes
24.	Dissection microscope
25.	Microtome, rotary
26.	Microtome, Sledge, large cutting
27.	Cabinet for slides (1000)
28.	Incubators
29.	Paraffin embedding bath
30.	Hot plates for flattening sections
31.	Hot air oven for drying slides (450° C)
32.	Refrigerator (minimum 165 L)
33.	Diamond pencils
(C) MUSEUM	
34.	Articulated Skeleton set
35.	Disarticulated Bone set
36.	Wet Specimen jars (Glass)
37.	Steel Racks
38.	Desktop Computer/Laptop with printer-scanner-copier facility

2. Department of Physiology

S.No.	NAME OF THE ITEMS (Quantity may be procured at the discretion of the department as per requirement)
1.	Microscopes, oil immersion
2.	Demonstration eye piece
3.	Double demonstration eye piece
4.	Stage incubator
5.	Westergren's pipette for E.S.R. on stand (with space pipette)
6.	Wintrobe's pipette for ESR and PCV withstand
7.	Hemoglobin-meter Sahli's or Hellige (with spaces)
8.	Hemocytometer
9.	Thermometers, balances, microslides and glassware
10.	Multi-channel Physiograph,3 channels, complete with accessories
11.	Centrifuge, high speed with technometer
12.	Colorimeter, photoelectric
13.	pH meter electric
15.	Digital Physiograph
16.	Digital Perimeter
17.	Sphygmomanometer(digital) (Mercury based instruments to be replaced with suitable alternatives)
18.	Stethoscope
19.	Stethoscopes, demonstration with multiple ear pieces
20.	Polygraphs
21.	Spirometer, ordinary
22.	Digital Spirometer
23.	Mosso's Ergograph
24.	Clinical thermometer
25.	Compass aesthesiometer
26.	Thermo-aesthesiometer
27.	Algometer
28.	Knee hammer
29.	Stethograph
30.	Bicycle Ergometer
31.	Olfactometer
32.	Ophthalmoscope

33.	Schematic eye
34.	Color perception lantern Edridge green
34.	Dynamometer
35.	Otoscope
36.	Stop watch
37.	Digital ECG Machine
38.	Yoga Mat
40.	Tuning fork to test hearing 32-10000 cps (100, 256, 512Hz)
41.	Van Slyke's apparatus manometric (Desirable)
42.	Venous pressure apparatus (Desirable)
43.	Douglas bag, complete (Desirable)
44.	Basal metabolism apparatus (Desirable)
45.	Apparatus for passive movement (Desirable)
46.	Phakoscope (Desirable)
47.	Perimeter with charts (Lister's) (Desirable)
48.	Maddox rod (Desirable)
55.	Newton's color wheel (Desirable)
56.	Student physiograph (single channel) with accessories (Desirable)
57.	Gas analyser automatic for CO ₂ , O ₂ , N ₂ (Desirable)
59.	Sherrington Starling kymograph (electrically driven) Complete assembly
60.	Electromagnetic time marker
61.	Myograph stand
62.	Electronic stimulator
63.	Tuning fork time marker 100/sec
64.	Electrodes
65.	Spirit lamps
66.	Marey's tambour
67.	Softwares to demonstrate Amphibian and mammalian experiments (Desirable)
68.	Low voltage unit for tapping 2 and 4 volts for stimulation (Desirable)
GENERAL	
69.	Centrifuge, high speed with technometer etc.
70.	Refrigerator, 9-10c ft.
71.	Water distillation still, with spare heating elements

72.	All glass distillation apparatus double stage
73.	Voltage stabilizer
74.	Stepdown transformers

3. Department of Biochemistry

S. No.	NAME OF THE ITEMS (Quantity may be procured at the discretion of the department as per requirement)
1.	Analytical Balance : up to 200 g/1gm increment
2.	Urinometers calibrated (Mercury based instruments to bereplaced with other alternatives)
3.	Hot air oven (More than 200 litres)
4.	Digital Colorimeters
5.	Student Microscopes
6.	Glucometer with strips (For POCT)
7.	Thermometer 0 – 250 degree Celsius
8.	Semi autoanalyzer
9.	Boiling Water baths
10.	Constant temperature water bath Tank Capacity:(Temperature range 5 to 80 degree Celsius)
11.	Centrifuge clinical for ≥ 8 tubes
12.	pH meters of wide range digital
13.	Fixed volume pipettes -- 1ml,0.5ml,0.2ml,0.1ml and 0.02ml
14.	Bottle dispensers
15.	Variable and fixed volume micro auto pipettes
16.	Vacutainer Tube
17.	PCR Machine (either in the institution or elsewhere on a visit)
18.	ABG Machine
19.	Autoanalyzer (either in the institution or elsewhere on a visit)
20.	Complete Chromatographic Unit for paper & TLC (either in the institution or elsewhere on a visit)
21.	Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose) (either in the institution or elsewhere on a visit)
22.	Densitometer with computer
23.	Vortex mixers
24.	Incubator 37 ^o C
25.	Fume cupboard
26.	Digital Analytical Balance
27.	Balance Micro
28.	Spectrophotometer
30.	PCR machine (either in the institution or elsewhere on a visit)
31.	ELISA Reader and washer

32.	Urine strips for Glucose & Protein
33.	ISE analyzer
34.	Refrigerators (Minimum - 400 Ltrs capacity)

Note: Equipments for student demonstration may be shared by the departments to prevent duplication and make cost effective.

(4) Department Of Pathology (for demonstration)

5. Cytopathology section

- Cytospin
- Auto stainer
- Facilities for liquid-based cytology

6. Hematology section

- Electrophoresis apparatus
- HPLC
- Flow cytometry –Desirable

7. IHC

- Immuno fluorescence Microscope

8. Molecular Diagnostic

- Conventional PCR
- Real time PCR

(a) Clinical Laboratory:

S.No.	NAME OF THE ITEMS (Quantity may be procured at the discretion of the department as per requirement)
(A)	General
I	Histopathology / Cytopathology for Students
1.	For Students – LED Binocular with Scanner, 10X, 40X, & Oil immersion lenses and inbuilt Battery backup power source
II	Hematology for Students
2.	Stop watch reading at 1/5 second.
3.	Haemo-cytometers with red and white pipettes
4.	Staining jars for slides.
III	Clinical Pathology for Students
1.	Urinometers(Mercury based instruments to be replacedwith other alternatives)
2.	Centrifuge tubes graduated.
3.	Graduated cylinders for various capacities ranging from100 cc to1000 cc. (For Students)
4.	Pipettes of various sizes with disposal tips. (For Students)
5.	Reagent bottles (For Students)
6.	Dropping bottles (For Students)
7.	Reagents (For Students)
(B)	Morbid Histology and Morbid Anatomy
1.	Manual Rotary Microtome
2.	Automated Rotary Microtome

3.	Cryostat
4.	Hot plate
5.	Paraffin embedding bath
6.	Heated Paraffin Embedding Module
7.	Cold Plate for Modular Tissue Embedding System
8.	Automated Tissue Processor - Histokinette
9.	Autoclave
10.	Ultrapure water solutions - Distilled water plant
11.	Water bath
12.	Centrifuge machine
13.	Digital SLR at least 20 megapixel with micro, macro, wideangle zoom lenses, Flash and other accessories
14.	Digital Automatic camera > 5 megapixel
15.	Fully Automated high throughput Multi-Stainer Workstation
16.	Fully Automated Embedding System (Heated embedding module & cold plate) (desirable)
17.	Fully Automated Flexible Coverslipping Workstation (aspirational)
18.	Standalone paraffin dispensing module cold plate holding more than 100 cassettes
19.	Stand-alone cold plate
20.	Single Pan Digital Balance, Chemical
21.	Balance, chemical with weights
22.	Microscopes
23.	Grossing Station - 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.
24.	Fully Automated Immuno-histo-chemistry Setup with Continuous supply of Important Antibodies, Lymphoma Panel etc. (for Post graduate training)
(C) Hematology Lab: For demonstration	
25.	Five part Fully Automated Cell Counter
26.	Three Part Fully Automated Cell Counter
27.	Coagulometer (Fully automated)

(5) Department Of Microbiology

S.No.	NAME OF THE ITEMS (Quantity may be procured at the discretion of the department as per requirement)
(A)	
1.	Microscopes (Specified as in Pathology)
2.	Culture Plates/ Petri Dishes
3.	Glass wares including Pasteur Pipettes
4.	Facility for heating slides
(B) General	
5.	Anaerobic apparatus
6.	Autoclave
7.	Balance Electronic Digital

8.	Biosafety Cabinet Type - 2A
9.	BOD Incubator
10.	Centrifuge
11.	CO2 Incubator/Candle Jar
12.	Computer Unit
13.	Deep Freeze -20° C & Deep Freezer
14.	Distilled water Plant
15.	Elisa Reader with washer
16.	Hot Air Oven
17.	Incubator
18.	Lab Refrigerator (minimum 400 litres)
19.	Laminar flow
20.	Micrometer eye pieces
21.	Micrometer stage
22.	Microscope Binocular
23.	Microscope with universal condenser containing oilimmersion, Bright field, Phase Contrast & Dark ground
24.	pH determination apparatus
25.	Serum inspissators
26.	VDRL shaker
27.	Vortex Mixer
28.	Water bath with variable temperature
29.	Oil-immersion lens for student microscope
30.	Automated Blood Culture System
31.	Colony Counter
(C) Consumables for Culture and Serological Diagnosis	
32.	Antibiotic Discs for Antibiotic susceptibility testing
33.	Antibiotic zone scale
34.	Antisera-Salmonella
35.	Antisera- <i>Shigelladysenteriae</i>
36.	Antisera- <i>Shigella flexneri</i>
37.	Antisera- <i>Shigella sonnei</i>
38.	Antisera- <i>Vibrio cholerae</i>
39.	ATCC strain - <i>Enterococcus faecalis</i> 29213
40.	ATCC strain - <i>E.coli</i> 25922
41.	ATCC strain - <i>E.coli</i> 35218
42.	ATCC strain - <i>Pseudomonas aeruginosa</i> 27853
43.	ATCC strain - <i>Staphylococcus aureus</i> 25923
44.	ATCC strain - <i>Staphylococcus aureus</i> 29213
45.	Bottles for blood culture

46.	Micropipettes – Multi channel & Single channel
47.	Digital Thermometers of different temperatures
(D) BSL 2 Lab	
48.	-80°C deep freezer with UPS
49.	Real-time PCR machine calibrated for the fluorophore dyes with UPS (2 nos., 2KVA each, with 2 hours back-up)
50.	Microcentrifuge / Refrigerated Centrifuge
51.	(a) Personal protective equipment (PPE) (b) Viral Transport Medium (VTM) (c) All other consumables and kits as required for Virology studies.
52.	Magnifying glass with metal handle
53.	Metal mincing machine
54.	Postmortem instrument sets complete
55.	Suction pumps
56.	Filtering apparatus Seitz
57.	Filter and Millipore filter- each
58.	Desiccators
59.	Vacuum Dessicators
60.	Apron plastic for postmortem
61.	Apron rubber for postmortem
62.	Lyophilizer
63.	Thermal Cycler
64.	U.V. Transilluminator with photography
65.	Colony counter
66.	Cold room + 4 degree Celsius
67.	BACTEC system
68.	Phase contrast Microscope
69.	Vortex mixer
70.	Electronic Balance
71.	Microfuge
72.	Ultra centrifuge
73.	Flourescent Microscope

(6) Department Of Pharmacology

S. No.	NAME OF ITEMS
(Quantity may be procured at the discretion of the department as per requirement)	
A Clinical Pharmacology Lab	
1.	Special Drug Delivery systems like Metered Dose Inhalers, Spacers, Nasal sprays, Transdermal patches, Insulin pen etc.
2.	Samples of various important drug formulations including rational and irrational FDC, Essential medicines
3.	Simulation models for demonstration of routes of administration i.e., various injections (iv, im, sc, intracardiac), enema, vaginal pessary insertion, and other routes of drug administration. Modules for communication competencies e.g., module with recorded videos of role play.

B. Computer Assisted Learning Lab	
4.	Must have computers with standard configuration and connected to the internet, (Preferably broadband) along with AV aids including multimedia projector and screen/LED screen). The Computers to have computer assisted teaching-learning and assessment material e.g., National List of Essential Medicines, Standard Treatment Guidelines, Banned Drugs List of the CDSCO, Hospital formulary, Animations/videos of mechanism of action of clinically useful drugs in humans, Adverse Drug Reactions forms, photographs of ADRs, Drug Promotional Literature, OSCE/OSPE station material and Self-assessment modules. E-prescription, Digital cases, and case videos (optional)

(7) DEPARTMENT OF FORENSIC MEDICINE AND TOXICOLOGY

1. Autopsy table- 2
2. Portable X-ray machine must be present in every autopsy block with provision of Radio-technician (can be shared with Radiology) and reporting by Radiologist to avoid movement of dead body from autopsy room to Radiology Department to meet the requirement of dignified management of dead.
3. Computers with printers.
4. Software for preparing and printing postmortem report etc.
5. Mortuary block shall have air condition facility.
6. Dead body freezer (as per requirement).
7. Adequate protective clothes, equipment's for the staff of the department working in autopsy block.
8. Provision of **Video-conferencing room** in the department to give evidence in the court of law to meet requirement of Digital India with appropriate facility of Internet, Computer, Video camera, etc.

Where FMT department has functional Poison Information Centre and Analytical Toxicology lab then it should have following equipments:

1. Digital Spectrophotometer
2. Chemical Balance
3. Distillation Plant
4. Spectroscopic Lens with Adjustable Slit.
5. TLC, HPLC, GC-MS

S.No.	NAME OF THE ITEMS (Quantity may be procured at the discretion of the department as per requirement)
1	Anthropometric Set including
	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
2	Digital pH Meter
3	Digital Spectrophotometer
4	Chemical Balance
5	Distillation Plant
6	Refrigerator

7	Centrifuge
8	Slide Warming Table
9	Hot Plate
10	Spectroscopic Lens With Adjustable Slit
11	Dissection Set Complete
12	Digital BP Instrument
13	Stethoscope
Medico legal work	
14	Cold Storage For Dead Bodies
15	Weighing Machine For Dead Bodies
16	Autopsy Tables
17	Stryker Type Autopsy Saw With Accessories
18	Weighing Machine For Organs
19	Weighing Machine For Fetus
20	Dissection Set Complete
21	Brain Knife
22	Hack Saw
23	Rib Shear Left & Right
24	Measuring Tape(Steel Tape Roll)
25	Magnifying Lens
26	X- Ray View Box (4 In 1)
27	Tooth Extractor Left & Right
28	Hand Set Heat Sealer
29	Instrument Trolley
30	Rectal Thermometer
31	Portable X-ray Machine (can be shared with Radiology Department)

(8) Department Of Community Medicine

S.No.	NAME OF THE ITEMS (Quantity may be procured at the discretion of the department as per requirement)
1	Hydrometer, milk
2	Incubator, electric (can be procured from Microbiology)
3	Baiance for weighing food stuff (Capacity 2 Kg).
4	Centrifuge clinical
5	Weighing machine adult
6	Baby weighing machine
7	Salters Baby weighing machine
8	Harpenden Calipers (for skinfold thickness)
9	Height measuring stand
10	Refrigerator 9 cu.ft.

11	Ice Lined Refrigerator (I.L.R.) (at Health Centre)
12	Smart TV
13	Vehicles for transport of students/interns/faculty/paramedical staff to the RHTC and UHTC
14	Multimedia Projector with Screen
15	Public Address system (2 portable for field based activities and one each for RHTC & UHTC)
16	Chloroscope
17	Horrock's Apparatus
18	MUAC tapes
19	Haemoglobinometer
20	BP Apparatus (Digital)
21	Stethoscope
22	Sound level meter
23	Water sampling bottle from any depth
24	Needle Shredder
25	Vaccine carrier
26	Craft water testing kit
27	Treatment kits as per national health programs
28	Iodine testing kit
29	Glucometer
30	Mosquito catching kit
31	Clinical Thermometer
32	First Aid Kit
33	Otoscope

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

FOR PHASE 3 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.

SKILLS LAB

(1) Trainer simulators / models / mannequins for:

- First aid, Bandaging, splinting
- Basic Life Support (BLS), CPR (Cardio Pulmonary Resuscitation) mannequin
- Various types of injections- Subcutaneous, Intra-muscular, Intra-venous
- Urine Catheter insertion
- Skin & Fascia suturing
- Breast examination model /mannequin

- Gynecological examination model/mannequin including IUCD (Intra Uterine Contraceptive Device) Training model
 - Obstetrics mannequins including Obstetric examination, conduct and management of vaginal delivery.
 - Neonatal & Pediatric resuscitation mannequins
 - Whole body mannequins
 - Trauma mannequin
- (II) Each model (Low or High Fidelity) should have a module for training including objectives, methods and assessment. Modules can also have hybrid models where real patients or standardized/simulated patients/ computer simulations can be used.
- (III) There shall also be space for computer assisted learning with adequate computers.

Dr. ARUNA V. VANIKAR, President

[ADVT.-III/4/Exty./360/2023-24]

Note I: These Guidelines are being published in English and Hindi; the English version shall prevail in case of any doubt about the interpretation of these Guidelines.

Note II : Annexures to these guidelines shall be displayed on the NMC website.

GUIDELINES FOR MANPOWER REQUIREMENT FOR RESEARCH FACILITIES IN A MEDICAL COLLEGE

Research labs can be under following categories:

- 1. Molecular lab**
- 2. Stem cell research lab**
- 3. Cytogenetics**
- 4. HLA and tissue typing research lab**

Applied Clinical research for organ perfusion, cancer research, in vitro fertilization, etc. can be under any of the above research facilities.

MAN POWER

(1) Lab Director-post-1

Minimum Qualifications required:

MD Path/ MD Microbiology/ MD Transfusion Medicine/ MD Biochemistry .

Faculty with PhD (Medical subject will be preferred)

Lab work: 10 years experience

Lab research related publications- minimum 10 in last 10 years

(2) Lab Supervisor- post-1 (per research facility)

Minimum Qualifications required:

MD Path/ MD Microbiology/ MD Transfusion Medicine/ MD Biochemistry

Faculty with PhD (Medical subject) will be preferred

or MSc in life sciences with PhD from Medical college

Lab work: 7years experience

Lab research related publications- minimum 5 in last 5 years

(3) Senior Scientific Research Officer- posts- 1 or more (per research facility)

Minimum Qualifications required:

PhD with MD Path/ MD Microbiology/ MD Transfusion Medicine/ MD Biochemistry /

PhD in medical college or MSc in life sciences with PhD from medical college

Lab work: 4years experience

Lab research related publications- minimum 3 in last 3 years

(4) Junior Research Officer-posts- 1 or more (per research facility)

Minimum Qualifications required:

MD Path/ MD Microbiology/ MD Transfusion Medicine/ MD Biochemistry or Diploma in Clinical Pathology/ MSc in life sciences, PhD scholar/ Postdoc fellow

Diploma holder in any branch may pursue PhD if experience / research inclinations proved for minimum of 1 year. They can be enrolled for integrated Master's PhD course.

Lab work: 1 year experience

Lab research related publications- preferably 1 in last 2 years

(5) Laboratory Technicians- Posts- minimum 2

Minimum Qualifications required:BSc/ MSc, in life sciences including Biotechnology,

DMLT

(6) Data entry operator/ Clerk -1 (minimum)

(7) Store keeper -1 (minimum)

(8) Biostatistician- 1(minimum)

(9) Lab attendant

(10) Peon/ Multi-task worker

(11) Clinical Monitors-

Any MBBS or above with research inclination

(12) Social worker/ MSW with applied research inclinations

ANNEXURE-II

Installation of close circuit television system in Medical college Hospital

All Medical colleges and Institutions are hereby instructed install cameras in their institute premises at the following prescribed places with suggested numbers of cameras:

S.No	Precribed Places for Camera Installation	Prescribed Numbers of Cameras to be Installed
1	Main Entrance of the Hospital & College	1
2	Patient Registration Counter	2
3	OPDs (depending upon number of OPDs in the college); It should cover the Medicine OPD Surgical OPD, Gynecological PD, Paediatrics OPD, Ortho OPD, etc	5
4	Pre anesthesia area and recovery area in the operation theatre complex	2
5	Faculty Lounge and Attendance marking area	2
6	All 5 Lecture Theatres	5
7	Anatomy Dissection Hall	1
8	Physiology Lab/Bio Chemistry UG Labs	2
9	Patho and Micro Biology Labs	2
10	Pharmacology Lab	1
11	Patient Attendant waiting area	1
12	Emergency and Casualty ward	1
	Total	25

2. All the colleges to have atleast 100 mbps dedicated internet lease line. Maintenance of camera and other related infrastructure is responsibility of medical college/institution only.

Pro-Forma for Display of Information on the College Website

The Following Details are mandatory to be filled up by the Medical College and displayed on their website (once entered should be updated without removal of data)

S No.	Information of the medical college/institution Year of Inception: Government/private:	
1.	Name	
2.	Address with pin code	
3.	University address with pin code	
4.	Official website	
5.	Dean/ Principal/ Director	
6.	Mobile Number	
7.	Email ID of Dean	
8.	Hospital	
9.	Date and Year of Registration of the Hospital (DD/MM/YYYY)	
10.	Number of Beds	
11.	Number of Beds for emergency	
12.	Date of the First Letter of Permission(LoP) of MBBS (DD/MM/YYYY) & number of seats	
13.	Status of Recognition	
14.	Number of MBBS and PG broad specialty and super specialty students admitted in this session*	MBBS: MD/MS: DM/MCh:

15.	Inpatients registered and admitted (Previous month record)	
16.	Outpatients registered (Previous month record)	
17.	Number of Deaths reported to the Municipality/ village register(month-wise) (Previous month record)	
18.	Address and pin code of the Corporation/ Village where the Death records are reported	
19.	Website link/ email ID/ hyperlink of the corporation in case Death Records are reported	
20.	Number of Births reported(Month-wise)	
21.	Address and pin code of the Corporation/village where the Birth records are reported	
22.	Website link/ email ID/ hyperlink of the corporation in case Birth Records are reported	
23.	Number of Rooms in Men's Hostel and students accommodated	
24.	Total Number of Rooms in Women's Hostel and students accommodated	
25.	Name of the Grievance Redressal Officer (PIO & CPIO):	
26.	Address with Pin code	

27.	Telephone Number Email Id	
28.	Grievances reported (Previous month record)	

29. Details of Post- Graduation Courses offered

Post Graduate Course	Year of Commencement of the Course	Number of Students Currently pursuing the Course	Number of Students admitted in the current session

30. Department wise list of Faculty Members

Department	Name of the faculty Qualification IMR Number	Current Designation & Date of promotion	Nature of employment Regular/ permanent or contract/outsou rced	Details of Service in the Last 5 years					Number of lectures taken/year, small teaching group with Topics covered
				1	2	3	4	5	

N.B.

1. Publications by faculty should be attached as annexure.
2. Publications should be quoted in Vancouver referencing style.
3. Medical Educator Training/ research methodology and dates.
4. Additional Information, if any, may also be provided.

Sr. No	Faculty Name	Publication in Vancouver referencing style.	Indexing System